

**POST GRADUATE SCHOOL**  
**INDIAN AGRICULTURAL RESEARCH INSTITUTE**  
**NEW DELHI-110012**

No. PGS-I/1-405/AC/2017

January 9, 2018

**ENDORSEMENT**

A copy of the proceedings of the 405<sup>th</sup> meeting of the Academic Council held on 16<sup>th</sup> December, 2017 is forwarded herewith for information and necessary action. Comments, if any, may please be sent to the PG School within 15 days from the date of issue of the Proceedings.

1. All the members of the Academic Council and concerned Officers (By name) \_\_\_\_\_
2. PS to Director General, ICAR, Krishi Bhawan, New Delhi-110001
3. PS to Deputy Director General (Edn.), ICAR, KAB-II, Pusa, New Delhi-110012
4. Master of Halls of Residences, P.G. School Hostel Office
5. Sr. Admn. Officer, IMC (35 copies for members of Board of Management)
6. PS to Director/PS to Dean & Joint Director (Edn.), IARI/PS to Registrar/PS to Comptroller
7. Shri A. K. Tyagi, Chief Technical Officer, P.G. School
8. Dr. S.K. Tyagi, Chief Technical Officer, P G School
9. Assistant Administrative Officer, Post Graduate School-II
10. Concerned Dealing Assistants, PGS-I

  
(K.M. Manjiah)  
Associate Dean





**PROCEEDINGS OF THE 405<sup>th</sup> MEETING OF THE ACADEMIC COUNCIL  
HELD ON DECEMBER 16, 2017 AT 11.00 AM IN THE CONFERENCE HALL  
OF Prof. M.S.SWAMINATHANLIBRARY, IARI, NEW DELHI - 110012**

The following members were present:

1. Dr.A.K. Singh, Director (Additional charge), IARI	Chairman
2. Dr. R.K. Jain, Dean & Joint Director (Edn.), IARI	Vice-Chairman
3. Dr. C. Ramasamy, Former Vice Chancellor, TNAU	Member
4. Dr. J. S. Samra, Former CEO, National Rainfed Area Authority	Member
5. Dr. H.S. Gaur, Former Vice-Chancellor, SVPUA&T, Meerut	Member
6. Dr. S.K. Datta, Former DDG(CS), ICAR	Member
7. Dr. K.V. Prabhu, Joint Director (Research)	Member
8. Dr. J.P. Sharma, Joint Director (Ext.)	Member
9. Dr. Kuldeep Singh, Director, NBPGR	Member
10. Dr. N.K. Singh, Director (Acting), NRCPB	Member
11. Dr. P.K. Mishra, Director, IISWC, Dehradun	Member
12. Dr. Man Singh, Project Director (Acting), WTC and Professor, WST	Member
13. Dr. K.M. Manjaiah, Associate Dean and Registrar, PG School	Member
14. Dr.(Ms.) Shashi Bala Singh, Professor, Agricultural Chemicals	Member
15. Dr.(Ms.) Alka Singh, Professor, Agricultural Economics	Member
16. Dr. D.K. Singh, Professor, Agricultural Engineering	Member
17. Dr. R.N. Padaria, Professor, Agricultural Extension	Member
18. Dr.V.K. Sehgal, Professor, Agricultural Physics	Member
19. Dr. Y.S. Shivay, Professor, Agronomy	Member
20. Dr. (Ms.) ArunaTyagi, Professor, Biochemistry	Member
21. Dr. A.R. Rao, Professor, Bioinformatics	Member
22. Dr. Sudeep Marwaha, Professor, Computer Application	Member
23. Dr. Subhash Chander, Professor, Entomology	Member
24. Dr. K.P. Singh, Professor, Floriculture and Landscape Architecture	Member
25. Dr.O.P. Awasthi, Professor, Fruits and Hort. Tech.	Member
26. Dr. Vinod, Professor, Genetics and Plant Breeding	Member
27. Dr. Sunil Pabbi, Professor, Microbiology	Member
28. Dr. R.C. Bhattacharya, Professor, MBB	Member
29. Dr.(Ms.) RekhaChaudhury, Professor, PGR	Member
30. Dr. V.K. Baranwal, Professor, Plant Pathology	Member
31. Dr. Madan Pal Singh, Professor, Plant Physiology	Member
32. Dr. S.P. Datta, Professor, SS&AC	Member
33. Dr. T.K. Behera, Professor, Vegetable Crops	Member
34. Mr. Sanchal Bilgrami, Comptroller	Member
35. Dr. B.S. Tomar, Head, Vegetable Sciences and Faculty Representative to the Academic Council	Member
36. Ms. Sunita Gupta, Incharge, Library Services	Member
37. Mr. Satish Naik, President, PGSSU	Member
38. Ms. Priyanka Upreti, Students' Representative	Member

Leave of absence was sought and granted to the following members:

1. Dr. N.S. Rathore, Deputy Director General (Edn.)	Member
2. Dr.A.K. Choubey, Director (Acting), IASRI	Member
3. Dr. K.K. Singh, Director, CIAE, Bhopal	Member
4. Dr. M.R. Dinesh, Director, IIHR	Member
5. Dr. Seema Jaggi, Professor, Agricultural Statistics	Member
6. Dr. Anil Sirohi, Professor, Nematology and MOHR, PG Hostels	Member
7. Dr. Soora Naresh Kumar, Professor, Environmental Sciences	Member

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|--|--------|
| 8. Dr. S.K. Jain, Professor, Seed Science & Technology   | Member |
| 9. Dr. S.K. Jha, Professor, Post Harvest Technology  | Member |
| 10. Dr. Bhupinder Singh, Principal Scientist, CESCRA<br>and Faculty Representative to the Academic Council | Member |
| 11. Mr. M.K. Jain, Joint Director (Admn.) (Acting)   | Member |

Dr. R.K.Jain, Dean and Joint Director (Edn.) extended a formal welcome to Dr.A.K. Singh, Director (Additional Charge)for attending his first meeting. Thereafter, Dr. A.K. Singh, Chairman of Academic Council warmly welcomed the outside members of the Academic Council and all the members present in the meeting. He also welcomed the new members of the Academic Council who were attending the meeting for the first time:

#### New members

1. Dr. A.K. Singh, Deputy Director General (Agril. Extension) as Director (Additional Charge), IARI
2. Dr. (Ms.) Shashi Bala Singh, Professor, Agricultural Chemicals
3. Dr. Madan Pal Singh, Professor, Plant Physiology
4. Ms. Sunita Gupta, Incharge, Library Services
5. Mr. Satish Naik, President, Post Graduate School Students Union (PGSSU)
6. Ms. Priyanka Upreti, Student Representative to the Academic Council

The Chairman also placed on record the valuable contributions of the following outgoing members of the Academic Council in strengthening the PG education at IARI:

1. Dr. Jeet Singh Sandhu, Former Deputy Director General(Crop Sciences) as Director (Additional charge), IARI
2. Dr. U.C. Sud, Former Director, IASRI
3. Dr.(Ms.) Irani Mukherjee, Former Professor, Agricultural Chemicals
4. Dr. V.P. Singh, Professor, Plant Physiology
5. Ms. Usha Khemchandani, Former Incharge, Library Services
6. Mr. Bhoopesh Punera, Former President, Post Graduate School Students Union (PGSSU)
7. Ms. Anu Kumari, Former Student Representative to the Academic Council
8. Ms. Shashi Prabha Razdan, Former Registrar and Joint Director (Admn.)

Thereafter, the following agenda items were taken up for consideration:

Agenda Item	Description of Agenda Items
405.1	Confirmation of the proceedings of the 404 <sup>th</sup> meeting of the Academic Council held on July 7, 2017
405.2	Action Taken Report on the Proceedings of 404 <sup>th</sup> meeting of the Academic Council held on July 7, 2017
405.3	Recommendations of the Standing Committee on Scholarships, Financial Assistance & Academic Progress made in its meeting held on 11.10.2017
405.4	Recommendations of the Standing Committee on Courses Curricula and Academic Affairs made in its meeting held on 22.11.2017
405.5	Recommendations of the Standing Committee on Faculty & Discipline made in its meeting held on 5.12.2017
405.6	Finalization of the Academic Calendar for the 61 <sup>st</sup> Academic Session 2018-19
405.7	Finalization of "Convocation Week" programme
405.8	List of candidates who have become eligible for the award of their respective degrees of M.Sc., M.Tech. & Ph.D.

405.9	Finalization of number of seats and qualification for admission to M.Sc., M.Tech. and Ph.D. degree programmes for the Academic Session 2018-19
405.10	Recommendations of the Committee constituted for a special IARI Merit Medal for the best Ph.D. student from the North Eastern Region.
405.11	Relaxation in 18 month contact period condition for Split Ph.D. Programme
405.12	Consideration of IARI-ANASTU Collaboration
402.13	Creation of supernumerary seats to grant 5% reservation to the candidates belonging to children/widows of eligible personnel of Security Forces in Master and Ph.D. Programme at IARI
402.14	Any other item with the permission of the Chair

***Agenda Item No. 405.1 Confirmation of the proceedings of the 404<sup>th</sup> meeting of the Academic Council held on 7.7.2017***

The Chairman called for the comments, if any, from the members of the Academic Council on the proceedings of the 404<sup>th</sup> meeting. Since no comment was there, the proceedings of the previous meeting were confirmed.

***Agenda Item No. 405.2 Action Taken Report on the Proceedings of 404<sup>th</sup> meeting of the Academic Council held on 7.7.2017***

Action taken report (ATR) was presented by the Dean and Joint Director (Education). On the issue of increasing tuition fee from the Post Graduate Students, the Academic Council has approved that an incremental increase of about 10% be made after the approval of ICAR.

***Agenda Item No. 405.3: Consideration of the proceedings of the Standing Committee on Scholarships, Financial Assistance & Academic Progress made in its meeting held on 11.10.2017***

The Academic Council approved the following recommendations of Standing Committee. The decision of Chairman, Academic Council on disbursement of Scholarship on the recommendations of the Standing Committee was also ratified by the Academic Council.

**405.3.1** As per P.G. School Calendar para 15.3.3, the scholarships shall be awarded initially for a period of one academic year from the date of joining the Post Graduate School or the commencement of the academic year, whichever is later. *(Commencement of the Academic Year 2017-18 is 31.07.2017)*

**405.3.2** Award of Institute Sr. Scholarship @ Rs.13,125/- per month + Rs.10,000/- per annum as contingent grant to 140 candidates admitted to IARI, New Delhi.

S. No.	NAME OF THE STUDENT	ROLL NO	DISCIPLINE	DATE ENROL
1.	ROHAN SARKAR	10931	AGRICULTURAL CHEMICALS	28/07/2017
2.	SAMEER RANJAN MISRA	10932	AGRICULTURAL CHEMICALS	"
3.	Ms. USHA KUMARI	10933	AGRICULTURAL CHEMICALS	"
4.	Ms. NAMRATA LASKAR	10934	AGRICULTURAL CHEMICALS	"
5.	PHILIP KURIACHEN	10935	AGRICULTURAL ECONOMICS	"
6.	BISWAJIT SEN	10936	AGRICULTURAL ECONOMICS	"
7.	SHARATH SHASHIDHAR YELIGAR	10938	AGRICULTURAL ECONOMICS	"

8.	YOGESH H. C.	10939	AGRICULTURAL ECONOMICS	"
9.	JAMALUDHEEN A.	10940	AGRICULTURAL ECONOMICS	"
10.	Ms. PRIYANKA SHARAD MAHANGADE	10942	AGRICULTURAL ENGINEERING	"
11.	MANJUNATH	10949	AGRICULTURAL ENGINEERING	"
12.	NISHANTH M. STANLY	10950	AGRICULTURAL ENGINEERING	"
13.	AMIT KUMAR PATIL	10954	AGRICULTURAL ENGINEERING	"
14.	AKSHAY KUMAR SINGH	10955	AGRICULTURAL ENGINEERING	"
15.	Ms. SANGITA ABA KHATAL	10959	AGRICULTURAL ENGINEERING	"
16.	PARSHANT SINGH	10960	AGRICULTURAL ENGINEERING	"
17.	Ms. SANGAVI R.	10961	AGRICULTURAL ENGINEERING	"
18.	Ms. LAXMIPRIYA UPADHYAYA	10962	AGRICULTURAL EXTENSION	"
19.	Ms. SONITARANI SETHY	10963	AGRICULTURAL EXTENSION	"
20.	Ms. PRITI PRIYADARSHNI	10964	AGRICULTURAL EXTENSION	"
21.	SAHIL SWANGLA	10965	AGRICULTURAL EXTENSION	"
22.	GIREESH S.	10966	AGRICULTURAL EXTENSION	"
23.	SONDARVA YAGNESH MANSUKHBHAI	10967	AGRICULTURAL EXTENSION	"
24.	RAM NARAYAN SINGH	10968	AGRICULTURAL PHYSICS	"
25.	VIKAS KUMAR RAI	10969	AGRICULTURAL PHYSICS	"
26.	BHABANI PRASAD MONDAL	10970	AGRICULTURAL PHYSICS	"
27.	MADANMOHAN MEENA	10971	AGRICULTURAL PHYSICS	"
28.	KAJAL DAS	10978	AGRONOMY	"
29.	HARISH M. N.	10979	AGRONOMY	"
30.	Ms. SONAKA GHOSH	10980	AGRONOMY	"
31.	RAHUL SADHUKHAN	10982	AGRONOMY	"
32.	JAMARESH PRADHAN	10983	AGRONOMY	"
33.	ARJUN SINGH	10984	AGRONOMY	"
34.	MOHAMMAD HASANAIN	10985	AGRONOMY	"
35.	HIMANSU SEKHAR GOUDA	10986	AGRONOMY	"
36.	PRAVEEN VASANT KADAM	11000	AGRONOMY	"
37.	SUMAN SEN	11150	AGRONOMY	"
38.	ANSHEEF ALI T. P.	11001	BIOCHEMISTRY	"
39.	Ms. MINNU SASI	11002	BIOCHEMISTRY	"
40.	Ms. YAMINI TAK	11003	BIOCHEMISTRY	"
41.	SUNIL INDRAJIT WARWATE	11004	BIOCHEMISTRY	31/07/2017
42.	AMIT UMESH PASCHAPUR	11014	ENTOMOLOGY	28/07/2017
43.	NIRANJANA G. N.	11015	ENTOMOLOGY	"
44.	RAKSHITH H. S.	11016	ENTOMOLOGY	"
45.	Ms. IPSITA SAMAL	11017	ENTOMOLOGY	"
46.	Ms. G. S. UMA	11018	ENTOMOLOGY	"
47.	NIKHIL RAJ M.	11019	ENTOMOLOGY	"
48.	THIMMEGOWDA M. N.	11020	ENTOMOLOGY	"
49.	YOGENDER SAINI	11023	ENVIRONMENTAL SCIENCES	"
50.	Ms. ANKITA PAUL	11024	ENVIRONMENTAL SCIENCES	"
51.	ALESH KUMAR	11025	ENVIRONMENTAL SCIENCES	"
52.	Ms. HELEN MARY ROSE	11026	ENVIRONMENTAL SCIENCES	"
53.	DINESH G. K.	11027	ENVIRONMENTAL SCIENCES	"
54.	Ms. SRIJANA PRADHAN	11028	FLORICULTURE AND LANDSCAPE ARCHITECTURE	"
55.	SURENDRA SINGH CHAUHAN	11029	FLORICULTURE AND LANDSCAPE ARCHITECTURE	"

56.	Ms. T. RIHNE	11033	FLORICULTURE AND LANDSCAPE ARCHITECTURE	"
57.	SATYABRATA PRADHAN	11034	FRUIT SCIENCE	"
58.	Ms. PREETI SINGH	11035	FRUIT SCIENCE	"
59.	Ms. THEIVANAI M.	11038	FRUIT SCIENCE	"
60.	ASHOK KUMAR MAHAWER	11039	FRUIT SCIENCE	"
61.	PANKAJ KUMAR	11040	FRUIT SCIENCE	"
62.	Ms. SEEMA SHEORAN	11045	GENETICS AND PLANT BREEDING	"
63.	THRIBHUVAN R.	11046	GENETICS AND PLANT BREEDING	"
64.	MANDEEP SINGH	11047	GENETICS AND PLANT BREEDING	"
65.	JEET RAM CHOUDHARY	11048	GENETICS AND PLANT BREEDING	"
66.	NENAVATH KRISHNA KUMAR RATHOD	11050	GENETICS AND PLANT BREEDING	"
67.	J JORBEN	11052	GENETICS AND PLANT BREEDING	"
68.	Ms. NEETHU MOHAN	11053	GENETICS AND PLANT BREEDING	"
69.	Ms. ARCHANA R.	11055	GENETICS AND PLANT BREEDING	"
70.	RATHAN N. D.	11056	GENETICS AND PLANT BREEDING	"
71.	RANJIT SAROJ	11057	GENETICS AND PLANT BREEDING	"
72.	AMAN TIGGA	11058	GENETICS AND PLANT BREEDING	"
73.	Ms. NOOR E MUJASSIM	11059	GENETICS AND PLANT BREEDING	"
74.	Ms. ABIRAMI T.V	11060	MICROBIOLOGY	"
75.	NAITAM MAYUR GIRIDHAR	11061	MICROBIOLOGY	"
76.	Ms. LAVANYA A. K.	11062	MICROBIOLOGY	"
77.	Ms. DIYA ROY	11063	MICROBIOLOGY	"
78.	Ms. DHIVYA PRIYA THENAPPAN	11065	MICROBIOLOGY	"
79.	Ms. SRUTHY K. S.	11066	MICROBIOLOGY	"
80.	SOHAM CHOUDHURY	11068	MOLECULAR BIOLOGY AND BIOTECHNOLOGY	"
81.	SOUGATA BHATTACHARJEE	11069	MOLECULAR BIOLOGY AND BIOTECHNOLOGY	"
82.	Ms. LOITONGBAM ASHAKIRAN DEVI	11070	MOLECULAR BIOLOGY AND BIOTECHNOLOGY	"
83.	Ms. BABLEE KUMARI SINGH	11071	MOLECULAR BIOLOGY AND BIOTECHNOLOGY	"
84.	ABINASH BISWAJIT SETHY	11072	MOLECULAR BIOLOGY AND BIOTECHNOLOGY	"
85.	PRASHANT RAGHUNATH SHINGOTE	11073	MOLECULAR BIOLOGY AND BIOTECHNOLOGY	"
86.	Ms. CHAITRA GANAPATI BHAT	11075	NEMATOLOGY	"
87.	BOLLI VENU BABU	11076	NEMATOLOGY	"
88.	NEERAJ	11077	NEMATOLOGY	"
89.	Ms. NANDHINI T.	11078	NEMATOLOGY	"
90.	PRABAKARAN S.	11080	PLANT GENETIC RESOURCES	"
91.	Ms. MANJU KUMARI	11081	PLANT GENETIC RESOURCES	"
92.	SUNIL NAIK S.	11082	PLANT GENETIC RESOURCES	"
93.	ANTO JAMES	11083	PLANT GENETIC RESOURCES	"
94.	DEEPAK D. A.	11084	PLANT GENETIC RESOURCES	"
95.	KAVI SIDHARTHAN V.	11085	PLANT PATHOLOGY	"
96.	JAGDISH YADAV	11086	PLANT PATHOLOGY	"
97.	OINAM WASHINGTON SINGH	11087	PLANT PATHOLOGY	"
98.	DARSHAN K.	11088	PLANT PATHOLOGY	"
99.	VIMAL KUMAR C.	11089	PLANT PATHOLOGY	"

100.	Ms. AMRUTHA LAKSHMI M	11090	PLANT PATHOLOGY	"
101.	POTHIRAJ G.	11091	PLANT PATHOLOGY	"
102.	BASAVARAJ CHILAZARI	11092	PLANT PATHOLOGY	31/07/2017
103.	VIVEK KUMAR KHARE	11094	PLANT PATHOLOGY	28/07/2017
104.	SANDEEP ADAVI B.	11095	PLANT PHYSIOLOGY	"
105.	BISWABIPLAB SINGH	11097	PLANT PHYSIOLOGY	"
106.	ELANGO VAN A.	11098	PLANT PHYSIOLOGY	"
107.	ADHIP DAS	11099	PLANT PHYSIOLOGY	"
108.	Ms. DEVIKA S.	11100	PLANT PHYSIOLOGY	"
109.	Ms. PAYAL PRIYADARSINI	11101	PLANT PHYSIOLOGY	"
110.	Ms. SWARAJYA LAXMI NAYAK	11102	POST HARVEST TECHNOLOGY	"
111.	Ms. UMA PRAJAPATI	11103	POST HARVEST TECHNOLOGY	"
112.	Ms. SINDHU C.	11108	POST HARVEST TECHNOLOGY	"
113.	VISHNU ANAND	11109	POST HARVEST TECHNOLOGY	"
114.	Ms. VIKONO KSH	11110	POST HARVEST TECHNOLOGY	"
115.	C BALACHANDAN GOWDA	11113	SEED SCIENCE AND TECHNOLOGY	"
116.	SUNIL KUMAR	11114	SEED SCIENCE AND TECHNOLOGY	"
117.	DEBASHIS PAUL	11115	SEED SCIENCE AND TECHNOLOGY	"
118.	Ms. NIPA BISWAS	11116	SEED SCIENCE AND TECHNOLOGY	"
119.	SUNIL JADHAV	11117	SEED SCIENCE AND TECHNOLOGY	"
120.	CHANDAN M. N.	11118	SEED SCIENCE AND TECHNOLOGY	"
121.	JORRIGAL LAXMAN	11119	SEED SCIENCE AND TECHNOLOGY	"
122.	JAGADISH GOWDA K. S.	11120	SEED SCIENCE AND TECHNOLOGY	"
123.	ABINASH DAS	11121	SOIL SCIENCE AND AGRICULTURAL CHEMISTRY	"
124.	RAHUL MISHRA	11122	SOIL SCIENCE AND AGRICULTURAL CHEMISTRY	"
125.	ASIK DUTTA	11123	SOIL SCIENCE AND AGRICULTURAL CHEMISTRY	"
126.	Ms. ANKITA TRIVEDI	11124	SOIL SCIENCE AND AGRICULTURAL CHEMISTRY	"
127.	Ms. PRITI TIGGA	11125	SOIL SCIENCE AND AGRICULTURAL CHEMISTRY	"
128.	Ms. KHUSHBOO RANI	11126	SOIL SCIENCE AND AGRICULTURAL CHEMISTRY	"
129.	RAVINDRA KUMAR REKWAR	11127	SOIL SCIENCE AND AGRICULTURAL CHEMISTRY	"
130.	SOURAV CHOUDHURY	11128	SOIL SCIENCE AND AGRICULTURAL CHEMISTRY	"
131.	MUDAVATH RAVINDRA NAIK	11129	SOIL SCIENCE AND AGRICULTURAL CHEMISTRY	"
132.	VINAY N. D.	11130	VEGETABLE SCIENCE	"
133.	LAXMAN LAKKAPPA NANDI	11131	VEGETABLE SCIENCE	"
134.	PRADEEP KUMAR MAURYA	11134	VEGETABLE SCIENCE	"
135.	ARUN	11135	VEGETABLE SCIENCE	"
136.	AMIT KUMAR MATHUR	11136	VEGETABLE SCIENCE	"
137.	SHIV SHANKER CHAUDHARI	11139	WATER SCIENCE AND TECHNOLOGY	"
138.	Ms. BLESSY V. A.	11140	WATER SCIENCE AND TECHNOLOGY	"
139.	MADHAVANANDA GUNDAPPAGOL	11141	WATER SCIENCE AND TECHNOLOGY	"
140.	SANJAY KUMAR	11149	WATER SCIENCE AND TECHNOLOGY	"



**405.3.3** Award of Institute Sr. Scholarship @ Rs.13,125/- per month + Rs.10,000/- per annum as contingent grant to the following 16 students admitted under IARI PG outreach programme at ICAR-IIHR, Bengaluru.

S.NO.	NAME OF THE STUDENT	ROLL NO	DISCIPLINE	DATE ENROL
1.	SOUDAMANI KARJEE	11030	FLORICULTURE AND LANDSCAPE ARCHITECTURE	28/07/2017
2.	PARVATHI BENNURMATH	11031	"	"
3.	ANAMIKA GURUNG	11032	"	"
4.	PRASHANT SANTRAM KALAL	11036	FRUIT SCIENCE	"
5.	NUSRAT PERVEEN	11037	"	"
6.	KIRAN KUMAR G N	11041	"	"
7.	NANDKISHOR MADHAVRAO KANADE	11042	"	"
8.	PRADEEP KUMAR VISHWAKARMA	11044	"	"
9.	ANUSREE ANAND	11104	POST HARVEST TECHNOLOGY	"
10.	SACHIN A J	11105	"	"
11.	DEEP LATA	11106	"	"
12.	KARTHIK NAYAKA V S	11107	"	"
13.	SOURAV MAHAPATRA	11132	VEGETABLE SCIENCE	"
14.	KOUSHIK SAHA	11133	"	"
15.	SWAMINI BHOI	11137	"	"
16.	MANISHA	11138	"	"

**405.3.4** Award of Institute Sr. Scholarship @ Rs.13,125/- per month + Rs.10,000/- per annum as contingent grant to the following 12 students admitted under IARI PG outreach programme at ICAR-CIAE, Bhopal.

S.NO.	NAME OF THE STUDENT	ROLL NO	DISCIPLINE	DATE ENROL
1.	ANUPAM AMITABH	10943	AGRICULTURAL ENGINEERING	28/07/2017
2.	PRAMOD SHIVAJI SHELAKE	10944	"	"
3.	MOUSUMI SABAT	10945	"	"
4.	ANJALI SUDHAKAR	10946	"	"
5.	BHUKYA JITHENDER	10947	"	"
6.	SANKET RAMNATH SAWANT	10948	"	"
7.	MANISHA HANUMANT JAGADALE	10951	"	"
8.	PRABHAKAR SHUKLA	10952	"	"
9.	PREM VEER GAUTAM	10953	"	"
10.	KONGA UPENDAR	10956	"	"
11.	SUSHANTA PADHAN	10957	"	"
12.	VIKAS PAGARE	10958	"	"

**405.3.5** Award of Institute Sr. Scholarship @ Rs. 3,000/- per month + Rs. 10,000/- per annum as contingent grant to the following 10 students who were admitted under Faculty Up-gradation Scheme.

S.NO.	NAME OF THE STUDENT	ROLL NO	DISCIPLINE	DATE ENROL
1.	Ms. POLA SUNITHA Dr. YSRH UNIV. ANDHRA PRADESH	11021	ENTOMOLOGY	28/07/2017
2.	YANA YENKANNA SRI KL TSH UNIV., HYDERABAD	11022	"	"
3.	SRIDHAR RAMACHANDRA UAHS SHIV., KARNATAKA	11043	FRUIT SCIENCE	"
4.	RAVI KIRAN TIRUMALA K	11049	GENETICS AND PLANT	"

	ICAR-CSSRI, KARNAL		BREEDING	
5.	VENKATA R PRAKASH REDDY ACHARYA NGRA UNIV, GUNTUR	11051	"	"
6.	JOGDANDE SAI PRASAD PROF. JTSAU, HYDERABAD	11067	MICROBIOLOGY	"
7.	MADEM GURIVI REDDY ACHARYA NGRA UNIV, GUNTUR	11093	PLANT PATHOLOGY	"
8.	SREENATHA A. UNIV. OF HORT. SCIENCES, BAGALKOT	11112	POST HARVEST TECHNOLOGY	"
9.	HARI KRISHNA B. PROF. JTSAU, HYDERABAD	11144	WATER SCIENCE AND TECHNOLOGY	"
10.	SUNIL MANDI ICAR-CTRI RES. STATION, DINHATA - WB	10999	AGRONOMY	"

**405.3.7** Award of Contingent grant only @ Rs.10,000/- per annum to the following two students who was admitted under Dept.-Scientific Category.

S.NO.	NAME OF THE STUDENT	ROLL NO	DISCIPLINE	DATE ENROL
1.	RISHI RAJ	10987	AGRONOMY	28/07/2017
2.	Ms. MADHU BALA PRIYADARSHI	11013	COMPUTER APPLICATION	

**405.3.8** Following 14 students who were admitted in the discipline of Agricultural Statistics, Bioinformatics and Computer Application will get their Sr. Scholarship from IASRI, New Delhi.

S.NO.	NAME OF THE STUDENT	ROLL NO	DISCIPLINE	DATE ENROL
1	DIPANKAR MITRA	10972	AGRICULTURAL STATISTICS	28/07/2017
2	AKHILESH JHA	10973	"	"
3	MD. YEASIN	10974	"	"
4	ASHIS RANJAN UDGATA	10975	"	"
5	RONIT JAISWAL	10976	"	"
6	SAMIR BARMAN	10977	"	"
7	Ms. RITWIK DAS	11005	BIOINFORMATICS	"
8	Ms. SNEHA MURMU	11006	"	"
9	Ms. SHWETA KUMARI	11007	"	"
10	Ms. SAPNA NIGAM	11008	COMPUTER APPLICATION	"
11	ARPAN KUMAR MAJI	11010	"	"
12	ASIT KUMAR PRADHAN	11011	"	"
13	HIMANSHUSHEKHAR CHAURASIA	11012	"	"
14	DILIP KUMAR	11148	"	"

**405.3.9** The award of Institute Sr. Scholarship to the following 6 in-service students was not recommended as they have already availed the benefit of Scholarship during their last admission at IARI and left the course incomplete. Further, (i) the necessary recovery on account of Surety Bond etc. as per rule may also be made from these students, if still due and (ii) to avoid second time award of fellowship, a suitable undertaking to the effect that the students has not availed the benefit of Scholarship earlier from or through IARI/ICAR, may be obtained, in future.

S.NO.	NAME OF THE STUDENT	ROLL NO	DISCIPLINE	DATE ENROL	Scheme
1.	VIKAS SHARMA	11064	MICROBIOLOGY	28/07/2017	FUS
2.	SURESH KUMAR	10937	AGRICULTURAL ECONOMICS	28/07/2017	ICAR In-service
3.	PRAVEEN K.V.	10941	"	28/07/2017	"
4.	MUKESH SANKAR S.	11054	GENETICS AND PLANT BREEDING	28/07/2017	"



5.	CHANDRAMANI DATTATRAYA WAGHMARE	11079	NEMATOLOGY	28/07/2017	"
6.	PRINCE CHOYAL	11096	PLANT PHYSIOLOGY	28/07/2017	"

**405.3.10** Award of IARI Jr. Scholarship@ 7,560/- per month + Rs. 6,000/- per annum as contingent grant to the following 57 M.Sc./M.Tech. students (including 6 students admitted for IARI-Assam and 5 students for IARI-Jharkhand) who have not been awarded ICAR-JRF.

Sl. No.	NAME OF THE STUDENT	ROLL NO	DISCIPLINE	DATE_ENROL
<b>IARI, NEW DELHI</b>				
1.	NAGARJUN T. R.	20911	AGRICULTURAL CHEMICALS	17/07/2017
2.	Ms. MADHU TIPPANANAVAR	20912	AGRICULTURAL CHEMICALS	18/07/2017
3.	SUBHASIS SARKAR	20913	AGRICULTURAL CHEMICALS	18/07/2017
4.	Ms. GEETHA M. L.	20918	AGRICULTURAL ECONOMICS	18/07/2017
5.	AKSHAY SANJAY MAHADIK	20923	AGRICULTURAL ENGINEERING	18/07/2017
6.	RATHOD SUNIL KUMAR	20924	AGRICULTURAL ENGINEERING	18/07/2017
7.	KUNDAN KUMAR	20927	AGRICULTURAL ENGINEERING	18/07/2017
8.	PRADEEP TIPPANANAVAR	20931	AGRICULTURAL EXTENSION	18/07/2017
9.	CHANDAN GOWDA H.	20932	AGRICULTURAL EXTENSION	17/07/2017
10.	SONA KUMAR	20934	AGRICULTURAL PHYSICS	18/07/2017
11.	Ms. PRIYA BHATTACHARYA	20935	AGRICULTURAL PHYSICS	18/07/2017
12.	KOUSHIK BAG	20936	AGRICULTURAL PHYSICS	18/07/2017
13.	ARAVIND K. S.	20937	AGRICULTURAL PHYSICS	18/07/2017
14.	Ms. RUXANABI NARAGUND	20945	AGRONOMY	17/07/2017
15.	R RUSTUM ZHIIPAO	20946	AGRONOMY	18/07/2017
16.	DURGASI VENKATA BHARGAV	20952	BIOCHEMISTRY	18/07/2017
17.	ASHOK KUMAR SAU	20967	ENTOMOLOGY	18/07/2017
18.	DEEPANSHU JANGID	20971	ENVIRONMENTAL SCIENCES	18/07/2017
19.	RAHUL KARJEE	20972	ENVIRONMENTAL SCIENCES	18/07/2017
20.	Ms. DIVYA POOJA B.	20973	ENVIRONMENTAL SCIENCES	18/07/2017
21.	ROCKY KUMAR	20974	ENVIRONMENTAL SCIENCES	17/07/2017
22.	Ms. VINITA	20975	ENVIRONMENTAL SCIENCES	17/07/2017
23.	DAVENDRA KUMAR	20978	FLORICULTURE AND LANDSCAPE ARCHITECTURE	18/07/2017
24.	Ms. MEGHA R.	20979	FRUIT SCIENCE	18/07/2017
25.	SHIVANAGOUDA PATIL N.	21030	GENETICS AND PLANT BREEDING	27/07/2017
26.	Ms. SNEHA G. R.	20993	MICROBIOLOGY	18/07/2017
27.	MUHAMMED SHAMNAS V.	20994	MOLECULAR BIOLOGY AND BIOTECHNOLOGY	18/07/2017
28.	KRISHNAYAN PAUL	20996	MOLECULAR BIOLOGY AND BIOTECHNOLOGY	18/07/2017
29.	Ms. SOMYA GUPTA	21043	MOLECULAR BIOLOGY AND BIOTECHNOLOGY	25/07/2017
30.	ABHISHEK GOWDA A. P.	21002	NEMATOLOGY	18/07/2017
31.	Ms. DEEPIKA D. D.	21006	PLANT GENETIC RESOURCES	17/07/2017
32.	K. SRINIVAS	21007	PLANT GENETIC RESOURCES	18/07/2017
33.	Ms. MONIKA JHA	21008	PLANT GENETIC RESOURCES	17/07/2017
34.	LHAM DORJEE	21009	PLANT PATHOLOGY	18/07/2017
35.	Ms. RASHMI E. R.	21012	PLANT PATHOLOGY	18/07/2017
36.	Ms. CHARISHMA K.	21013	PLANT PATHOLOGY	18/07/2017
37.	UMESH KUMAR	21015	PLANT PATHOLOGY	18/07/2017
38.	RAVEENDRAN M.	21018	PLANT PHYSIOLOGY	19/07/2017
39.	URHE SUMIT BHAUSAHEB	20921	POST HARVEST TECHNOLOGY	17/07/2017
40.	Ms. SAMPADASHANKAR	21024	POST HARVEST TECHNOLOGY	18/07/2017
41.	Ms. SHRUTI KUMARI	21025	SEED SCIENCE AND TECHNOLOGY	18/07/2017
42.	AKASH A.	21029	SEED SCIENCE AND TECHNOLOGY	18/07/2017
43.	MOHANKUMAR K. T.	21032	SOIL SCIENCE AND AGRICULTURAL CHEMISTRY	18/07/2017
44.	CHAUHAN SHOHAIB SHEIKH AYUB	21035	VEGETABLE SCIENCE	17/07/2017
45.	Ms. DIANA DHAYAL	21040	WATER SCIENCE AND TECHNOLOGY	18/07/2017
46.	RAJNEESH KUMAR	21042	WATER SCIENCE AND TECHNOLOGY	17/07/2017

IARI, ASSAM				
Sl. No.	NAME OF THE STUDENT	ROLL NO	DISCIPLINE	DATE_ENROL
47.	AKSHAY KUMAR YOGI	50034	AGRONOMY	26/07/2017
48.	CHETHAN KUMAR V.	50025	GENETICS AND PLANT BREEDING	17/07/2017
49.	Ms. JANANI R.	50029	VEGETABLE SCIENCE	18/07/2017
50.	CHANDAN T.	50031	WATER SCIENCE AND TECHNOLOGY	18/07/2017
51.	YOGESH LAL	50032	WATER SCIENCE AND TECHNOLOGY	17/07/2017
52.	Ms. AROCKIA ANUSTY J.	50033	WATER SCIENCE AND TECHNOLOGY	17/07/2017
IARI, JHARKHAND				
Sl. No.	NAME OF THE STUDENT	ROLL NO	DISCIPLINE	DATE_ENROL
53.	CHUNENDRA PRAKASH	60020	AGRONOMY	18/07/2017
54.	MANORANJAN SENAPATI	60022	GENETICS AND PLANT BREEDING	18/07/2017
55.	ARUNA T.S.	60031	VEGETABLE SCIENCE	26/07/2017
56.	SHARANAYYA	60029	WATER SCIENCE AND TECHNOLOGY	18/07/2017
57.	VED PRAKASH MEENA	60030	WATER SCIENCE AND TECHNOLOGY	17/07/2017

**405.3.11** Following 14 M.Sc. students who were admitted in the disciplines of Agricultural Statistics, Bioinformatics and Computer Application will get their Scholarship from IASRI subject to fulfilment of prescribed formalities by IASRI, New Delhi.

S.No	NAME OF THE STUDENT	ROLL NO	DISCIPLINE	DATE_ENROL
1.	VINAYAKA	20938	AGRICULTURAL STATISTICS	18/07/2017
2.	Ms. TANIMA DAS	20939	AGRICULTURAL STATISTICS	18/07/2017
3.	VINAYKUMAR L. N.	20940	AGRICULTURAL STATISTICS	17/07/2017
4.	RAHUL KUMAR GUPTA	20943	AGRICULTURAL STATISTICS	17/07/2017
5.	Ms. ANKITA VERMA	20944	AGRICULTURAL STATISTICS	17/07/2017
6.	NITESH KUMAR SHARMA	20954	BIOINFORMATICS	18/07/2017
7.	NAVEENKUMAR H.S.	20955	BIOINFORMATICS	17/07/2017
8.	BAIBHAV KUMAR	20957	BIOINFORMATICS	17/07/2017
9.	JUTAN DAS	20958	BIOINFORMATICS	17/07/2017
10.	ABHISHEKH M. P.	20959	COMPUTER APPLICATION	17/07/2017
11.	AMIT SAHA	20960	COMPUTER APPLICATION	18/07/2017
12.	MOHIT KUMAR	20961	COMPUTER APPLICATION	17/07/2017
13.	B. JAGDISH NAIK	20962	COMPUTER APPLICATION	18/07/2017
14.	Ms. LISHI KUMARI	20964	COMPUTER APPLICATION	21/08/2017

**Agenda Item No. 405.4:** *Consideration of the proceedings of the meeting of the Standing Committee on Course Curricula and Academic Affairs held on 22.11.2017.*

The Academic Council discussed the recommendations of the Standing Committee and approved the following:

**405.4.1** The Academic Council agreed on the proposal of PGR for renaming the "Plant Genetic Resources" degree as "Plant Genetic Resources and Economic Botany" to widen the career opportunities for the students subject to the condition that the BOS of PGR discipline may review and revise the existing courses in light of the changed degree nomenclature.

**405.4.2** *Consideration of a proposal of ICAR-IIHR, Bengaluru for renaming the PHT degree as Horticulture (Post Harvest Technology)*

**405.4.3** *Consideration of a proposal of Board of Studies, PIIT, IARI for renaming M.Sc. degree as M.Sc. Horticulture (Post Harvest Technology)*

**405.4.4** *Consideration of a proposal to retain the nomenclature of the degree in the discipline Computer Application and Bioinformatics as M.Sc. (Computer Application) and M.Sc. (Bioinformatics), not pre-fixing with M.Sc. (Agriculture) as approved in 404<sup>th</sup> Meeting of the Academic Council*

The Academic Council discussed the above issues in detail and decided that keeping in view the uniform nomenclature for M.Sc. degree as recommended by the 5<sup>th</sup> Deans' Committee, the same should be maintained at IARI in all the disciplines as already decided by the Academic Council, in its 404<sup>th</sup> meeting held on 7.7.2017 except for the disciplines of Bioinformatics, Computer Application and Molecular Biology and Biotechnology, subject to the clarification from the Education Division.

**405.4.5.** The Academic Council discussed the instructions of UGC, as recommended by the Standing Committee to make students aware about disaster management, planning for natural disasters and emergencies and decided that a *Non Credit Compulsory E-Course "PGS 507" (one Credit) may be developed by the Discipline of Agricultural Extension* from 2018-19 session covering the aspects : (i) Bomb threat, (ii) Earthquake, (iii) Explosion, (iv) Hazardous materials spill/release, (v) Campus shooting, (vi) Terrorist incidence and (vii) Financial emergency such as (a) A sudden health emergency, (b) unexpected loss of income, (c) Death in the family or other family emergency, (d) Rent in arrears and risk of eviction and (e) Natural disaster, (f) the social aspect/dealing with above threats, etc.

**405.4.6** Keeping in view the availability of one Research Guide and six faculty members at ICAR-CIAE, Bhopal, the Academic Council approved the start of third sub discipline of Agricultural Engineering: Soil and Water Conservation Engineering at ICAR-CIAE, Bhopal by allocating one seat for Ph.D. for admission during the academic session 2018-19.

**405.4.7** The Academic Council discussed the views of Director, ICAR-IISWC, Dehradun showing their inability to start M.Sc./M.Tech. degree programme at IISWC, Dehradun from the Academic Session 2018-19. Keeping in view of the above, the Academic Council decided to defer the start of academic programme at IISWC, Dehradun till the creation/development of minimum necessary students' amenities/facilities. Further, the expertise of the ICAR-IISWC scientists could be utilised in the research programme of IARI students in the discipline of Agricultural Engineering.

**405.4.8.** The Academic Council approved the proposal to hold discipline-wise common qualifying exam for Ph.D. students at IARI (instead of single student based) of the concerned students after completion of 75% of course work both in the major and minor fields.

**Agenda Item No. 405.5: Consideration of the proceedings of the meeting of the Standing Committee on Faculty & Discipline held on 5.12.2017**

The Academic Council approved the following recommendations made by the Standing Committee on Faculty and Discipline:

**405.5.1 Recommended** the candidature of following **twenty one** Scientists for induction into P.G. Faculty in their respective disciplines.

S. No.	Name & Designation	Name of the Discipline
<b>IARI, New Delhi</b>		
1.	Dr. Teekam Singh, Senior Scientist	Agronomy
2.	Dr. Arun Kumar Shukla, Principal Scientist, IARI RS Shimla	Fruit Science
3.	Dr. (Mrs.) Prachi Shripatiroa Yadav, Scientist	Genetics and Plant Breeding
4.	Dr. Ambrish Kumar Sharma, Principal Scientist	Genetics and Plant Breeding
5.	Dr. Gyan Prakash Mishra, Scientist	Genetics and Plant Breeding
6.	Dr. Nalini Ranjan Kumar, Principal Scientist, NAIP	Agricultural Economics
7.	Dr. Harbir Singh, Principal Scientist	Agricultural Economics
8.	Dr. Jitendra Kumar Ranjan, Senior Scientist	Vegetable Science
9.	Dr. Rashid Pervez, Principal Scientist	Nematology
10.	Dr. D. Vijay, Senior Scientist	Seed Science & Technology
11.	Dr. Yasin Jeshma K., Scientist, NBPGR	Bioinformatics
12.	Dr. Anil Kumar Singh, Principal Scientist, IARI RS Indore	Agricultural Extension
13.	Dr. Kuldeep Tripathi, Scientist	Plant Genetic Resources
14.	Dr. Neeraj Patanjali, Scientist, SSAC	Agricultural Chemicals
15.	Dr. Sarika, Scientist	Agricultural Statistics
<b>ICAR-IIHR, Bengaluru</b>		
16.	Dr. Smaranika Mishra, Scientist, IIHR Bengaluru	Vegetable Science
17.	Dr. T.R. Rupa, Principal Scientist, IIHR Bengaluru	Soil Science and Agricultural Chemistry
<b>ICAR-CIAE, Bhopal</b>		
18.	Dr. N.S. Chandel, Scientist	Agricultural Engineering (FMP)
19.	Dr. Manoj Kumar, Scientist	Agricultural Engineering (FMP)
20.	Dr. Adinath Kate, Scientist	Agricultural Engineering (ASPE)
21.	Dr. K.V. Ramana Rao, Principal Scientist	Agricultural Engineering (SWCE)

**405.5.2** The application of following scientists should be routed through the Board of Studies of their concerned parent disciplines.

S. No.	Name & Designation	Name of the present Discipline	Ph.D. Degree in
1.	Dr. Vijay Singh Meena, Scientist	Plant Genetic Resources	Horticulture
2.	Dr. Surendra Pal Singh, Principal Scientist	Plant Genetic Resources	Entomology
3.	Dr. Archana Watts, Scientist	Plant Physiology	Molecular Biology and Biotechnology

4.	Dr. Pranita Jaiswal, Principal Scientist	Microbiology	Botany
5.	Dr. S. Vimla Devi, Senior Scientist	Plant Genetic Resources	Genetics and Plant Breeding

**405.5.3** Did not recommend the induction of following ten scientists as Faculty Members as they do not meet the prescribed requirement of teaching and/ research publications.

S. No.	Name & Designation	Name of the Discipline	Reason for Declining
1.	Dr. Arun Kumar T V, Scientist	Agricultural Engineering (ASPE)	Short of one Research Publication
2.	Er. A P Pandurang, Scientist	Agricultural Engineering (ASPE)	Short of three years post M.Tech. experience as Scientist and short of two Research Publication
3.	Dr. Ashutosh Pradeep Rao, Scientist, CIAE, Bhopal	Agricultural Engineering (FMP)	Short of one Research Publication
4.	Er. Ajit Kumar Naik, Scientist, CIAE, Bhopal	Agricultural Engineering (SWCE)	Short of three Research Publication
5.	Dr. Mukesh Kumar, Scientist, CIAE, Bhopal	Agricultural Engineering (SWCE)	Short of one Research Publication
6.	Er. Radhe Ravindra D Scientist, CIAE, Bhopal	Agricultural Engineering (SWCE)	Short of two Research Publication
7.	Er. Waghaye Abhishek M. Scientist, CIAE, Bhopal	Agricultural Engineering (SWCE)	Short of three Research Publication
8.	Dr. Yogesh Rajwade Scientist, CIAE, Bhopal	Agricultural Engineering (SWCE)	Short of two Research Publication
9.	Dr. Raghu B R, Scientist, IIHR, Bengaluru	Genetics and Plant Breeding	Want of Publications
10.	Mrs. Pushpa Chetan Kumar, Scientist, IIHR, Bengaluru	Post Harvest Technology	Want of Publications, MSc. Degree and Transcript

**405.5.4** Recommended the following fifteen faculty members as Research guides for M.Sc. guidance in their respective disciplines as they meet the prescribed requirement for becoming the research guides.

S. No.	Name & Designation	Name of the Discipline
1.	Dr. R.P. Pant, Principal Scientist	Plant Pathology
2.	Dr. Kanhaiya Singh, Principal Scientist	Fruit Science
3.	Dr. Tushar Kanti Bag, Principal Scientist	Plant Pathology
4.	Dr. Madhubala Thakre, Scientist	Fruit Science
5.	Dr. Mir Asif Iqbal, Scientist	Agricultural Statistics
6.	Dr. Wasi Alam, Scientist	Agricultural Statistics
7.	Dr. Neelu Jain, Senior Scientist	Genetics and Plant Breeding
8.	Dr. Venu Lenin, Senior Scientist	Agricultural Extension
9.	Dr. K.K. Chaturvedi, Senior Scientist	Bioinformatics
10.	Dr. D.C. Mishra, Scientist	Bioinformatics
11.	Dr. Praveen Kumar Singh, Principal Scientist	Vegetable Science
12.	Dr. T. Nepolean, Principal Scientist	Bioinformatics
13.	Dr. Sanjeev Kumar, Scientist	Bioinformatics
14.	Dr. Satish Devram Lande, Scientist	Agricultural Engineering (FPE)

15. *	Dr. C. Vasugi, Principal Scientist, IIHR, Bengaluru	Fruit Science
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\*eligible and recommended for Ph.D. guidance

**405.5.5** Did not recommend the recognition of the following **thirteen** faculty members as Research Guides as they do not meet the prescribed requirement of teaching experience/student guidance.

S. No.	Name and Designation	Name of the Discipline	Reason for declining
1.	Dr. Sandhya Gupta, Principal Scientist, NBPGR, New Delhi	Plant Genetic Resources	Short of One year teaching experience
2.	Dr. Nimisha Sharma, Scientist, IARI, New Delhi	Fruit Science	Short of One year teaching experience
3.	Dr. M. Sankaran, Principal Scientist, IIHR, Bengaluru	Fruit Science	Short of one student guidance
4.	Dr. J. Satisha, Principal Scientist, IIHR, Bengaluru	Fruit Science	Short of one year teaching experience and one student guidance
5.	Dr. Anuradha Sane, Principal Scientist, IIHR, Bengaluru	Fruit Science	Short of two year teaching experience and two student guidance
6.	Dr. H.S. Oberoi, Principal Scientist, Microbiology, IIHR, Bengaluru	Post Harvest Technology	Not eligible for PHT as his parent discipline is Microbiology (also Short of one year teaching experience and student guidance)
7.	Dr. T. Sakthivel, Principal Scientist, IIHR, Bengaluru	Fruit Science	Short of two year teaching experience and two student guidance
8.	Dr. Saroj Kumar Giri, Principal Scientist, CIAE, Bhopal	Agricultural Engineering (ASPE)	Short of two student guidance
9.	Dr. K.P. Singh, Senior Scientist, CIAE, Bhopal	Agricultural Engineering (FPE)	Short of two student guidance
10.	Dr. B.M. Nandede, Scientist, CIAE, Bhopal	Agricultural Engineering (FPE)	Short of one year teaching experience, two research publications and two student guidance
11.	Dr. Sandeep Gangil, Principal Scientist, CIAE, Bhopal	Agricultural Engineering (FPE)	Short of one year teaching experience and two student guidance
12.	Dr. K.V. Ramana Rao, Principal Scientist, CIAE, Bhopal	Agricultural Engineering (SWCE)	Short of two research publications and two student guidance
13.	Dr. C.K. Saxena, Senior Scientist, CIAE, Bhopal	Agricultural Engineering (SWCE)	Short of two research publications and two student guidance

**405.5.6** The Academic Council agreed on the recommendation of the Standing Committee that the candidature of **Dr. Ashwani Kumar**, Former Director, ICAR-IIWM for recognition of **Adjunct faculty** in the discipline of Water Science and Technology, IARI as per prescribed guidelines approved by the Academic Council in its 402<sup>nd</sup> meeting held on 30/11/2016 and notified vide Notification No. PGS/1-402/AC/2016 dated 20/1/2017.

**405.5.7** The Academic Council discussed the recommendations of the Standing Committee on the representations from the Principal Scientists of Nematology/Agricultural Chemicals/Faculty Representative and opined that the existing Assessment Criteria for nomination of Professor should be continued.



**Agenda Item No. 405.6 Consideration of the Academic Calendar for the 61<sup>st</sup> Academic Session 2018-19**

The Academic Council approved the Academic Calendar of the P G School for the 61<sup>st</sup> Academic Session.

<b>Admission Process for the Academic Session 2018-2019</b>		
<b>2018</b>		
March 10-11	Saturday & Sunday	Advertisement for inviting on line applications for Ph.D. admission will be published in all the leading national news papers
March 12	Monday	Receipt of online applications for Ph.D. admission starts
April 16	Monday	Last date for receipt of online applications for admission to Ph.D. Programme
April 23	Monday	Last date for receipt of through proper channel applications and documents submission
June 03	Sunday	Entrance Examination for admission to Ph.D. Programme
June 18	Monday	Last date for submission of thesis by IARI M.Sc. students who have applied for admission to the Ph.D. Programme
June 23	Saturday	Declaration of result of Written Test for admission to Ph.D. programme
June 30	Saturday	Last date for receipt of mark sheet from the candidates who are studying in M.Sc. final year
July 02	Monday	Interview for admission to Ph.D. Programme in the respective disciplines
July 07	Saturday	Academic Council meeting for finalization of results for M.Sc. & Ph.D. admissions 2018-19
July 26-27	Thursday & Friday	Verification of original documents and online Registration of newly admitted M.Sc. and Ph.D. Programmes 2018-19
July 28	Saturday	Orientation Programme: Newly admitted students to be addressed by Dean and Director, IARI
<b>I – Trimester</b>		
July 30	Monday	First Trimester begins, payment of fees and online registration of continuing students
July 31	Tuesday	Commencement of Class Work
August 16	Thursday	Last date for adding/dropping of course
September 05	Wednesday	Teacher day celebration and lecture
November 12	Monday	National Agricultural Education day celebration and lecture
November 13 to November 17	Tuesday to Saturday	Final Examination of I Trimester
<b>II – Trimester</b>		
November 19	Monday	Online Registration of students
November 20	Tuesday	Commencement of Class Work
December 02	Sunday	Agricultural Education Day
December 04	Tuesday	Last date for adding/dropping of courses
December 16 to December 30	Sunday to Sunday	Winter Break

2019		
January 28	Monday	Last date for holding of Final Viva- Voce Examination for consideration for award of IARI Merit Medals and award of degree in the 57 <sup>th</sup> Convocation, 2019
February 04	Monday	<b>Commencement of 57<sup>th</sup> Convocation Week Programme</b>
February 07	Thursday	<i>49<sup>th</sup> Lal Bahadur Shastri Memorial Lecture</i>
February 08	Friday	57 <sup>th</sup> Convocation
February 23 to February 25	Saturday to Monday	Annual Sports Meet (Tentative)
March 25 to March 30	Monday to Saturday	<b>Final Examination of II Trimester</b>
<b>III - Trimester</b>		
April 01	Monday	Online Registration of students
April 02	Tuesday	Commencement of Class Work
April 16	Tuesday	Last date for adding/dropping of course
May 26 to June 16	Sunday to Sunday	Summer Vacation
July 15 to July 20	Monday to Saturday	<b>Final Examination of III Trimester</b>
July 21 to July 28	Sunday to Sunday	Trimester Break

**Agenda Item No. 405.7: Finalisation of 56<sup>th</sup> Convocation Week Programme**

The Academic Council approved the following 56<sup>th</sup> Convocation programme of IARI scheduled from February 5-9, 2018.

**Venue: Dr. B.P. Pal Auditorium**

**Monday, February 05, 2018**

09.30-18.00 hrs.

Presentation of "Significant Post Graduate Students Research" by M.Sc. & Ph.D. students for "Merit Medals" and "Best Student of the Year" award

**Tuesday, February 06, 2018**

**Presentation of Significant Educational Achievements for the year 2017 by the Professors representing different schools of the teaching disciplines**

09.30-11.15 hrs.

Session I – Crop Improvement

11.30-13.00 hrs.

Session II – Crop Protection

14.00-15.45 hrs.

Session III – Resource Management

16.00-17.00 hrs.

Session IV – Basic Sciences

17.15-18.30 hrs.

Session V – Horticultural Sciences



### Wednesday, February 07, 2018

Presentation of Significant Educational Achievements for the year 2017  
by the Professors representing different schools of the teaching  
disciplines

09.30-10.45 hrs. Session VI – Social Sciences

#### Award Lectures

11.00-12.15 hrs. Lecture by the Recipient of Sukumar Basu Memorial Award

12.30-13.45 hrs. Lecture by the Recipient of Shri Harikrishna Shastri Memorial Award

15.00-16.15 hrs. Lecture by the Recipient of Dr. A.B. Joshi Award

### Thursday, February 08, 2018

**Venue: Conference Hall, IARI Library**

09.30-10.30 hrs. 406<sup>th</sup> Meeting of the Academic Council, IARI

11.00-12.00 hrs. Meeting of Board of Management, IARI

12.15-13.00 hrs. Press Conference

**Venue: Dr. B.P. Pal Auditorium**

14.00-15.30 hrs. 48<sup>th</sup> Lal Bahadur Shastri Memorial Lecture

**Venue: Lawns of Dr. B.P. Pal Auditorium**

15.45-16.30 hrs. Full Dress Rehearsal

### Friday, February 09, 2018

**Venue: Lawns of Dr. B.P. Pal Auditorium**

10.00-12.00 hrs. 56<sup>th</sup> Convocation

**Venue: Dr. B.P. Pal Auditorium**

18.00 hrs. Cultural Programme by P. G. Students

**Venue: Lawns of Genetics Division**

20.00 hrs. Convocation Dinner

The process on the following items has already been completed with the approval of the Chairman of the Academic Council to enable the P.G. School to complete all the pre-convocation requirements well in time. The action taken was approved by the Academic Council.

1. Finalization of Chief Guest
2. Chairpersons for the various Programmes
  - i) Chairman, Judging Committee and Convenor for the programme "Significant Post Graduate Students Research-2017 presentation" by the PG students for IARI Merit Medals" and Best Student of the Year Award on Monday, February 05, 2018 (Convener: Dr. D.K. Singh, Professor, Agricultural Engineering)
  - ii) Chairpersons and Conveners for the Programme "Presentation of Significant Educational Achievements of IARI for the year 2017" by the Professors of teaching disciplines representing different schools on Tuesday, February 06, 2018 (Convener: Dr. T.K. Behera, Professor, Vegetable Science)

## 3. Lecture by the recipients of the following awards

- i) Sukumar Basu Memorial Award
- ii) Shri Hari Krishna Shastri Memorial Award
- iii) Dr. A.B. Joshi Memorial Award

4. Speaker to deliver 48<sup>th</sup> Lal Bahadur Shastri Memorial Lecture:5. Chairman for the 48<sup>th</sup> Lal Bahadur Shastri Memorial Lecture:

## 6. Chairpersons for the below mentioned Committees:

i) Pandal and Seating Arrangements Committee	Dr. Indra Mani, Head, Agricultural Engineering
ii) Catering Arrangement Committee	Shri M.K. Jain, Joint Director (Admn.) (Acting)
iii) Invitation Committee	Dr. (Ms.) Rashmi Aggarwal, Head, Plant Pathology
iv) Reception Committee	Dr. B.S. Dwivedi, Head, SS&AC
v) Cultural Programme & Invocation Song Committee	Dr. (Mrs.) K. Annapurna, Head, Microbiology
vi) Decoration Committee	Dr. Markandey Singh, Senior Scientist, FLS
vii) Publicity Committee	Dr. R.N. Padaria, Professor, Agricultural Extension
viii) Transport and Accommodation Committee	Sh. Pushpender Kumar, Chief Admn. Officer

**Agenda Item No.405.8:** *Consideration of the list of the candidates who have become eligible for award of their respective degrees of Master of Science and Doctor of Philosophy as on 13.12.2017*

The Academic Council approved the list of **137** candidates for the award of degree of M.Sc./M.Tech. and **50** candidates for Doctor of Philosophy who have completed all the prescribed requirement including their Final Viva-Voce Examination as on 13.12.2016 (**Appendix-I**).

**Agenda Item No. 405.9:** *Finalization of number of seats and qualification for admission to M.Sc./M.Tech. and Ph.D. degree programmes for the Academic Session 2018-19*

The number of seats for M.Sc./M.Tech. and Ph.D. programmes in various disciplines at IARI, New Delhi, IARI, Jharkhand and IARI, Assam required for the Academic Session 2018-19 was approved by the Academic Council.

**M. Sc./M.Tech. Programme:** The seat requirement will be sent to the Education Division of ICAR as they hold the All India Entrance Examination for admission (AIEEA – PG-2018) and Award of ICAR-JRF to Master's degree programme of IARI, IVRI, NDRI, CIFE, CAU and SAU's.

S.No.	Discipline	GEN	OBC	SC	ST	PH	Total
<b>A. IARI, NEW DELHI</b>							
1.	AGRICULTURAL CHEMICALS	2	2	1	0	0	5
2.	AGRICULTURAL ECONOMICS	2	1	1	0	0	4
3.	AGRICULTURAL ENGG. (Agricultural Processing & Structure)	1	0	0	0	0	1

S.No.	Discipline	GEN	OBC	SC	ST	PH	Total
<b>A. IARI, NEW DELHI</b>							
4.	AGRICULTURAL ENGG. (Farm Power & Equipment)	1	1	1	1	0	4
5.	AGRICULTURAL ENGG. (Soil & Water Conservation Engineering)	3	1	0	0	0	4
6.	AGRICULTURAL EXTENSION	3	2	1	0	0	6
7.	AGRICULTURAL PHYSICS	2	1	1	0	0	4
8.	AGRICULTURAL STATISTICS	3	3	0	1	0	7
9.	AGRONOMY	3	1	1	0	0	5
10.	BIOCHEMISTRY	3	1	0	0	0	4
11.	BIOINFORMATICS	3	1	1	0	1	5
12.	COMPUTER APPLICATION	3	1	1	1	0	6
13.	ENTOMOLOGY	3	1	1	0	0	5
14.	ENVIRONMENTAL SCIENCES	2	2	1	1	0	6
15.	FLORICULTURE AND LANDSCAPING ARCHITECTURE	1	1	1	0	0	3
16.	FRUIT SCIENCE	3	1	1	0	0	5
17.	GENETICS AND PLANT BREEDING	3	1	1	1	1	6
18.	MICROBIOLOGY	3	1	1	0	0	5
19.	MOLECULAR BIOLOGY AND BIOTECHNOLOGY	3	2	1	1	0	7
20.	NEMATOTOLOGY	3	1	0	0	0	4
21.	PLANT GENETIC RESOURCES	2	1	0	1	0	4
22.	PLANT PATHOLOGY	3	2	1	1	1	7
23.	PLANT PHYSIOLOGY	3	1	1	0	0	5
24.	POST HARVEST TECH. (PHT of Horticultural Crops)	1	2	0	1	0	4
25.	POST HARVEST TECH. (Post Harvest Engineering & Technology)	0	1	0	0	0	1
26.	SEED SCIENCE AND TECHNOLOGY	3	1	1	1	1	6
27.	SOIL SCIENCE AND AGRICULTURAL CHEMISTRY	2	1	1	0	0	4
28.	VEGETABLE SCIENCE	2	1	1	0	0	4
29.	WATER SCIENCE AND TECHNOLOGY	1	1	0	0	0	2
<b>TOTAL-A</b>		<b>67</b>	<b>36</b>	<b>20</b>	<b>10</b>	<b>4</b>	<b>133</b>
<b>B. IARI, ASSAM</b>							
a	AGRONOMY	1	0	1	0	0	2
b	GENETICS AND PLANT BREEDING	2	1	0	0	0	3
c	SOIL SCIENCE AND AGRICULTURAL CHEMISTRY	1	1	0	1	0	3
d	VEGETABLE SCIENCE	1	1	1	0	0	3
<b>TOTAL-B</b>		<b>5</b>	<b>3</b>	<b>2</b>	<b>1</b>	<b>0</b>	<b>11</b>
<b>C. IARI, JHARKHAND</b>							
a	AGRONOMY	2	1	0	0	0	3
b	GENETICS AND PLANT BREEDING	2	0	1	0	1	3
c	SOIL SCIENCE AND AGRICULTURAL CHEMISTRY	1	1	0	1	0	3
d	VEGETABLE SCIENCE	1	1	0	0	0	2
<b>TOTAL-C</b>		<b>6</b>	<b>3</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>11</b>
<b>Grand Total</b>		<b>78</b>	<b>42</b>	<b>23</b>	<b>12</b>	<b>5</b>	<b>155</b>

**Ph. D. Programme:** The all India Entrance Examination to the Ph.D. degree programmes at IARI is conducted by the Post Graduate School with the assistance of Examination Committee constituted by the Chairman, Academic Council.

S.No.	Discipline	GEN	OBC	SC	ST	PH	Total
<b>A. IARI, NEW DELHI</b>							
1.	AGRICULTURAL CHEMICALS	3	2	1	0	0	6
2.	AGRICULTURAL ECONOMICS	2	1	1	1	0	5
3.	AGRICULTURAL ENGG. (Agricultural Processing & Structure)	1	0	1	0	0	2
4.	AGRICULTURAL ENGG. (Farm Power & Equipment)	2	1	0	1	0	4

S.No.	Discipline	GEN	OBC	SC	ST	PH	Total
<b>A. IARI, NEW DELHI</b>							
5.	AGRICULTURAL ENGG. (Soil & Water Conservation Engineering)	2	1	0	0	0	3
6.	AGRICULTURAL EXTENSION	4	2	1	0	0	7
7.	AGRICULTURAL PHYSICS	3	1	1	0	0	5
8.	AGRICULTURAL STATISTICS	3	3	1	1	0	8
9.	AGRONOMY	5	2	3	0	0	10
10.	BIOCHEMISTRY	3	2	0	0	0	5
11.	BIOINFORMATICS	3	1	1	0	0	5
12.	COMPUTER APPLICATION	3	1	1	1	1	6
13.	ENTOMOLOGY	3	1	1	0	0	5
14.	ENVIRONMENTAL SCIENCES	2	2	1	1	1	6
15.	FLORICULTURE AND LANDSCAPING ARCHITECTURE	2	1	1	0	0	4
16.	FRUIT SCIENCE	3	1	1	0	0	5
17.	GENETICS AND PLANT BREEDING	7	3	1	2	0	13
18.	MICROBIOLOGY	3	2	1	0	0	6
19.	MOLECULAR BIOLOGY AND BIOTECHNOLOGY	4	2	1	1	0	8
20.	NEMATOLOGY	2	1	1	0	0	4
21.	PLANT GENETIC RESOURCES	3	1	0	1	0	5
22.	PLANT PATHOLOGY	4	3	1	1	1	9
23.	PLANT PHYSIOLOGY	3	2	1	0	0	6
24.	POST HARVEST TECH. (PHT of Horticultural Crops)	1	1	0	0	0	2
25.	POST HARVEST TECH. (Post Harvest Engineering & Technology)	0	1	0	0	0	1
26.	SEED SCIENCE AND TECHNOLOGY	3	1	1	1	1	6
27.	SOIL SCIENCE AND AGRICULTURAL CHEMISTRY	5	3	1	0	0	9
28.	VEGETABLE SCIENCE	4	2	2	2	1	10
29.	WATER SCIENCE AND TECHNOLOGY	4	2	1	0	0	7
	<b>TOTAL-A</b>	<b>87</b>	<b>46</b>	<b>26</b>	<b>13</b>	<b>5</b>	<b>172</b>
<b>B. CIAE, BHOPAL</b>							
	AGRICULTURAL ENGG. (Agricultural Processing & Structure)	3	1	1	1	1	6
	AGRICULTURAL ENGG. (Farm Power & Equipment)	3	2	1	0	0	6
	AGRICULTURAL ENGG. (Soil and Water Conservation Engg.)	1	0	0	0	0	1
	<b>TOTAL-B</b>	<b>7</b>	<b>3</b>	<b>2</b>	<b>1</b>	<b>1</b>	<b>13</b>
	<b>Grand Total</b>	<b>94</b>	<b>49</b>	<b>28</b>	<b>14</b>	<b>6</b>	<b>185</b>

The following schedule related to Ph.D. Programme was approved by the Academic Council.

**Date of Entrance Examination : 3.6.2018 (Sunday)**

**Name of the Examination Centres:** Anand, Bengaluru, Ludhiana, Coimbatore, Delhi, Guwahati, Jabalpur, Hyderabad, Patna, Kolkata, Pune, Udaipur and Varanasi.

In addition to the seats finalized for open stream, seats for admission to M.Sc. & Ph.D. programmes under other streams are detailed below:

Faculty Up-gradation Scheme	-	10 seats for Ph.D. only
ICAR-In-Service Nominee Scheme	-	10 seats for Ph.D. only
Departmental (Scientific Cadre)	-	10 seats (Provisional) for Ph.D. only
Departmental (Technical Cadre)	-	26 seats for M.Sc. & Ph.D.
Foreign Students	-	30 seats for M.Sc. & Ph.D.

***Agenda Item No. 405.10: Recommendations of the Committee constituted for a special IARI Merit Medal for the best Ph.D. student from the North Eastern Region.***

The Academic Council deliberated on the recommendations of the Committee on Institution of a special IARI Merit Medal for the best Ph.D. student from the North Eastern Region and was of the opinion that there should be only one platform and uniform criteria for all the students in this competitive event. Creation of any special medal for selected group of states/region will dilute the spirit and purpose of this competitive event which was instituted for encouraging high quality research and meritorious performance during the Ph.D. curriculum.

***Agenda Item No. 405.11: Relaxation in 18 month contact period condition for Split Ph.D. Programme***

The Academic Council discussed the issue at length and did not agree to relax 18 months contact period condition for split Ph.D. programme. However students who have (a) successfully completed 100% of course work requirement; (b) successfully completed qualifying examination; (c) has got approved his/her ORW from Dean and completed most of the research works certified by the Advisory committee as well as the BOS and (d) completed more than 24 months with P.G. School, they could be permitted to seek temporary relief from Ph.D. programme for accepting employment in Government/Public/Private sector with the condition that after rejoining the programme, should complete the residential requirement of 36 months.

The Academic Council also decided that the concerned Standing Committee shall also examine the further continuance of Split Ph.D. programme in future.

***Agenda Item No. 405.12: Consideration of Joint Degree Programme between IARI-ANASTU***

The Academic Council discussed the issue at length and agreed in principle the Joint Degree Programme between IARI and ANASTU subject to (i) the fulfilment of course credit requirements of the PG School, IARI, New Delhi and (ii) the intimation to UGC/Ministry of External Affairs (MEA).

***Agenda Item No. 405.13: Creation of supernumerary seats to grant 5% reservation to the candidates belonging to children/widows of eligible personnel of Security Forces in Master and Ph.D. Programme at IARI.***

The Academic Council discussed the request of Home Secretary, Govt. of India to implement the similar provision as available with Delhi University reserving 5% seats in each courses and give 5% mark in the minimum eligibility requirement in the qualifying examination to the children/widows of following eligible personnel of Security Forces: After detailed deliberation, Academic Council decided to allocate 5 seats for M.Sc. & Ph.D. from the academic session 2018-19 in addition to the seats finalised for open streams for the following order of priority for admission of candidates belonging to children/widows of eligible personnel of Security Forces:

- i) Widows/Wards of Defence Personnel killed in action.



- ii) Wards of serving personnel and ex-servicemen disabled in action.
- iii) Widows/Wards of Defence personnel who died in peace time with death attributable to military service.
- iv) Wards of Defence personnel disabled in peace time with disability attributable to military service.
- v) Wards of Ex-servicemen personnel and serving personnel including personnel of police forces who are in receipt of Gallantry awards. Category (V):- Gallantry Awards include: ParamVir Chakra, Ashok Chakra, SarvottamYudhSeva Medal, MahaVir Chakra, Kirti Chakra, UttamYudhSeva Medal, Vir Chakra, Shaurya Chakra, YudhSeva Medal, Sena, NauSena-Vayusena Medal, Mention-in-Despatches.
- vi) President's Police Medal for Gallantry, Police Medal for Gallantry.

They shall also be eligible for relaxation in the minimum educational qualification criteria as available to other reserved category. These seats shall be specifically for the ward/widows of the defence personnel only and not to be transferred and filled by any other category.

**Agenda Item No. 405.14: Any other item with the permission of the Chair**


**405.14.1** On the issue of Ms. Revathi C, Roll No.9716 for not completing her FVVE in prescribed period of study after submission of thesis on 03/02/2016, the Academic Council decided that one last warning with a time limit may be issued to her for completion of FVVE. If she fails to do so, her name may be removed from the rolls of P.G. School.

**405.14.2** On the issue of submission of thesis in only soft form in the Professor M.S. Swaminathan Library due to lack of space, the Academic Council was of the opinion that the status quo may be maintained and theses should also be kept in the the hard form.

**405.14.3** The issue of changing Degree nomenclature from M.Sc. to M.Tech. for the students of Water Sciences and Technology was not agreed to by the Academic Council.

The meeting ended with a vote of thanks to the chair.

  
(K.M. Manjiah)  
Member-Secretary

  
(A.K. Singh)  
Chairman

  
(R.K. Jain) 5/1/18  
Vice Chairman

List of candidates who have successfully completed all the requirements including final viva-voce examination for the award of degree of Master of Science as on 13.12.2017

No.	ROLL NO	NAME OF THE STUDENT	Title of Thesis
<b>AGRICULTURAL CHEMICALS</b>			
1	20629	ROHAN SARKAR	PROFILING, ANTIOXIDANT ACTIVITY AND IN-VITRO BIOAVAILABILITY OF ANTHOCYANIN(S) IN <i>Carissa carandas</i> FRUITS
2	20630	SHUVAJIT DUTTA	MONOTERPENIC CONSTITUENTS FROM <i>Trachyspermum ammi</i> (L.) SEEDS AND THEIR ANTIOXIDANT ACTIVITY
3	20632	Ms. USHA KUMARI	SORPTION AND LEACHING OF FLUCELOSULFURON IN SOIL
4	20633	Ms. NAMRATA LASKAR	PERSISTENCE, MOBILITY AND MICROBIAL DEGRADATION OF PENTACHLOROPHENOL
<b>AGRICULTURAL ECONOMICS</b>			
5	20634	BISWAJIT SEN	ECONOMIC ANALYSIS OF AGRICULTURAL DIVERSIFICATION AND ITS IMPACT ON FARM INCOME IN BIHAR
6	20635	PHILIP KURIACHEN	CLIMATE CHANGE AND VEGETABLE PRODUCTION: AN ANALYSIS OF IMPACTS AND FARMERS' ADAPTATION STRATEGIES IN KARNATAKA
7	20636	SHARATH S YELIGAR	ECONOMETRIC ANALYSIS OF IMPORT DEMAND OF PULSES IN INDIA
8	20637	SUNIL KUMAR B R	ECONOMIC ANALYSIS OF THE CLIMATE VARIABILITY AND ITS IMPACT ON CROP PRODUCTION IN MARATHWADA REGION OF MAHARASHTRA
<b>AGRICULTURAL ENGINEERING</b>			
9	20638	Ms. MAHANGADE PRIYANKA SHARAD	DEVELOPMENT OF GREEN ENERGY BASED VEGETABLE TRANSIT STORAGE UNIT
10	20639	MANJUNATH	DESIGN AND DEVELOPMENT OF SENSOR CONTROLLED MECHANISM OF SEED METERING FOR CHECK ROW PLANTING
11	20640	PREM VEER GAUTAM	DEVELOPMENT OF MICROCONTROLLER BASED SEED METERING MECHANISM FOR PLANTING OF PULSE CROPS
12	20641	PRASHANT SINGH	STUDY ON WATERLOGGING AND SOIL SALINITY PROBLEMS IN BUTANA BRANCH OF WESTERN YAMUNA CANAL (WYC)
13	20642	Ms. KHATAL SANGITA ABA	MODELING OF HYDROLOGICAL PROCESSES IN A RAVINOUS WATERSHED IN SOUTH-EASTERN RAJASTHAN
<b>AGRICULTURAL EXTENSION</b>			
14	20643	Ms. LAXMIPRIYA UPADHYAYA	ANALYSIS OF DIGITAL DIVIDE IN AGRICULTURAL INFORMATION DELIVERY
15	20644	Ms. PRITI PRIYADARSHNI	AN ANALYTICAL STUDY ON ICT MEDIATED SOCIAL LEARNING FOR RISK ADJUSTMENT IN AGRICULTURE
16	20645	SAHIL SWANGLA	A STUDY ON INDIGENOUS TECHNICAL KNOWLEDGE (ITKS) IN TRIBAL FARMING SYSTEM OF HIMACHAL PRADESH
17	20646	GIREESH S.	AN ANALYTICAL STUDY OF YIELD GAPS IN MAJOR PULSES
18	20647	Ms. SONITA RANI SETHY	IDENTIFICATION AND VALIDATION OF INDICATORS OF A MODEL VILLAGE

No. ROLL NO NAME OF THE STUDENT

Title of Thesis

### AGRICULTURAL PHYSICS

- |    |       |                   |  |
|----|-------|-------------------|--|
| 19 | 20648 | VIKAS KUMAR RAI   | MODELING SOIL HYDROTHERMAL DYNAMICS, ROOT WATER UPTAKE AND RADIATION USE IN PIGEONPEA UNDER CONSERVATION AGRICULTURE             |
| 20 | 20649 | RAM NARAYAN SINGH | MICROMETEOROLOGICAL AND BIOPHYSICAL PARAMETERS OF CHICK PEA UNDER THE INTERACTION OF ELEVATED SURFACE OZONE AND CARBON DIOXIDE   |
| 21 | 20650 | MADANMOHAN MEENA  | MODELING SOIL WATER DYNAMICS AND ROOT WATER UPTAKE IN WHEAT UNDER DIFFERENT TILLAGE AND IRRIGATION PRACTICES                     |
| 22 | 20651 | RAJESH NISHAD     | RELATION OF MICROMETEOROLOGICAL PARAMETERS WITH BIOPHYSICAL CHARACTERS AND APHID INFESTATION IN MUSTARD UNDER TEMPERATURE STRESS |

### AGRICULTURAL STATISTICS

- |    |       |                     |  |
|----|-------|---------------------|--|
| 23 | 20521 | PRAKASH LAKRA       | A STUDY OF BIVARIATE STRUCTURAL TIME-SERIES MODELS AND THEIR APPLICATIONS.                             |
| 24 | 20652 | DIPANKAR MITRA      | A STUDY OF LONG MEMORY TIME-SERIES MODELS FOR PRICE FORECASTING  |
| 25 | 20653 | RONIT JAISWAL       | CHAIN TYPE PRODUCT ESTIMATORS FOR TWO STAGE SAMPLING DESIGN  |
| 26 | 20654 | ASHIS RANJAN UDGATA | ESTIMATION OF ACREAGE UNDER MANGO INTEGRATING REMOTE SENSING AND SURVEY DATA IN WEST GODAVARI DISTRICT |
| 27 | 20655 | MD YEASIN           | BAYESIAN TECHNIQUE FOR MODELLING AND FORECASTING CROP YIELD AND VOLATING AGRICULTURAL DATA             |
| 28 | 20656 | AKHILESH JHA        | BLOCK DESIGNS FOR EXPERIMENTATION ON UNEVEN LAND   |
| 29 | 20658 | SAMIR BARMAN        | PREDICTION OF FINITE POPULATION TOTAL FOR GEO-REFERENCED DATA  |

### AGRONOMY

- |    |       |                      |  |
|----|-------|----------------------|--|
| 30 | 20659 | SUMAN SEN            | EFFECT OF SEQUENTIAL HERBICIDES APPLICATIONS ON WEED INTERFERENCE AND GROWTH AND YIELD OF DIRECT-SEEDED RICE ( <i>Oryza sativa</i> L.)     |
| 31 | 20680 | AMARESH PRADHAN      | EFFECT OF TIME OF K APPLICATION ON PERFORMANCE OF MAIZE UNDER CONSERVATION   |
| 32 | 20661 | MANJUNATH HANJANATTI | STUDIES ON PRECISION NITROGEN MANAGEMENT IN MAIZE ( <i>ZEA MAYS</i> L)   |
| 33 | 20662 | KAJAL DAS            | STUDIES ON INTEGRATED CROP MANAGEMENT MODULES FOR ENHANCING PRODUCTIVITY AND PROFITABILITY OF DIRECT SEEDED BASMATI RICE                   |
| 34 | 20744 | MOHAMMAD SABER       | PLANTING DENSITY AND NITROGEN SCHEDULING STUDIES IN MUSTARD UNDER CONSERVATION AGRICULTURE BASED PEARLMILLET-MUSTARD                       |
| 35 | 20746 | RAHMAT GUL           | EFFECT OF IRRIGATION REGIMES AND CROP RESIDUE MULCH ON PRODUCTIVITY AND WATER ECONOMY OF LATE SOWN WHEAT                                   |
| 36 | 50001 | HARISH M N           | COMPARATIVE PERFORMANCE OF PROMISING RICE VARIETIES UNDER DIFFERENT NUTRIENT MANAGEMENT PRACTICES IN EASTERN HIMALAYES                     |
| 37 | 50002 | PARKASH VERMA        | "INFLUENCE OF NUTRIENT MANAGEMENT PRACTICES AND MICROBIAL INOCULANS ON PRODUCTIVITY AND SOIL QUALITY OF LOWLAND RICE IN EASTERN HIMALAYAS" |
| 38 | 60001 | AJAY PAL             | EFFECT OF CULTIVARS AND PHOSPHORUS FERTILIZATION IN DIRECT-SEEDED RICE.  |
| 39 | 60002 | ARJUN SINGH          | EFFECT OF PLANTING METHODS, IRRIGATION REGIMES AND SOIL ADJUVANT ON GROWTH AND PRODUCTIVITY OF AEROBIC RICE IN EASTERN INDIA               |



No. ROLL NO NAME OF THE STUDENT

Title of Thesis

## BIOCHEMISTRY

40 20663 Ms. URVI MEHROTRA

A STEP TOWARDS TARGETED GENOME EDITING (CRISPR/CAS9) IN SOYBEAN FOR IMPROVING ITS NUTRITIONAL VALUE

41 20664 ANSHEEF ALI T.P.

GENOME-WIDE IDENTIFICATION AND EXPRESSION PROFILING OF WHEAT OXYGEN EVOLVING ENHANCER PROTEIN GENE FAMILY IN RESPONSE TO HEAT

42 20665 Ms. MINNU SASI

MANIFESTATION OF OXIDATIVE BURST THROUGH BIO-ELICITOR TREATMENT TO MITIGATE DROUGHT STRESS IN RICE

## BIOINFORMATICS

43 20667 Ms. SNEHA MURMU

TRANSCRIPTOME ANALYSIS OF MOISTURE STRESS RESPONSIVE GENES IN LATHYRUS SATIVUS USING RNA-SEQ DATA

44 20668 Ms. RITWIKI DAS

DEVELOPMENT OF WEBSERVER FOR DISCOVERY OF POLYMORPHIC MICROSATELLITE DNA MARKERS

45 20669 AAMIR KHAN

DEVELOPMENT OF TRANSCRIPTOME BASED WEB GENOMIC RESOURCE OF SMALL CARDAMOM (*Elettaria cardamomum* Maton)

46 20670 Ms. SHWETA KUMARI

BIOINFORMATIC TOOL FOR ANALYSIS OF CROP DNA FINGERPRINTS

## COMPUTER APPLICATION

47 20540 Ms. SAPNA NIGAM

DEVELOPMENT OF DATA MART FOR SINGLE NUCLEOTIDE POLYMORPHISM IN RICE

48 20612 MUDENGE FABRICE

DECISION SUPPORT SYSTEM FOR EVALUATING AGRICULTURAL ACTIVITIES ON ERGONOMICS PARAMETERS

49 20613 KARANGWA JAMES

WEB BASED TOOL FOR SMALL AREA ESTIMATION UNDER UNIT LEVEL MODEL

50 20671 ARPAN KUMAR MAJI

ON-LINE ANALYTICAL PROCESSING SOLUTION FOR HUMAN RESOURCES MANAGEMENT IN INDIAN COUNCIL OF AGRICULTURAL RESEARCH

51 20672 ASIT KUMAR PRADHAN

WEB BASED SYSTEM FOR GENERATION OF STRUCTURALLY INCOMPLETE GENERALIZED ROW COLUMN DESIGNS

52 20673 HIMANSHUSHEKHAR CHAURASIA

MOBILE APPLICATION FOR SELECTING SEED SPICES CROP

53 20674 RAMESH PRAJAPAT

DEVELOPMENT OF DATA MART FOR COPY NUMBER VARIATION

54 20675 DILIP KUMAR

DEVELOPMENT OF DATA MART FOR SIMPLE SEQUENCE REPEATS

## ENTOMOLOGY

55 20676 NIRANJANA G N

STUDY ON SYSTEMATICS OF LEAFHOPPER FAUNA AT DIFFERENT ALTITUDES

56 20677 Ms. IPSITA SAMAL

BIOCHEMICAL CHANGES IN *Chilo partellus* (Swinhoe) POPULATIONS REARED ON MAIZE GENOTYPES

57 20678 THIMMEGOWDA M N

INVESTIGATION ON THERMAL TOLERANCE OF COTTON MEALYBUG PARASITOID, *AENASIVUS ARIZONENSIS* (CHALCIDOIDEA: ENCYRTIDAE)

58 20679 RAKSHITH H S

INVESTIGATION ON ORIENTATION AND FORAGING BEHAVIOR OF *COCCINELLA TRANSEVERALIS* FAB. (Coleoptera: Coccinellidae)

## ENVIRONMENTAL SCIENCES

59 20680 YOGENDER SAINI

IMPACT OF SELECTIVE TRACE ELEMENTS ON BIOGAS PRODUCTION FROM ADMIXTURE OF CATTLE DUNG AND WHEAT STRAW

60 20681 Ms. ANJALI KANDPAL

ASSESSMENT OF IMPACT OF TROPOSPHERIC OZONE AND AEROSOL VARIABILITY ON MICROCLIMATE, GROWTH AND YIELD OF WHEAT

No.	ROLL NO	NAME OF THE STUDENT	Title of Thesis
61	20682	KUMAR ANURAG BHASKAR	AMMONIA VOLATILIZATION LOSSES IN WHEAT UNDER CONSERVATION AND CONVENTIONAL MANAGEMENT PRACTICES
62	20684	ALESH KUMAR	EFFECT OF ENGINEERED ZINC OXIDE NANO-PARTICLE ON RICE PLANTS
63	20751	DEBABRATA PUNTIA	INTERACTIVE EFFECT OF ELEVATED CARBON DIOXIDE AND TEMPERATURE ON NITROGEN PARTITIONING, GROWTH AND YIELD OF RICE VARIETIES

## GENETICS

64	20685	MANDEEP SINGH	INHERITANCE AND MOLECULAR MAPPING OF LEAF RUST RESISTANCE IN SYNTHETIC HEXAPLOID WHEAT 'SYNTHETIC 55'
65	20687	SUNIL	QTL MAPPING FOR HEAT TOLERANCE RELATED TRAITS IN WHEAT ( <i>Triticum aestivum</i> L) USING BACKCROSS INBRED LINES
66	20688	Ms. SEEMA SHEORAN	GENOTYPIC AND PHENOTYPIC EVALUATION OF BACKCROSS DERIVED LINES OF CHICKPEA FOR DROUGHT TOLERANCE
67	20689	J. JORBEN	INHERITANCE OF FERTILITY RESTORATION AND CHARACTERIZATION OF RESTORER AND MAINTAINER LINES OF A4 CYTOPLASM IN PEARL MILLET [ <i>Pennisetum glaucum</i> (L). R. BR.]
68	50004	NENAVATH KRISHNA KUMAR	MORPHOLOGICAL AND BIOCHEMICAL CHARACTERIZATION AND MOLECULAR DIVERSITY ANALYSIS IN MIMBAN (STICKY) MAIZE LANDRACES FROM MIZORAM STATE
69	50010	JEET RAM CHOUDHARY	GENETIC EVALUATION AND QTL VALIDATION FOR IRON TOXICITY TOLERANCE IN NORTH-EAST INDIAN RICE GERMPLASM UNDER ACIDIC LOWLAND ECOLOGY
70	60003	THRIBHUVAN R	IDENTIFICATION AND VALIDATION OF META-QTLS FOR DROUGHT TOLERANCE IN CULTIVATED AND WILD RICE GERMPLASM
71	60004	SARAVANAKUMAR S	MOLECULAR CHARACTERIZATION AND EVALUATION OF MEDIUM SLENDER GRAIN RICE GENOTYPES PYRAMIDED WITH BACTERIAL BLIGHT AND BLAST RESISTANCE GENES

## HORTICULTURE (FLA)

72	20690	SHRAVAN P	STUDIES ON SENESCENCE IN GERBERA USING NANOPARTICLES AND BOTANICALS
73	20691	SURENDRA SINGH CHAUHAN	STUDIES ON PHOTOPERIODIC RESPONSE IN CHRYSANTHEMUM MORIFOLIUM RAMAT.
74	20692	Ms. SOUDAMANI KARJEE	DEVELOPMENT OF in-vitro PROTOCOL FOR EFFICIENT REGENERATION OF MARIGOLD ( <i>Tagetes erecta</i> L. AND <i>T. patula</i> L.) USING NON AXILLARY EXPLANTS

## HORTICULTURE (FRUIT SCIENCE)

75	20627	KHALID AHMAD MANGAL	CHARACTERIZATION OF ( <i>Vitis</i> sp.) ROOTSTOCKS AND THEIR COMPARATIVE PERFORMANCE UPON GRAFTING
76	20693	SATYABRATA PRADHAN	EVALUATION OF PAPAYA GENOTYPES FOR LOW TEMPERATURE STRESS TOLERANCE
77	20694	Ms. PREETI SINGH	STUDIES ON HETEROSIS BREEDING IN PAPAYA ( <i>Carica papaya</i> L)
78	20695	PRASHANT KALAL	EVALUATION CITRUS HYBRID PROGENIES AGAINST SALINITY AND <i>Phytophthora nicotianae</i> Breda de Haan.

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<b>HORTICULTURE (VEGETABLE SCIENCE)</b>			
79	20696	PRADEEP KUMAR MAURYA	INHERITANCE STUDIES FOR RESISTANCE AND IDENTIFICATION OF MOLECULAR MARKERS LINKED TO LEAF CURL IN CHILLI
80	20697	KOUSHIK SAHA	STUDY OF HETEROSIS AND COMBINING ABILITY AMONG DIFFERENT HORTICULTURAL GROUPS OF MUSKMELON ( <i>Cucumis melo</i> L)
81	20698	RAVINDRA DANGI	GENETIC DIVERSITY FOR HORTICULTURAL TRAITS AND STEMPHYLIUM BLIGHT RESISTANCE IN ONION
82	20699	AMIT KUMAR MATHUR	GENETIC STUDIES FOR RESISTANCE TO LEAF CURL DISEASE IN CHILLI ( <i>Capsicum annum</i> . L.)
83	20748	Ms. RAKSHYA BHUSAL	CHARACTERIZATION OF <i>Allium</i> SPECIES AND GENOTYPES FOR MORPHOLOGICAL AND BIOCHEMICAL TRAITS
84	50005	VINAY N D	GENETICS OF BHENDI YELLOW VEIN MOSAIC VIRUS (BYVMV) RESISTANCE IN OKRA ( <i>Abelmoschus esculentus</i> (L.) moench.)
85	50006	SOURAV MAHAPATRA	GENETIC DIVERSITY STUDY IN BOTTLE GOURD ( <i>Legenaria siceraria</i> (Mol. ) stand .) USING MORPHOLOGICAL AND MOLECULAR MARKERS
86	60005	ARUN	STUDY OF HETEROSIS AND COMBINING ABILITY IN RIDGE GOURD ( <i>Luffa acutangula</i> ) AND CHARACTERIZATION OF INTER SPECIFIC HYBRID WITH <i>L. cylindrica</i> .
87	60006	LAXMAN LAKKAPPA NANDI	STUDIES ON CHARACTERIZATION OF CULTIVATED BRINJAL ( <i>Solanum melongena</i> L.) AND ITS WILD RELATIVES

### **MICROBIOLOGY**

88	20700	Ms. ABIRAAMI T.V.	BACTERIAL SIDEROPHORES: CHARACTERIZATION AND THEIR ROLE IN ENHANCING Fe <sup>2+</sup> AVAILABILITY
89	20701	NAITAM MAYUR	EXPLOITATION OF AGRICULTURAL RESIDUES FOR PRODUCTION OF POLY-B-HYDROXYBUTYRATE
90	20702	Ms. DIYA ROY	DESICCATION INDUCED PHYSIOLOGICAL AND BIOCHEMICAL ALTERATIONS IN THE HALOTOLERANT CYANOBACTERIUM <i>Anabaena</i> sp.
91	20703	Ms. LAVANYA A.K.	EVALUATION OF MESTA BIOMASS FOR BIOETHANOL PRODUCTION POTENTIAL

### **MOLECULAR BIOLOGY AND BIOTECHNOLOGY**

92	20704	Ms. BABLEE KUMARI SINGH	ANALYSIS OF DRO1 EXPRESSION UNDER WATER DEFICIT STRESS AND ITS RELATIONSHIP WITH ROOT ANGLE PHENOTYPE IN INDIAN RICE ACCESSIONS
93	20705	SOHAM CHOUDHURY	CLONING AND CHARACTERIZATION OF RAN GTPASE FAMILY GENE(S) IN WHEAT ( <i>TRITICUM AESTIVUM</i> )
94	20706	SUMIT JHA	EXPRESSION ANALYSIS OF SELECTED <i>Magnaporthe</i> RESPONSIVE GENES IN PANICLE BLAST RESISTANT WILD RICE ACCESSIONS
95	20707	SOUGATA BHATTACHARJEE	MOLECULAR CLONING AND GENE EXPRESSION PROFILING OF GPC1 (GRAIN PROTEIN CONTEST B1) UNDER TERMINAL HEAT STRESS IN WHEAT <i>TRITICUM AESTIVUM</i>
96	20708	Ms. LOITONGBAM ASHAKIRAN DEVI	EXPRESSION PROFILING AND CLONING OF OsTFX1, A SUSCEPTIBILITY GENE FACILITATING BACTERIAL LEAF BLIGHT IN RICE
97	20709	ABINASH BISWAJIT SETHY	CLONING AND CHARACTERIZATION OF WEALTHY FARMERS PANICLE SPL14 FROM RICE

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## NEMATODOLOGY

98 20710 Ms. CHAITRA GANAPATI BHAT

DETERMINATION OF NEMATODE C-TYPE LECTINS IN HETERORHABDITIS-PHOTORHABDUS SYMBIOSIS

99 20711 BOLLI VENU BABU

BIOEFFICACY AND BIOCHEMICAL CHARACTERIZATION OF INDIGENOUS ISOLATES OF *Trichoderma harzianum* AGAINST *Meloidogyne incognita* INFECTING TOMATO

100 20712 JADHAO SHIVAJI DNYANBA

IDENTIFICATION AND IN VITRO RNAI OF NOVEL TARGET GENES FOR CONTROL OF THE ROOT-KNOT NEMATODE *Meloidogyne incognita*

## PLANT GENETIC RESOURCES

101 20714 ANTO JAMES

MICROSATELLITE MARKERS IN DIVERSITY ANALYSIS AND PROFILING OF WHEAT (*Triticum aestivum* L.) CULTIVARS

102 20715 Ms. MANJU KUMARI

MOLECULAR CHARACTERIZATION OF RELEASED VARIETIES OF SESAME (*Sesamum indicum* L.) USING SSR MARKERS

103 20716 PRABAKARAN, S.

EFFECT OF SEED COMPOSITION ON DRYING AND ITS STORABILITY IN ORTHODOX SEEDS

104 20717 SUNIL NAIK S

DEVELOPMENT OF PROTOCOL FOR BANANA CRYOPRESERVATION USING FLORAL EXPLANTS

## PLANT PATHOLOGY

105 20718 KAVI SIDHARTHAN.V

SELECTION OF A COMPATIBLE BIOCONTROL CONSORTIUM EFFECTIVE AGAINST FUSARIUM WILT OF TOMATO

106 20719 JAGDISH YADAV

EFFECT OF ABIOTIC FACTORS ON SYMPTOMATOLOGY AND SECONDARY METABOLITES PRODUCTION OF FUSARIUM FUJIKUROI INCITING BAKANAIE DISEASE OF RICE

107 20720 DEEPAK KANDHER

MORPHOLOGICAL CHARACTERIZATION AND PHYLOGENETIC RE-EVALUATION OF *Stemphylium*, *Alternaria* AND *Ulocladium* GENERA COMPLEX

108 20721 BASAVARAJ CHILAZARI

SCREENING FOR TAL EFFECTS OF XAP CAUSING BACTERIAL BLIGHT

109 20722 VIVEK KUMAR KHARE

PCR BASED DETECTION OF THE BEGOMOVIRUSES ASSOCIATED WITH LEAF CURL DISEASE IN COTTON AND OTHER HOSTS

110 20723 OINAM WASHINGTON SINGH

DIVERSITY AMONG *Albugo candida* ISOLATES CAUSING WHITE RUST IN *Brassica juncea* (L) CZERN AND COSS

111 20749 SHAH MAHMOOD HAMIDI

MANAGEMENT OF BANDED LEAF AND SHEATH BLIGHT (BLSB) OF MAIZE WITH FUNGICIDES AND DEFENSE ACTIVATORS VIS-A-VIS UNDERSTANDING THE DEFENSE MECHANISMS

## PLANT PHYSIOLOGY

112 20724 Ms. ANKITA MISHRA

IDENTIFICATION AND CHARACTERIZATION OF DONORS IN WHEAT TOLERANT TO NITROGEN AND PHOSPHORUS STRESS

113 20725 SANDEEP ADAVI B

IMPACT OF ELEVATED (CO<sub>2</sub>) ON NITROGEN METABOLISM AND NITRATE SIGNALLING IN WHEAT

114 20726 ELANGO VAN A

GENOME-WIDE ANALYSIS OF PROTEIN TYROSINE KINASE (PTK) AND PROTEIN TYROSINE PHOSPHATASE (PTP) GENE FAMILIES AND THEIR ROLE IN ABIOTIC STRESS RESPONSE OF RICE

115 20727 ADHIP DAS

ANALYSING POTENTIAL ROLE OF POLYAMINES FOR AMELIORATION OF HIGH TEMPERATURE STRESS EFFECTS IN RICE

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## POST HARVEST TECHNOLOGY

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| 116 | 20728 | VISHNU ANAND            | IMPROVING QUALITY AND DIGESTIBILITY OF GLUTEN FREE AMARANTH PASTA USING HYDROCOLLOIDS.                          |
| 117 | 20729 | Ms. VIKONO KSH          | EFFECT OF IMPROVER ENAYMES OF THE RHEOLOGY AND STORAGE CHARACTERISTICS GLUTEN -FREE AMARNTH BREAD               |
| 118 | 20730 | Ms. SWARAJYALAXMI NAYAK | APPLICATION OF OZONE AND BIOAGENTS FOR EXTENTION OF STORAGE LIFE OF STRAWBERRY                                  |
| 119 | 20731 | Ms. UMA PRAJAPATI       | POSTHARVEST MANAGEMENT OF CAPSICUM ( <i>Capsicum annum L.</i> ) USING ABSCISIC ACID AND FLURIDONE               |
| 120 | 20750 | KARAN SINGH DHAMI       | STUDIES ON PACKAGING AND CHEMICAL TREATMENTS ON POSTHARVEST QUALITY OF LITCHI ( <i>LITCHI CHINENSIS SONN.</i> ) |

## SEED SCIENCE AND TECHNOLOGY

- |     |       |                       |   |
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| 121 | 20732 | SUNIL KUMAR           | OPTIMIZATION OF SEED YIELD AND QUALITY IN CUCUMBER <i>Cucumis sativus</i> Cv. PUSA BARKHA |
| 122 | 20733 | BALACHANDAN GOWDA, C. | SEED COAT CHARACTERISTIES IN RELATION TO SEED VIABILITY AND VIGOUR IN SOYBEAN             |
| 123 | 20735 | DEBASHIS PAUL         | AN ASSAY ON HARDSEEDEDNESS AND GERMINATION IN MUNG BEAN ( <i>Vigna radiata L.</i> )       |
| 124 | 20736 | Ms. NIPA BISWAS       | STUDIES ON ROS METABOLISM DURING SEED GERMINATION OF INDIAN QUALITY MUSTERD GENOTYPES     |

## SOIL SCIENCE AND AGRICULTURAL CHEMISTRY

- |     |       |                       |   |
|-----|-------|-----------------------|---|
| 125 | 20737 | RAHUL MISHRA          | ENHANCING EFFICACY OF PHYTOEXTRACTION OF ZINC, CADMIUM AND LEAD IN CONTAMINATED SOIL  |
| 126 | 20738 | ASIK DUTTA            | IMPACTS OF CONSERVATION AGRICULTURE ON SOIL AGGREGATION AND THERMODYNAMICS OF ORGANIC CARBON MINERALIZATION UNDER RICE-WHEAT CROPPING SYSTEM  |
| 127 | 20739 | ABINASH DAS           | LONG TERM IMPACT OF MANURING AND FERTILIZATION ON LABILE CARBON AND CARBON UTILIZATION EFFICIENCY OF MICROBES IN FOUR MAJOR SOIL GROUPS OF INDIA  |
| 128 | 20740 | Ms. PRITI TIGGA       | EFFECTS OF CONSERVATION AGRICULTURE ON SOIL AGGREGATION AND CARBON POOLS IN MAIZE-WHEAT-MUNGBEAN CROPPING STSTEM  |
| 129 | 50007 | ABHIK PATRA           | IMPACT ASSESSMENT OF MANURING AND FERTILIZATION ON ALUMINIUM DYNAMICS AND MICROBIAL FUNCTION IN RICE UNDER ACIDIC SOIL  |
| 130 | 50008 | RAVINDRA KUMAR REKWAR | SOIL CARBON POOLS IN RELATION TO PEDOGENIC PROCESSES UNDER DIFFERENT CROPPING SYSTEMS IN THE BRAHMAPUTRA VALLEY OF ASSAM  |
| 131 | 60007 | Ms. ANKITA TRIVEDI    | LONG TERM FERTILIZATION AND LIMING IMPACTS ON SOIL ORGANIC CARBON STABILIZATION MECHANISMS UNDER A MAIZE-WHEAT SYSTEM IN AN Alfisol   |
| 132 | 60008 | Ms. KHUSHBOO RANI     | SOLUBILIZATION OF POTASSIUM FROM WASTE MICA AS AFFECTED BY POTASSIUM SOLUBILIZING MICROORGANISMS AND ORGANIC ACIDS AND ITS AVAILABILITY TO MUSTARD ( <i>BRASSICA JUNCEA</i> ) IN ALFISOL AND INCEPTISOL |

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**WATER SCIENCE AND TECHNOLOGY**

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WATER BUDGET AND PRODUCTIVITY OF SURFACE IRRIGATION SYSTEMS IN RABI CROPS AT IARI FARM

134 20743 MADHAVANANDA GUNDAPPAGOL

NITROGEN DISTRIBUTION IN SOIL THROUGH UREA AMMONIUM NITRATE (UAN) APPLICATION IN CABBAGE (*Brassica oleracea* var. *capitata*) UNDER DRIP FERTIGATION

135 20752 JAWID NIKZAD

EFFECT OF MULCHES AND ANTITRANSPIRANTS ON GROWTH, PRODUCTIVITY AND ECONOMICS IN RAIN FED MUNGBEAN

136 50009 Ms. BLESSY V.A.

HYDROLOGICAL RESPONSE AND CARBON SEQUESTRATION IN FARMING SYSTEMS OF NORTH EASTERN HIMALAYAN WATERSHED

137 60009 LOKNATH MAITRY

HEAVY METAL DYNAMICS IN SPINACH (*SPINACIA OLERACEA* L.) GROWN ON SLUDGE AMENDED SOILS IRRIGATED WITH ALKALI WATER

List of candidates who have successfully completed all the requirements including final viva-voce examination for the award of degree of Doctor of Philosophy as on 13.12.2017

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<b>AGRICULTURAL ECONOMICS</b>			
1	9921	BALAJI S. J.	AGRICULTURAL GROWTH, RURAL NON-FARM EMPLOYMENT AND POVERTY IN INDIA
<b>AGRICULTURAL ENGINEERING</b>			
2	9630	INGLE VISHAL KESHAORAO	HYDROLOGIC MODELING OF WATERSHED IN TAPI RIVER CATCHMENT USING SWAT MODEL FOR WATERSHED RESTORATION MANAGEMENT PLANS
3	9781	ARUN KUMAR T V	DEVELOPMENT OF SORGHUM BASED SNACK FOOD THROUGH EXTRUSION PROCESSING
4	9925	BIBWE BHUSHAN RATNAKAR	MICROENCAPSULATION OF FLAXSEED ( <i>Linum usitatissimum</i> L.) OIL
5	9927	Ms. VAIRAT AMITA DINKAR	DEVELOPMENT OF BARNYARD MILLET BASED EXTRUDED PRODUCT
6	10079	JITENDRA KUMAR	DEVELOPMENT OF INDIGENOUS SENSOR NETWORK BASED IRRIGATION SYSTEM FOR IMPROVING AGRICULTURAL WATER PRODUCTIVITY
7	10237	BIKRAM JYOTI	DESIGN AND DEVELOPMENT OF ELECTROSTATIC SPRAYER
8	10382	Ms. THINGUJAM BIDYALAKSHMI	DEVELOPMENT OF AUTOMATED SOLAR DRYER FOR VEGETABLE SEEDS
9	10386	KRISHNAKUMAR P	DEVELOPMENT OF BARNYARD MILLET BASED NUTRI- FUNCTIONAL SNACK FOOD
10	10389	SHAHZAD FAISAL	DEVELOPMENT OF EXTRUDED MAIZE- SOY- APPLE POMACE SNACKS FOOD
<b>AGRICULTURAL EXTENSION</b>			
11	10402	MADAN SINGH	IMPACT ASSESSMENT OF IARI-VOLUNTARY ORGANIZATIONS PARTNERSHIP EXTENSION MODEL: A MULTIDIMENSIONAL STUDY
<b>AGRICULTURAL PHYSICS</b>			
12	9641	Ms. ADITI SRIVASTAVA	REGIONAL SCALE CROP GROWTH AND YIELD ASSESSMENT LINKING REMOTE SENSING INPUTS AND CROP SIMULATION MODELS
<b>AGRICULTURAL STATISTICS</b>			
13	9944	NIRUPAM GHOSH	SOME CONTRIBUTIONS TO CALIBRATION ESTIMATORS IN SUCCESSIVE SAMPLING
14	10095	YASHAVANTH B S	VECTOR AUTOREGRESSIVE TIME SERIES MODELS AND THEIR APPLICATIONS IN AGRICULTURE

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## AGRONOMY

- |    |       |                      |   |
|----|-------|----------------------|---|
| 15 | 9814  | PANCH RAM MIRJHA     | CROP DIVERSIFICATION AND NUTRIENT MANAGEMENT IN MANGO ( <i>Mangifera indica</i> L.) BASED AGRI-HORTICULTURE SYSTEM                                      |
| 16 | 9954  | Ms. SOBHANA V.       | NUTRIENT MANAGEMENT AND CONSERVATION TILLAGE EFFECTS ON MAIZE-WHEAT-MUNGBEAN PRODUCTION SYSTEM  |
| 17 | 9956  | JITESH KUMAR BAGHEL  | CONSERVATION AGRICULTURE AND WEED CONTROL EFFECTS ON PRODUCTIVITY AND RESOURCE-USE EFFICIENCY IN RICE-WHEAT CROPPING SYSTEM                             |
| 18 | 10262 | SUDHIR KUMAR RAJPOOT | EVALUATION OF METHODS OF CROP ESTABLISHMENT FOR ENHANCING THE PRODUCTIVITY AND RESOURCE USE EFFICIENCY OF DIVERSIFIED BT. COTTON BASED CROPPING SYSTEMS |
| 19 | 10419 | VIJAYAKUMAR S        | POTASSIUM MANAGEMENT IN AEROBIC RICE -WHEAT CROPPING SYSTEM   |

## BIOCHEMISTRY

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|----|-------|---------------------|---|
| 20 | 9816  | Ms. NABANEETA BASAK | RNAi MEDIATED SILENCING OF IPK1 GENE FOR REDUCED PHYTATE CONTENT IN SOYBEAN SEEDS   |
| 21 | 9959  | Ms. VANITA PANDEY   | SEED SPECIFIC SILENCING OF MRP ABC TRANSPORTER GENE IN SOYBEAN ( <i>Glycine max</i> L.) FOR PHYTATE REDUCTION                     |
| 22 | 9961  | AJEET SINGH         | STUDY OF MOLECULAR MECHANISMS INVOLVED IN DEFENCE RESPONSES DURING VIRAL INFECTION IN SOLANACEOUS PLANTS                          |
| 23 | 10427 | OM PRAKASH GUPTA    | DECIPHERING REGULATORY MECHANISM(S) UNDERLYING ISOFLAVONE BIOSYNTHESIS AND ACCUMULATION IN SOYBEAN ( <i>Glycine max</i> L.) SEEDS |

## ENTOMOLOGY

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|----|-------|-------------------|---|
| 24 | 9964  | ACHINTYA PRAMANIK | BIOSYSTEMATIC STUDIES ON FIG WASPS OF INDIA   |
| 25 | 10438 | DARAVATH VEERANNA | NICHE PARTITIONING OF RICE PLANTHOPPERS AND IMPACT OF ELEVATED CO <sub>2</sub> ON BROWN PLANT HOPPER (BPH) AND PREDATION POTENTIAL OF WOLF SPIDER |

## ENVIRONMENTAL SCIENCES

- |    |       |                      |  |
|----|-------|----------------------|--|
| 26 | 10123 | SANDEEP KUMAR MALYAN | REDUCING METHANE EMISSION FROM RICE SOIL THROUGH MICROBIAL INTERVENTIONS |
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## GENETICS

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|----|-------|-----------------|---|
| 27 | 10449 | SUBHASH CHANDRA | GENETIC STUDIES AND IDENTIFICATION OF MOLECULAR MARKERS FOR SEED COAT PERMEABILITY IN SOYBEAN |
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## HORTICULTURE (FLA)

- |    |       |                             |   |
|----|-------|-----------------------------|---|
| 28 | 9843  | Ms. SHYAMA KUMARI           | IN VITRO INDUCTION OF MUTATIONS IN ROSE (ROSA HYBRIDA L.) THROUGH GAMMA IRRADIATION FOR COMMERCIAL TRAITS   |
| 29 | 10136 | LAKSHMIPATHY M              | EVALUATION OF DIFFERENT TURFGRASSES UNDER DIFFERENT SEASON, SHADE AND GROWTH REGULATOR REGIMES  |
| 30 | 10293 | Ms. LAKSHMI DURGA MADDUKURI | DEVELOPMENT OF SITE SPECIFIC INTEGRATED NUTRIENT MANAGEMENT SYSTEMS FOR GLADIOLUS (Gladiolus hybridus HORT.) AND MARIGOLD (Tagetes patula L.) USING SOIL TEST CROP RESPONSE CORRELATION STUDIES |
| 31 | 10296 | Ms. POONAM KUMARI           | ISOLATION AND CHARACTERIZATION OF ANTHOCYANIN PIGMENTS FROM INDIAN ROSE VARIETIES AS A POTENTIAL SOURCE OF NUTRACEUTICALS   |
| 32 | 10461 | RAVINDRA KUMAR KURIMELLA    | STUDIES ON PLANT REGENERATION IN MARIGOLD (TAGETES SPP.) THROUGH in vitro CULTURE OF MALE AND FEMALE GAMETOPHYTES   |
| 33 | 10466 | Ms. ASMITA                  | REGENERATION TECHNIQUES AND GENETIC FIDELITY ANALYSIS THROUGH MOLECULAR MARKERS IN LA HYBRIDS OF Lilium   |
| 34 | 10467 | Ms. AIDO TALOH              | CHARACTERIZATION AND MANAGEMENT OF PHYTOPLASMA DISEASES OF Chrysanthemum morifolium R.  |

## HORTICULTURE (VEGETABLE SCIENCE)

- |    |       |                         |  |
|----|-------|-------------------------|--|
| 35 | 10304 | PULIPATI GANGADHARA RAO | GENETICS AND MAPPING OF ECONOMIC TRAITS IN BITTER GOURD (Momordica charantia)                          |
| 36 | 10478 | HANUMAN RAM             | GENETICS OF YIELD TRAITS AND INHERITANCE OF POWDERY MILDEW RESISTANCE IN GARDEN PEA (Pisum sativum L). |

## MICROBIOLOGY

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|----|-------|-----------------------|--|
| 37 | 10058 | BAGUL SAMADHAN YUVRAJ | SUITABILITY OF WASTE WATER GROWN MICROALGAE FOR BIODIESEL PRODUCTION                                   |
| 38 | 10149 | DOLAMANI AMAT         | MICROBIAL PRODUCTION OF XYLOOLIGOSACCHARIDES   |
| 39 | 10542 | VELMOURUGANE K.       | INTERSPECIFIC COOPERATION AMONG MICROBIAL PARTNERS IN BIOFILM DEVELOPMENT AND RHIZOSPHERE COLONIZATION |

## MOLECULAR BIOLOGY AND BIOTECHNOLOGY

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|----|-------|--------------------|---|
| 40 | 9865  | Ms. SUMAN LATA     | CHARACTERIZATION OF GENES/PROMOTERS OF NUCLEAR ENCODED MITOCHONDRIAL SMALL RIBOSOMAL SUBUNIT PROTEINS IN Arabidopsis thaliana |
| 41 | 10013 | RAVI PRAKASH SAINI | HOST-DELIVERED ARTIFICIAL MICRO RNA-MEDIATED GENE SILENCING FOR RESISTANCE AGAINST Helicoverpa armigera                       |

## NEMATOLOGY

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|----|-------|--------------------------|--|
| 42 | 10019 | THORAT YOGESH EKANATHRAO | DEVELOP ROOT-KNOT NEMATODE, Meloidogyne Incognita SPECIFIC GENE EXPRESSION SYSTEM IN |
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## PLANT GENETIC RESOURCES

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| 43 | 10023 | SUBHASH CHANDER      | STUDIES ON DESIGNATION AND VALIDATION OF CORE COLLECTION OF FOXTAIL MILLET (Setaria italica (L.) P.Beauv.) USING MORPHOLOGICAL AND MOLECULAR MARKERS |
| 44 | 10326 | PERUMALLA KIRAN BABU | STUDIES ON SEED DETERIORATION IN SOYBEAN CONSERVED FOR LONG-TERM IN GENE BANK  |

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## PLANT PATHOLOGY

45 10173 RAM PRASNNA MEENA

GENOME CHARACTERIZATION AND DEVELOPMENT OF  
DIAGNOSTICS OF Citrus yellow vein clearing virus (CYVCV)  
ASSOCIATED WITH CITRUS IN INDIA

46 10512 LAXMAN SINGH RAJPUT

SIMULATION OF CYCLIC ADENOSINE MONOPHOSPHATE  
(cAMP) DEPENDENT PROTEIN KINASE A (PKA)  
ACTIVITY IN RELATION TO APPRESORIUM FORMATION  
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## POST HARVEST TECHNOLOGY

47 9897 SANDEEP KUMAR DUHAN

DEVELOPMENT OF CONTINUOUS MICROWAVE  
PASTEURIZATION SYSTEM FOR LIQUID FOODS

## SEED SCIENCE AND TECHNOLOGY

48 10046 PRAVEEN KUMAR SINGH

ASSESSMENT OF GENETIC PURITY AND  
ENHANCEMENT OF SEED LONGEVITY IN RICE HYBRIDS

## SOIL SCIENCE AND AGRICULTURAL CHEMISTRY

49 10196 Ms. SUVANA SUKUMARAN

ASSESSMENT OF CARBON SATURATION AND STABILITY  
OF SOIL CARBON IN LONG TERM FERTILIZER  
EXPERIMENTS

50 10535 RAJ MUKHOPADHYAY

MODIFIED CLAYS AND CLAY POLYMER COMPOSITES  
FOR IMMOBILIZATION OF ARSENIC IN CONTAMINATED  
SOILS

**POST GRADUATE SCHOOL**  
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**NEW DELHI-110012**

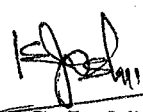
No. PGS-I/1-408/AC/2018

January 7, 2019

**ENDORSEMENT**

A copy of the proceedings of the 408<sup>th</sup> meeting of the Academic Council held on 14<sup>th</sup> December, 2018 is forwarded herewith for information and necessary action. Comments, if any, may please be sent to the PG School within 15 days from the date of issue of the Proceedings.

1. All the members of the Academic Council and concerned Officers (By name) \_\_\_\_\_
2. PS to Director General, ICAR, Krishi Bhawan, New Delhi-110001
3. PS to Deputy Director General (Edn.), ICAR, KAB-II, Pusa, New Delhi-110012
4. Master of Halls of Residences, P.G. School Hostel Office
5. Sr. Admn. Officer, IMC (For members of Board of Management)
6. PS to Director/PS to Dean & Joint Director (Edn.), IARI/PS to Registrar/PS to Comptroller
7. Dr. S.K. Tyagi, Chief Technical Officer, P G School
8. Assistant Administrative Officer, Post Graduate School-II
9. Concerned Dealing Assistants, PGS-I

  
(K.C. Joshi) 7/1/19  
Registrar

**PROCEEDINGS OF THE 408<sup>th</sup> MEETING OF THE ACADEMIC COUNCIL  
HELD ON DECEMBER 14, 2018 AT 11.00 AM IN THE CONFERENCE  
HALL OF PROF. M.S. SWAMINATHAN LIBRARY, IARI, NEW DELHI -  
110012**

The following members were present:

1. Dr. A.K. Singh, Director (Additional charge), IARI	Chairman
2. Dr. J.P. Sharma, Joint Director (Extn.)/ J.D.(Res.) and Dean & J.D. (Edn.)(Additional charge) IARI	Vice- Chairman
3. Dr. H.S. Gaur, Former Vice-Chancellor, SVPUA&T, Meerut	Member
4. Dr. S.K. Datta, Former DDG(CS), ICAR	Member
5. Dr. M.R. Dinesh, Director, IIHR	Member
6. Dr. Man Singh, Project Director (Acting), WTC and Professor, WST	Member
7. Dr. K.M. Manjaiah, Associate Dean, PG School	Member
8. Dr.(Ms.) Shashi Bala Singh, Professor, Agricultural Chemicals	Member
9. Dr. D.K. Singh, Professor, Agricultural Engineering	Member
10. Dr. R.N. Padaria, Professor, Agricultural Extension	Member
11. Dr. V.K. Sehgal, Professor, Agricultural Physics	Member
12. Dr. T.K. Das, Professor, Agronomy	Member
13. Dr. (Ms.) Aruna Tyagi, Professor, Biochemistry	Member
14. Dr. Subhas Chander, Professor, Entomology	Member
15. Dr. Soora Naresh Kumar, Professor, Environmental Sciences	Member
16. Dr. K.P. Singh, Professor, Floriculture and Landscape	Member
17. Dr. Vinod, Professor, Genetics and Plant Breeding	Member
18. Dr. R.C. Bhattacharya, Professor, MBB	Member
19. Dr. M.R. Khan, Professor, Nematology	Member
20. Dr.(Ms.) Veena Gupta, Professor, PGR	Member
21. Dr. Madan Pal Singh, Professor, Plant Physiology	Member
22. Dr. S.K. Jain, Professor, Seed Science & Technology	Member
23. Dr. S.P. Datta, Professor, SS&AC	Member
24. Dr. T.K. Behera, Professor, Vegetable Science	Member
25. Dr. Anil Sirohi, MOHR, PG Hostels	Member
26. Mr. Sanchal Bilgrami, Comptroller, IARI	Member
27. Dr. A. Nagaraja, Senior Scientist, Fruit Science and Faculty Representative to the Academic Council	Member
28. Dr. Mahesh C. Yadav, Principal Scientist, NBPGR and Faculty Representative to the Academic Council	Member
29. Mrs. Rajshree Anand, Incharge, IARI Library	Member
30. Mr. B.R. Tribhuvan, President, PGSSU	Member
31. Ms. Priti Priyadarshni, Students' Representative to the AC	Member
32. Mr. K.C. Joshi, Registrar & Joint Director (Admn.)	Member Secretary

Leave of absence was sought and granted to the following members:

1. Dr. N.S. Rathore, Deputy Director General (Edn.)	Member
2. Dr. P.K. Joshi, Director, South Asia, IFPRI	Member
3. Dr. A.K. Singh, Former Vice-Chancellor, RVSKVV, Gwalior	Member
4. Dr. K.K. Singh, Director, CIAE, Bhopal	Member
5. Dr. Kuldeep Singh, Director, NBPGR	Member
6. Dr. N.K. Singh, Director, NRCPB (Additional Charge)	Member
7. Dr. L.M. Bhar, Director, IASRI (Additional Charge)	Member
8. Dr. P.R. Ojasvi, Director, IISWC, Dehradun(Additional Charge)	Member
9. Dr. Seema Jaggi, Professor, Agricultural Statistics	Member
10. Dr.(Ms.) Alka Singh, Professor, Agricultural Economics	Member
11. Dr. A.R. Rao Professor, Bioinformatics	Member

12. Dr. Sudeep Marwaha, Professor, Computer Application	Member
13. Dr. O.P. Awasthi, Professor, Fruit Science	Member
14. Dr. V.K. Baranwal, Professor, Plant Pathology	Member
15. Dr.(Mrs.) Radha Prasanna, Professor, Microbiology	Member

Dr. J.P. Sharma, Joint Director(Extn.)/Joint Director(Res.)/Dean and Joint Director (Edn.)(Additional Charge) extended a formal welcome to Dr. A.K. Singh, Director; IARI(Additional Charge) and Chairman, Academic Council. Thereafter, Dr. A.K. Singh, Chairman of Academic Council warmly welcomed the outside members of the Academic Council and all the members present in the meeting. The Chairman also welcomed the new members of the Academic Council attending the meeting for the first time:

#### **New members**

1. Dr. J.P. Sharma as Dean & Joint Director (Edn.) (Additional Charge)
2. Dr. T.K. Das, Professor, Agronomy
3. Dr. (Mrs.) Veena Gupta, Professor, Plant Genetic Resources
4. Mrs. Rajshree Anand, Incharge, IARI Library
5. Mr. B.R. Tribhuvan, newly elected President, PGSSU
6. Ms. Priti Priyadarshni, newly elected Student Representative to the Academic Council

The Chairman also placed on record the valuable contributions of the following outgoing members of the Academic Council in strengthening the PG education at IARI:

1. Dr. R.K. Jain, Former Dean and Joint Director (Edn.), IARI
2. Dr. P.K. Mishra, Former Director, IISWC, Dehradun
3. Dr. Y.S. Shivay, Former Professor, Agronomy
4. Dr. Sunil Pabbi, Former Professor, Microbiology
5. Dr.(Mrs.) Rekha Chaudhury, Former Professor, Plant Genetic Resources
6. Mr. Anil Kulshrestha, Former Incharge, IARI Library
7. Mr. Satish Naik, Former President, PGSSU
8. Ms. Priyanka Upreti, Student Representative to the Academic Council

The Director and Chairman, Academic Council apprised the Academic Council about the educational achievements viz. students admissions at IARI/IARI-Jharkhand & Assam and PG outreach Programmes at CIAE, Bhopal; Signing of MoUs with ICAR Institutes; special lectures arranged; Foundation Stone Laying of International student hostel and Kissan Haat by Honorable Union Minister of Agriculture and Farmers' Welfare, Shri Radha Mohan Singh Ji and Institution building activities in other countries.

Thereafter, the following agenda items were taken up for consideration:

<b>Agenda Item No.</b>	<b>Description of Agenda Items</b>
<b>408.1</b>	Confirmation of the proceedings of the 407 <sup>th</sup> meeting of the Academic Council held on July 7, 2018
<b>408.2</b>	Action Taken Report on the Proceedings of 407 <sup>th</sup> meeting of the Academic Council held on July 7, 2018
<b>408.3</b>	Recommendations of the Standing Committee on Scholarships, Financial Assistance & Academic Progress made in its meeting held on 29.10.2018
<b>408.4</b>	Recommendations of the Standing Committee on Courses Curricula and Academic Affairs made in its meeting held on 03.12.2018

408.6	Finalization of the Academic Calendar for the 62 <sup>nd</sup> Academic Session 2019-20
408.7	Finalization of "Convocation Week" programme
408.8	List of candidates who have become eligible for the award of their respective degrees of M.Sc., M.Tech. and Ph.D.
408.9	Finalization of number of seats and eligibility qualification for admission to M.Sc., M.Tech. and Ph.D. degree programmes for the Academic Session 2019-20
408.10	Renewal of all the four Standing Committees' composition of the Academic Council for the period of two years (2019-20)
408.11	Any other item with the permission of the Chair

**Agenda Item No. 408.1: Confirmation of the proceedings of the 407<sup>th</sup> meeting of the Academic Council held on 7.7.2018**

The Chairman called for the comments, if any, from the members of the Academic Council on the proceedings of the 407<sup>th</sup> meeting. Comments received from Professor, Plant Pathology on marking scheme on the approved guidelines for IARI awards was considered by the Academic Council at Agenda Item No.408.4.3. Since no other comment was there, the proceedings of the previous meeting was confirmed.

**Agenda Item No. 408.2: Report on action taken on the proceedings of the 407<sup>th</sup> meeting of the Academic Council held on 7.7.2018**

Action taken report was presented by the Dean and Joint Director (Education).

**Agenda Item No. 408.3: Consideration of the proceedings of the Standing Committee on Scholarships, Financial Assistance & Academic Progress made in its meeting held on 29.10.2018.**

The Academic Council approved the following recommendations of Standing Committee. The decision of Chairman, Academic Council on disbursement of Scholarship was also ratified by the Academic Council.

**408.3.1** As per P.G. School Calendar para 15.3.3, the scholarships shall be awarded initially for a period of one academic year from the date of joining the Post Graduate School or the commencement of the academic year, whichever is later. (*Commencement of the Academic Year 2018-19 is 30.07.2018*)

**408.3.2** Award of Institute Sr. Scholarship @ Rs.13,125/- per month + Rs.10,000/- per annum as contingent grant to 156 candidates admitted at IARI, New Delhi.

S.No.	NAME OF THE STUDENT	ROLL NO.	DISCIPLINE	DATE OF ENROLMENT
1	ARKADEB MUKHOPADHYAY	11155	AGRICULTURAL CHEMICALS	27/07/2018
2	KAILASH PATI TRIPATHI	11156	"	27/07/2018
3	DEBDAS CHAND	11157	"	27/07/2018
4	AJITH M	11158	"	28/07/2018
5	SUTANWA SAHA	11159	"	27/07/2018
6	SUDAMA RAM SAHU	11160	"	27/07/2018
7	MUTHUPRASAD T	11161	AGRICULTURAL ECONOMICS	27/07/2018
8	NIRANJAN SIVALINGAM	11162	"	27/07/2018
9	BJ GIRIDHAR	11163	"	27/07/2018
10	SRINATHA T N	11164	"	27/07/2018
11	NAVEEN KUMAR NAIK	11165	"	27/07/2018

12	ABHINAV DUBEY	11166	AGRICULTURAL ENGINEERING	27/07/2018
13	MONIKA SATANKAR	11170	"	27/07/2018
14	PANKAJ MALKANI	11176	"	27/07/2018
15	MOHIT KUMAR	11177	"	27/07/2018
16	MUKESH KUMAR CHOUDHARY	11181	"	27/07/2018
17	ASHA K R	11186	"	27/07/2018
18	VENKATESH	11187	"	27/07/2018
19	ALOK GUPTA	11188	"	27/07/2018
20	SHEEJA P.S	11191	"	27/07/2018
21	ATISH SAGAR	11192	"	27/07/2018
22	KETHAVATH AJAYKUMAR	11193	"	27/07/2018
23	RADHIKA SAHU	11194	"	27/07/2018
24	AISWARYA S	11195	AGRICULTURAL EXTENSION	27/07/2018
25	Gangu Bai Shivappa Manguli	11197	"	27/07/2018
26	MANJUNATH H	11198	"	27/07/2018
27	SANJAY KUMAR GUPTA	11199	"	27/07/2018
28	ANA RAJ J	11200	"	27/07/2018
29	SUNNY ARYA	11201	AGRICULTURAL PHYSICS	27/07/2018
30	SUJAN ADAM	11202	"	27/07/2018
31	DEBASISH ROY	11203	"	27/07/2018
32	MOHAMMED SHAFEEQ P M	11204	"	27/07/2018
33	VIMAL KUMAR	11205	"	27/07/2018
34	VARATHARAJAN T	11212	AGRONOMY	27/07/2018
35	SOMANATH NAYAK	11214	"	27/07/2018
36	SHUBHAM MARAK	11215	"	27/07/2018
37	NIRAJ BISWAKARMA	11216	"	27/07/2018
38	RADHESHYAM	11217	"	27/07/2018
39	AYESHA FATIMA	11218	"	27/07/2018
40	VIJAY PRATAP	11219	"	27/07/2018
41	MANU S M	11220	"	27/07/2018
42	RAJESH KUMAR	11221	"	27/07/2018
43	PRATHAP V	11222	BIOCHEMISTRY	27/07/2018
44	JOSHNA JOSE	11223	"	27/07/2018
45	SWAPNIL S. THAKARE	11224	"	27/07/2018
46	RANJITH H V	11235	ENTOMOLOGY	27/07/2018
47	TANMAYA KUMAR BHOI	11236	"	27/07/2018
48	ARYA PS	11237	"	27/07/2018
49	GAURAV SINGH	11238	"	27/07/2018
50	MOGILI RAMAIAH	11240	"	27/07/2018
51	ANIL	11241	"	28/07/2018
52	KIRAN KUMAR	11243	"	28/07/2018
53	GOPALAKRISHNAN	11244	"	27/07/2018
54	ANAND HARSHANA	11366	"	6/8/2018
55	PARTHA PRATIM MAITY	11246	ENVIRONMENTAL SCIENCE	27/07/2018
56	JITU MANDOL	11247	"	27/07/2018
57	PRIYANKA MEENA	11248	"	27/07/2018
58	CHANDRA PRAKASH	11249	"	27/07/2018
59	PRATIBHA PRAKASH	11252	"	27/07/2018
60	SETHUPATHI.N.	11369	"	21/07/2018
61	BIBIN POULOSE	11253	FLORICULTURE AND LANDSCAPING	27/07/2018
62	UZMA MEHRAJ	11254	"	27/07/2018
63	POOJA A	11255	"	27/07/2018
64	PRIYA YADAV	11256	"	27/07/2018
65	NEERAJ SINGH NEGI	11257	"	27/07/2018
66	CHANDER PRAKASH	11258	"	27/07/2018
67	SHWETA K HADAKAR	11259	FRUIT SCIENCE	27/07/2018
68	PRASAD SHIVAPPA KAROSHI	11260	"	27/07/2018
69	NARENDRA SINGH	11261	"	27/07/2018
70	REENA PRUSTY	11263	"	27/07/2018
71	NAVEEN KUMAR MAURYA	11264	"	27/07/2018
72	KULDEEP PANDEY	11265	"	27/07/2018
73	AMOL KAILAS JADHAV	11266	"	27/07/2018
74	SUMAN DUTTA	11268	GENETICS AND PLANT BREEDING	27/07/2018
75	ABHIJITH K P	11269	"	27/07/2018



76	LIMBALKAR O. MAHARUDRA	11270	"	27/07/2018
77	NILESH JOSHI	11271	"	27/07/2018
78	HARSHAVARDHANA Y S	11272	"	27/07/2018
79	RAHUL KUMAR	11273	"	27/07/2018
80	SUNILKUMAR V P	11274	"	27/07/2018
81	ASHVINKUMAR KATRAL	11275	"	27/07/2018
82	VIJAY KAMAL MEENA	11276	"	27/07/2018
83	SURESH YADAV	11277	"	27/07/2018
84	DHARMATEJA PALAPARTHI	11278	"	27/07/2018
85	VINITA RAMTEKEY	11279	"	27/07/2018
86	GANGADHARA K N	11280	"	27/07/2018
87	SHRINIKETAN PURANIK	11281	MICROBIOLOGY	27/07/2018
88	BABAN PREET KOUR	11282	"	27/07/2018
89	SHIVARANJAN C S	11283	"	27/07/2018
90	VIKRAM K V	11284	"	27/07/2018
91	NISHANTH S	11285	"	27/07/2018
92	ANIL KUMAR	11286	"	27/07/2018
93	NILADRI BARMAN	11289	MOLECULAR BIOLOGY & BIOTECHNOLOGY	27/07/2018
94	BIPRATIP DUTTA	11290	"	27/07/2018
95	AKASH PAUL	11293	"	27/07/2018
96	SAAKRE MANJESH	11294	"	27/07/2018
97	TAKU MONYA	11295	"	27/07/2018
98	SHAZIYA SULTANA	11367	"	8/8/2018
99	WAGHAMARE SANDESH T.	11370	"	27/08/2018
100	AMIT AHUJA	11297	NEMATOTOLOGY	27/07/2018
101	VINAY K Y	11298	"	27/07/2018
102	SOWMYA R	11300	"	27/07/2018
103	AJAY SINGH SINDHU	11301	"	27/07/2018
104	LAXMISHA K M	11302	PLANT GENETIC RESOURCES	27/07/2018
105	PRABHU P	11303	"	27/07/2018
106	PUNEETH G M	11304	"	27/07/2018
107	ASWIN M	11305	"	27/07/2018
108	NAVAL KISHOR MEENA	11306	"	27/07/2018
109	JAGMOHAN SINGH	11307	PLANT PATHOLOGY	27/07/2018
110	NAVEEN NAYAKA S	11308	"	27/07/2018
111	SHREENATH Y S	11309	"	27/07/2018
112	ASHARANI PATEL	11310	"	27/07/2018
113	PRASHANTHA S T	11312	"	27/07/2018
114	VINEETH VIJAYAN	11313	"	28/07/2018
115	MRUTYUNJAYA S	11315	"	27/07/2018
116	MADHU G S	11316	"	27/07/2018
117	BIRENDRA KUMAR PADHAN	11318	PLANT PHYSIOLOGY	27/07/2018
118	PANDURANG RAGHUNATH D	11319	"	27/07/2018
119	DIPANKAR BARMAN	11320	"	27/07/2018
120	MALINI MK	11321	"	27/07/2018
121	NISHA	11323	"	27/07/2018
122	VIJAY R	11324	"	27/07/2018
123	MONIKA G TOTAD	11325	POST HARVEST AND TECHNOLOGY	27/07/2018
124	POOJA B. K.	11326	"	27/07/2018
125	GOWTHAM R	11327	"	27/07/2018
126	NIRANJAN PRASAD H P	11328	SEED SCIENCE AND TECHNOLOGY	27/07/2018
127	SATISH KUMAR	11329	"	27/07/2018
128	KARABI BANIA	11330	"	27/07/2018
129	PRAVEEN KUMAR YADAV	11331	"	27/07/2018
130	DILSHAD AHMAD	11332	"	27/07/2018
131	JAYASRI S	11333	"	27/07/2018
132	PREETI SAGAR NEGI	11334	"	27/07/2018
133	ANSHUMAN DAS	11335	SOIL SCIENCE AND AGRICULTURAL CHEMISTRY	27/07/2018
134	KINGSHUK MODAK	11336	"	27/07/2018
135	MD BASIT RAZA	11337	"	27/07/2018
136	AJIN S ANIL	11338	"	27/07/2018
137	ATHULYA S	11339	"	27/07/2018
138	NAVEEN KUMAR A	11340	"	27/07/2018
139	GANPAT LOUHAR	11341	"	27/07/2018

140	JYOTIRMAYA SAHOO	11342	"	27/07/2018
141	KAVITHA PANDU JADHAV	11343	"	27/07/2018
142	BHANUSHREE N	11344	VEGETABLE SCIENCE	27/07/2018
143	ABHAY VIKRAM SINGH	11345	"	27/07/2018
144	PUNEETH P V	11346	"	27/07/2018
145	IPSITA PANIGRAHI	11347	"	27/07/2018
146	YOGANANDA H S	11348	"	27/07/2018
147	RAMESHWAR MEENA	11349	"	27/07/2018
148	SAHANA K P	11350	"	27/07/2018
149	HARISHA S M (FUS)	11352	"	27/07/2018
150	VISHWANATH BIDARAMALI	11354	"	27/07/2018
151	MANJUNATH DALI	11355	WATER SCIENCE AND TECHNOLOGY	27/07/2018
152	MAHEKPREET KAUR	11356	"	27/07/2018
153	NEHA SINGHAL	11357	"	27/07/2018
154	RAGHAV MAURYA	11358	"	27/07/2018
155	ASHOK IRAPPA HALLI	11359	"	27/07/2018
156	SMITA JAISWAL	11360	"	27/07/2018

**408.3.3** Award of Institute Sr. Scholarship @ Rs.13,125/- per month + Rs.10,000/- per annum as contingent grant to the following 13 students admitted at CIAE, Bhopal under IARI PG Outreach Programme

S. No.	NAME OF THE STUDENT	ROLL NO	DISCIPLINE	DATE OF ENROLMENT
1.	RAM P KUMAR	11167	AGRICULTURAL ENGINEERING(AP&S)	27/07/2018
2.	RAJEEV R THAKUR	11168	"	27/07/2018
3.	LAVANYA PURAMSHETTI	11169	"	27/07/2018
4.	KANUPRIYA CHOUDHARY	11171	"	27/07/2018
5.	RAJASEKHAR MATHANGI	11174	"	27/07/2018
6.	LALITA	11175	"	27/07/2018
7.	AMAN MAHORE	11178	AGRICULTURAL ENGINEERING(FP&E)	27/07/2018
8.	NALAWADE ROHIT DILIP	11180	"	27/07/2018
9.	ABHISHEK KUMAR	11182	"	27/07/2018
10.	BHAGWAN SINGH NARWARIYA	11183	"	27/07/2018
11.	JAGJEET SINGH	11185	"	27/07/2018
12.	JYOTIRMAY MAHAPATRA	11365		27/07/2018
13.	ABHISHEK PATEL	11189	AGRICULTURAL ENGINEERING(S& WCE)	27/07/2018

**408.3.4** Award of Institute Sr. Scholarship @ Rs. 3,000/- per month + Rs. 10,000/- per annum as contingent grant to the following 7 students who were admitted under Faculty Up-gradation Scheme/ICAR-Inservice-Scheme.

S. No.	NAME OF THE STUDENT	ROLL NO	DISCIPLINE	DATE OF ENROLMENT
1.	PRABHULINGA T, CICR Nagpur, ICAR In service	11242	ENTOMOLOGY	27/08/2018
2.	RAJENDER JATOTH, PJTSAU, Aswaraopet, FUS	11317	PLANT PATHOLOGY	27/07/2018
3.	PADMANABHA K, Univ.Hort.S, Bagalkot, FUS	11351	VEGETABLE SCIENCE	27/07/2018
4.	HIRA SINGH, PAU, Ludhiana, FUS	11353	"	27/07/2018
5.	ARUDRA SRINIVASA RAO, ANGRAU, Guntur, FUS	11184	AGRICULTURAL ENGINEERING(FP&E)	27/07/2018
6.	MONALISHA PRAMANIK, IISWC, Dehradun, ICAR In service	11361	WATER SCIENCE AND TECHNOLOGY	27/08/2018
7.	YADAV RAHUL SUBHASH, DFR, Pune(Enrolled at CIAE, Bhopal), ICAR In service	11173	AGRICULTURAL ENGINEERING(AP&S)	27/07/2018

**408.3.5** Award of Contingent grant only @ Rs.10,000/- per annum to the following four students who were admitted under Departmental-Scientific Scheme.

S. No.	NAME OF THE STUDENT	ROLL NO	DISCIPLINE	DATE OF ENROLMENT
1.	NAYAN DEEPAK G, Fruit Sci., IARI, New Delhi	11267	FRUIT SCIENCE	27/08/2018
2.	SHEEL YADAV, NBPGR, New Delhi	11291	MOLECULAR BIOLOGY & BIOTECHNOLOGY	27/07/2018
3.	SHASHI MEENA, Pl. Physiology, IARI, New Delhi	11322	PLANT PHYSIOLOGY	30/07/2018
4.	RAKESH KUMAR, NCIPM, New Delhi	11245	ENTOMOLOGY	27/07/2018

**408.3.6** Following 14 students who were admitted in the discipline of Agricultural Statistics, Bioinformatics and Computer Application will get their Sr. Scholarship from IASRI.

S.N O.	NAME OF THE STUDENT	ROLL NO	DISCIPLINE	DATE OF ENROLMENT
1.	GARIMA SINGH	11206	AGRICULTURAL STATISTICS	27/07/2018
2.	KAPIL CHOUDHARY	11207	"	27/07/2018
3.	JITENDRA KUMAR	11208	"	27/07/2018
4.	SANDIPAN SARKAR	11209	"	27/07/2018
5.	MAHALINGARAYA	11210	"	27/07/2018
6.	SAYANTANI KARMAKAR	11211	"	27/07/2018
7.	ANKITA NEGI	11225	BIOINFORMATICS	27/07/2018
8.	AAMIR KHAN	11226	"	27/07/2018
9.	DIPRO SINHA	11227	"	27/07/2018
10.	DEBDALI CHOWDHURY	11228	COMPUTER APPLICATION	27/07/2018
11.	VAIJANATH S. KUMASAGI	11229	"	27/07/2018
12.	VIVEK KUMAR	11230	"	27/07/2018
13.	LAKSHMI MAHADEV SONKUSALE	11231	"	27/07/2018
14.	RAMESH PRAJAPAT	11232	"	27/07/2018

**408.3.7** The Standing Committee **did not recommend** award of Institute Sr. Scholarship to the following six students as they have already availed the benefit of Scholarship during their last admission at IARI and left the course incomplete. Further, the Standing Committee was also of the view that necessary recovery on account of Surety Bond etc. as per rule may also be made from these students, if still due. Further to avoid second time award of fellowship, a suitable undertaking to the effect that the students has not availed the benefit of Scholarship earlier from or through IARI/ICAR, may be obtained.

S.NO.	NAME OF THE STUDENT	ROLL NO	DISCIPLINE	DATE OF ENROLMENT
1.	ASLAM LATIF PATHAN	11190	AGRICULTURAL ENGINEERING(S&WCE)	25/08/2018
2.	DARSHAN MANIKRAO KADAM	11262	FRUIT SCIENCE	27/08/2018
3.	SUHAS GORAKH KARKUTE	11288	MOLECULAR BIOLOGY & BIOTECHNOLOGY	27/08/2018
4.	MANOJ KUMAR YADAV	11311	PLANT PATHOLOGY	27/08/2018
5.	HEMAVATI RANEBENNUR	11314	"	27/08/2018
6.	SAWANT RAMNATH SANKET	11172	AGRICULTURAL ENGINEERING(AP&S)	27/07/2018

President, PGSSU apprised that Mr. Sawant Ramnath Sanket at Sr. No.6 above is not an inservice candidate hence should be awarded Scholarship. The Academic Council was of the opinion that the issue may be examined by P.G. School for further consideration of Chairman, Academic Council.

**408.3.8** During the current academic session 2018-19, Education Division of ICAR referred 155 candidates for admission to M.Sc. degree programmes in different disciplines at IARI through online counseling held during September-October 2018. Out of 155, two students did not report for admission. In addition to this, two students have taken admission as Departmental candidates.

The candidates who are not awarded ICAR P.G. Scholarship are considered for award of Institute Scholarship. This year M.Sc./M.Tech. students were admitted late in September-October 2018. Award of ICAR-PG Scholarship is yet to be decided by the Education Division, ICAR. To avoid hardship to these students, the Academic Council has decided to pay them also from IARI funds subject to necessary adjustment on obtaining funds for ICAR- P.G. Scholarship from ICAR .

***Agenda Item No. 408.4: Consideration of the proceedings of the meeting of the Standing Committee on Course Curricula and Academic Affairs held on 03.12.2018***

The Academic Council discussed the recommendations of the Standing Committee and approved the following:

**408.4.1 Existing and proposed codes of FHT/FLA/VSC disciplines as suggested by Professors of respective disciplines**

The Academic Council approved the uniformity of the codes for the following six courses:

Existing Course Codes	Name of the Course	Trimester	Credits	Proposed Course Codes
HORT502/HORT502/VSC504	NUTRITIONAL REQUIREMENT OF HORTICULTURAL CROPS	I	3L+1P	FSC506/FLA506/VSC506
HORT501/FLA570/VSC570	BASIC HORTICULTURE	I	3L+2P	FSC507/FLA507/VSC507
HORT601/HORT601/VSC670	EXPORT ORIENTED HORTICULTURE	I	3L+1P	FSC603/FLA603/VSC603
HORT611/FLA672/VSC672	PROTECTED CULTIVATION OF HORTICULTURAL CROPS	II	3L+1P	FSC612/FLA612/VSC612
HORT622/FLA674/VSC674	PLANT TISSUE CULTURE IN THE IMPROVEMENT OF HORTICULTURAL CROPS	III	2L+2P	FSC625/FLA625/VSC625
HORT521/HORT521/VSC673	GROWTH AND DEVELOPMENT OF HORTICULTURAL CROPS	II	3L+1P	FSC523/FLA523/VSC523

**408.4.2 Introduction of two New Courses (i) FSC 621: Advances in Growth and Development of Fruit Crops (ii) FSC 604: Hi-Tech Fruit Production**

The Academic Council approved two new courses; (i) FSC 621 (3L+1P) - Advances in Growth and Development of Fruit Crops and (ii) FSC 604 (4L+0P) - Hi-Tech Fruit Production in the discipline of Fruit Science.

**408.4.3 Consideration of the request of Professor, Plant Pathology on allocation of marks for publications in different awards of the Institute**

The Academic Council discussed the proposal and approved that the Corresponding author may also get equal marks as that of first author of research paper.

**408.4.4 The issue of compulsory internship of IARI students with industry/organizations as part of PG Course curricula was discussed in detail and was not agreed for making it compulsory.**

***Agenda Item No. 408.5: Consideration of the proceedings of the meeting of the Standing Committee on Faculty & Discipline held on 4.12.2018***

The Academic Council discussed the recommendations of the Standing Committee and approved the following:

**408.5.1 Recommended the candidature of the following seven Scientists for induction into P.G. Faculty in their respective disciplines.**

S. No.	Name & Designation	Name of the Discipline
1.	Dr. Punitha P, Scientist	Agricultural Extension
2.	Mr. Pravin Kumar Upadhyay, Scientist	Agronomy
3.	Dr. Vartika Srivastava, Scientist, NBPGR	Fruit Science
4.	Dr. S.N. Bhowmik, Principal Scientist	Microbiology
5.	Dr. Anshul Watts, Scientist, NRCPB	Molecular Biology and Biotechnology
6.	Dr. Shivani Nagar, Scientist	Plant Physiology
7.	Dr. Gograj Singh Jat, Scientist	Vegetable Science

**408.5.2 The Academic Council was of the opinion that keeping in view the present scenario of developments in science, P.G. School faculty guidelines (para 3.23.2.) concerning posting of Scientists of a particular parent discipline in different departments/institutes, shall be revised by a Committee.**

In view of the above, the Academic Council was of the opinion that the candidature of the following Scientists and also similar cases in future, if any, may be considered after the recommendation of above Committee.

S. No.	Name & Designation	Name of the Discipline
1.	Dr. M.A. Khan, Principal Scientist	Soil Science and Agricultural Chemistry
2.	Dr. Archanna Watts, Scientist	Plant Physiology

**408.5.3 Recommended** the following twelve faculty members as Research guides for M.Sc. guidance in their respective disciplines as they met the prescribed requirement for becoming the research guides.

S. No.	Name & Designation	Name of the Discipline
1.	Dr. Anirban Dutta, Scientist	Agricultural Chemicals
2.	Dr. Sudipta Paul, Scientist	Agricultural Extension
3.	Dr. Kapila Shekhawat, Senior Scientist	Agronomy
4. *	Dr. Gyan Prakash Mishra, Senior Scientist	Genetics and Plant Breeding
5.	Dr. Navin Chandra Gupta, Scientist, NRCPB	Molecular Biology and Biotechnology
6.	Dr. Archana P. Raina, Principal Scientist, NBPGR	Plant Genetic Resources
7. *	Dr. Sundeep Kumar, Principal Scientist, NBPGR	Plant Genetics Resources
8.	Dr. Dhandapani R., Scientist (SS)	Plant Physiology
9. *	Dr. Jeetendra Kumar Ranjan, Senior Scientist	Vegetable Science
10.	Dr. Sharawan Singh, Scientist	Vegetable Science
11.	Dr. Shyam Sundar Day, Scientist	Vegetable Science
12.	Ms. Rosin K.G., Scientist	Water Science and Technology

\*Keeping in view of their previous teaching and guiding experience at their previous University

**408.5.4 Did not recommend** the recognition of the candidature of Dr. G. Prakash, Scientist, Plant Pathology as Research Guide as he did not meet the prescribed requirement of three year teaching experience (short of one year teaching experience).

**408.5.5** The Academic Council approved the recommendation of the Standing Committee that the CVs of the Scientists for recognition as Co-Research Guide in their respective disciplines at IIVR Varanasi, NIBSM, Raipur and NIASM, Baramati may be sent to the Board of Studies of respective disciplines of IARI to consider and recommend only those applications as per the need and with clear justification. As per the executed MoUs, the CVs received for induction as Faculty Member was not considered.

**408.5.6** On the issue of following four applications for recognition of Adjunct Faculty received from the Professors of respective Disciplines, the Academic Council was of the opinion that the respective BOS should follow the guidelines of Adjunct Faculty, identify specific teaching/research needs of the discipline and resubmit the proposals.

S. No.	Name & Designation	Name of the Discipline
1.	Dr. K.C. Bansal, Former Director, NBPGR	Molecular Biology and Biotechnology
2.	Dr. Pitam Chandra, Former Director, CIAE Bhopal	Post Harvest Technology
3.	Dr. Prabhakar, Former PC, AICRP on Small Millets, ICAR, IIHR	Genetics & Plant Breeding (at IIHR).
4.	Dr. R. Chitraichelvan, Former Head, Div. of Fruit Crops, IIHR	Fruit Science (at IIHR)

The Academic Council approved the Academic Calendar of the P G School for the Academic Session 2019-20 .

<b>Admission Process for the Academic Session 2019-20</b>		
<b>2019</b>		
March 09-10	Saturday & Sunday	Advertisement for inviting on line applications for Ph.D. admission will be published in all the leading national news papers
March 11	Monday	Receipt of online applications for Ph.D. admission starts
April 15	Monday	Last date for receipt of online applications for admission to Ph.D. Programme
April 22	Monday	Last date for receipt of through proper channel applications and documents submission
May 26	Sunday	<b>Entrance Examination for admission to Ph.D. Programme</b>
June 21	Friday	Last date for submission of thesis by IARI M.Sc. students who have applied for admission to the Ph.D. Programme
June 22	Saturday	Declaration of result of Written Test for admission to Ph.D. programme
June 29	Saturday	Last date for receipt of mark sheet from the candidates who are studying in M.Sc. final year
July 01	Monday	<b>Interview for admission to Ph.D. Programme in the respective disciplines</b>
July 06	Saturday	Academic Council meeting for finalization of results for M.Sc. & Ph.D. admissions 2019-20
July 25-26	Thursday & Friday	Verification of original documents and online Registration of newly admitted M.Sc. and Ph.D. students for the Academic Session 2019-20
July 27	Saturday	Orientation Programme: Newly admitted students to be addressed by Dean and Director, IARI
<b>I – Trimester</b>		
July 29	Monday	First Trimester begins, payment of fees and online registration of continuing students
July 30	Tuesday	Commencement of Class Work
August 13	Tuesday	Last date for adding/dropping of course
September 05	Thursday	Teacher day celebration and lecture
November 11	Monday	National Agricultural Education day celebration and lecture
November 12 to November 16	Tuesday to Saturday	<b>Final Examination of I Trimester</b>
<b>II – Trimester</b>		
November 18	Monday	Online Registration of students
November 19	Tuesday	Commencement of Class Work
December 03	Tuesday	Agricultural Education Day



December 04	Wednesday	Last date for adding/dropping of courses
<b>December 15 to December 29</b>	<b>Sunday to Sunday</b>	<b>Winter Break</b>
<b>2020</b>		
January 27	Monday	Last date for holding the Final Viva-Voce Examination for consideration for the award of IARI Merit Medals and award of degree in the 58 <sup>th</sup> Convocation, 2020
February 03	Monday	<b>Commencement of 58<sup>th</sup> Convocation Week Programme</b>
February 06	Thursday	<i>50<sup>th</sup> Lal Bahadur Shastri Memorial Lecture</i>
February 07	Friday	58 <sup>th</sup> Convocation
February 22 to February 24	Saturday to Monday	Annual Sports Meet (Tentative)
<b>March 23 to March 28</b>	<b>Monday to Saturday</b>	<b>Final Examination of II Trimester</b>
<b>III - Trimester</b>		
<b>March 30</b>	Monday	Online Registration of students
<b>March 31</b>	Tuesday	Commencement of Class Work
April 14	Tuesday	Last date for adding/dropping of course
<b>May 24 to June 14</b>	<b>Sunday to Sunday</b>	<b>Summer Vacation</b>
<b>July 13 to July 18</b>	<b>Monday to Saturday</b>	<b>Final Examination of III Trimester</b>
<b>July 19 to July 26</b>	<b>Sunday to Sunday</b>	<b>Trimester Break</b>

**Agenda Item No. 408.7: Finalisation of 57<sup>th</sup> Convocation Week Programme**

The Academic Council approved the following 57<sup>th</sup> Convocation programme of IARI.

**Venue: Dr. B.P. Pal Auditorium**

**Monday, February 04, 2019**

09.30-18.00 hrs. **Presentation of "Significant Post Graduate Students Research" by M.Sc./M.Tech. & Ph.D. students for "Merit Medals" and "Best Student of the Year" award**

**Tuesday, February 05, 2019**

**Presentation of Significant Educational Achievements for the year 2018 by the Professors representing different Schools of the teaching disciplines**

09.30-11.15 hrs. Session I – Crop Improvement

11.30-13.00 hrs. Session II – Crop Protection

14.00-15.45 hrs.	Session III – Resource Management
16.00-17.00 hrs.	Session IV – Basic Sciences
17.15-18.30 hrs.	Session V – Horticultural Sciences

### Wednesday, February 06, 2019

#### **Presentation of Significant Educational Achievements for the year 2018 by the Professors representing different Schools of the teaching disciplines**

09.30-10.45 hrs.	Session VI – Social Sciences
<b>Award Lectures</b>	
11.00-12.15 hrs.	Lecture by the Recipient of Dr. B.P. Pal Medal
12.30-13.45 hrs.	Lecture by the Recipient of XIX Shri Harikrishna Shastri Memorial Award
15.00-16.15 hrs.	Lecture by the Recipient of XXV Hooker Award
16.30-17.45 hrs.	Lecture by the Recipient of VII Rao Bahadur B. Vishwanath Memorial Award

### Thursday, February 07, 2019

*Venue: Conference Hall, IARI Library*

09.30-10.30 hrs.	408 <sup>th</sup> Meeting of the Academic Council, IARI
11.00-12.00 hrs.	Meeting of Board of Management, IARI
12.15-13.00 hrs.	Press Conference

*Venue: Dr. B.P. Pal Auditorium*

14.00-15.30 hrs.	49 <sup>th</sup> Lal Bahadur Shastri Memorial Lecture
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*Venue: Lawns of Dr. B.P. Pal Auditorium*

15.45-16.30 hrs.	Full Dress Rehearsal
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### Friday, February 08, 2019

*Venue: Lawns of Dr. B.P. Pal Auditorium*

11.00-13.00 hrs.	57 <sup>th</sup> Convocation
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*Venue: Dr. B.P. Pal Auditorium*

18.00 hrs.	Cultural Programme by P. G. Students
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*Venue: Lawns of Genetics Division*

20.00 hrs.	Convocation Dinner
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The process on the following items has already been completed with the approval of the Chairman of the Academic Council to enable the P.G. School to complete all the pre-convocation requirements well in time. The action taken is submitted for kind information of the Academic Council and its ratification.

1. Finalization of Chief Guest
2. Chairpersons for the various Programmes
  - i) Chairman, Judging Committee and Convenor for the programme "Significant Post Graduate Students Research-2018 presentation" by the PG students for IARI Merit Medals" and Best Student of the Year Award on

Monday, February 04, 2019 (Convenor: Dr.(Mrs.) Radha Prasanna, Professor, Microbiology)

- ii) Chairpersons and Conveners for the Programme "Presentation of Significant Educational Achievements of IARI for the year 2018" by the Professors of teaching disciplines representing Schools on Tuesday, February 05, 2019 (Convenor: Dr. S. Naresh Kumar, Professor, Environmental Science)
3. Lecture by the recipients of the following awards
  - i) Shri Hari Krishna Shastri Memorial Award
  - ii) Hooker Award
  - iii) Rao Bahadur B. Vishwanath Memorial Award
  - iv) Dr. B.P. Pal Medal
4. Speaker to deliver 49<sup>th</sup> Lal Bahadur Shastri Memorial Lecture:
5. Chairman and Convenor for the 49<sup>th</sup> Lal Bahadur Shastri Memorial Lecture:
6. Chairpersons for the below mentioned Committees:

i) Pandal and Seating Arrangements Committee	Dr. Indra Mani, Head, Division of Agricultural Engineering
ii) Catering Arrangement Committee	Sh. Kailash Chandra Joshi, Registrar & Joint Director (Admn.)
iii) Invitation Committee	Dr. V.K. Baranwal, Professor, Division of Plant Pathology
iv) Reception Committee	Dr. (Ms.) Anupama Singh, Head, Division of Agricultural Chemicals
v) Cultural Programme & Invocation Song Committee	Dr. (Ms.) K. Annapurna, Head, Division of Microbiology
vi) Decoration Committee	Dr. Markandey Singh, Sr. Scientist, Division of Floriculture & Landscape Architecture
vii) Publicity Committee	Dr. Ravindra Nath Padaria, Professor, Division of Agricultural Extension
viii) Transport and Accommodation Committee	Sh. Pushpender Kumar, Chief Administrative Officer

**Agenda Item No.408.8:** *Consideration of the list of the candidates who have become eligible for award of their respective degrees of Master of Science and Doctor of Philosophy as on 12.12.2018*

The Academic Council approved the list of **137** candidates for the award of degree of M.Sc./M.Tech. and **39** candidates for Doctor of Philosophy who have completed all the requirements including their final viva-voce examination as on 12.12.2018 (**Appendix-I**).

**Agenda Item No. 408.9:** *Finalization of number of seats and eligibility qualification for admission to M.Sc./M.Tech. and Ph.D. degree programmes for the Academic Session 2019-20*

**408.9.1** The number of seats for M.Sc./M.Tech. and Ph.D. programmes in various disciplines at IARI, New Delhi, IARI, Jharkhand and IARI, Assam required for the Academic Session 2019-20 was approved by the Academic Council.

**M. Sc./M.Tech. Programme:** The seat requirement will be sent to the Education Division of ICAR as they conduct the All India Entrance Examination for admission (AIEEA – PG- 2019) and Award of ICAR-JRF to Master's degree programme of IARI, IVRI, NDRI, CIFE, CAU and SAU's.

Sl. No.	Discipline	Total
<b>A. IARI, New Delhi</b>		
1.	AGRICULTURAL CHEMICALS	5
2.	AGRICULTURAL ECONOMICS	4
3.	AGRICULTURAL ENGG. (Agricultural Processing & Structure)	2
4.	AGRICULTURAL ENGG. (Farm Power & Equipment)	4
5.	AGRICULTURAL ENGG. (Soil & Water Conservation Engineering)	3
6.	AGRICULTURAL EXTENSION	6
7.	AGRICULTURAL PHYSICS	4
8.	AGRICULTURAL STATISTICS	7
9.	AGRONOMY	5
10.	BIOCHEMISTRY	4
11.	BIOINFORMATICS	5
12.	COMPUTER APPLICATION	6
13.	ENTOMOLOGY	5
14.	ENVIRONMENTAL SCIENCES	5
15.	FLORICULTURE AND LANDSCAPING ARCHITECTURE	3
16.	FRUIT SCIENCE	5
17.	GENETICS AND PLANT BREEDING	6
18.	MICROBIOLOGY	5
19.	MOLECULAR BIOLOGY AND BIOTECHNOLOGY	7
20.	NEMATOLOGY	2
21.	PLANT GENETIC RESOURCES	4
22.	PLANT PATHOLOGY	5
23.	PLANT PHYSIOLOGY	4
24.	POST HARVEST TECH. (PHT of Horticultural Crops)	2
25.	POST HARVEST TECH. (Post Harvest Engineering & Technology)	1
26.	SEED SCIENCE AND TECHNOLOGY	4
27.	SOIL SCIENCE AND AGRICULTURAL CHEMISTRY	4
28.	VEGETABLE SCIENCE	4
29.	WATER SCIENCE AND TECHNOLOGY	2
<b>TOTAL-A</b>		<b>123</b>
<b>B. IARI, Assam</b>		
a.	AGRONOMY	2
b.	GENETICS AND PLANT BREEDING	2
c.	SOIL SCIENCE AND AGRICULTURAL CHEMISTRY	2
d.	VEGETABLE SCIENCE	2
<b>TOTAL-B</b>		<b>8</b>
<b>C. IARI, Jharkhand</b>		
a.	AGRONOMY	2
b.	GENETICS AND PLANT BREEDING	2
c.	SOIL SCIENCE AND AGRICULTURAL CHEMISTRY	2
d.	VEGETABLE SCIENCE	2
<b>TOTAL-C</b>		<b>8</b>
<b>Grand TOTAL =A+B+C</b>		<b>139</b>

**Ph. D. Programme:** The all India Entrance Examination for admission to Ph.D. degree programmes at IARI is conducted by the Post Graduate School with the assistance of Examination Committee constituted by the Chairman, Academic Council.

Sl. No.	Discipline	GEN	OBC	SC	ST	PH	Total
<b>A. IARI, New Delhi</b>							
1.	AGRICULTURAL CHEMICALS	3	2	1	-	-	6
2.	AGRICULTURAL ECONOMICS	3	1	1	-	-	5
3.	AGRICULTURAL ENGG. (Agricultural Processing & Structure)	1	-	1	-	-	2
4.	AGRICULTURAL ENGG. (Farm Power & Equipment)	2	1	-	1	-	4
5.	AGRICULTURAL ENGG. (Soil & Water Conservation Engineering)	2	1	-	-	-	3
6.	AGRICULTURAL EXTENSION	4	2	1	-	(1)	7
7.	AGRICULTURAL PHYSICS	3	1	1	-	-	5
8.	AGRICULTURAL STATISTICS	3	3	1	1	(1)	8
9.	AGRONOMY	5	3	1	1	-	10
10.	BIOCHEMISTRY	3	2	-	-	-	5
11.	BIOINFORMATICS	3	1	1	-	-	5
12.	COMPUTER APPLICATION	3	1	1	1	-	6
13.	ENTOMOLOGY	3	2	1	-	-	6
14.	ENVIRONMENTAL SCIENCES	2	2	1	1	-	6
15.	FLORICULTURE AND LANDSCAPING ARCHITECTURE	2	1	1	-	-	4
16.	FRUIT SCIENCE	3	1	1	-	-	5
17.	GENETICS AND PLANT BREEDING	6	3	2	2	-	13
18.	MICROBIOLOGY	3	2	1	-	-	6
19.	MOLECULAR BIOLOGY AND BIOTECHNOLOGY	4	2	1	1	(1)	8
20.	NEMATOLOGY	2	1	1	-	-	4
21.	PLANT GENETIC RESOURCES	3	1	-	1	-	5
22.	PLANT PATHOLOGY	4	2	2	1	(1)	9
23.	PLANT PHYSIOLOGY	3	3	1	-	-	7
24.	POST HARVEST TECH. (PHT of Horticultural Crops)	2	1	-	-	-	3
25.	POST HARVEST TECH. (Post Harvest Engineering & Technology)	-	1	-	-	-	1
26.	SEED SCIENCE AND TECHNOLOGY	3	1	1	1	(1)	6
27.	SOIL SCIENCE AND AGRICULTURAL CHEMISTRY	6	2	2	-	-	10
28.	VEGETABLE SCIENCE	5	3	1	1	-	10
29.	WATER SCIENCE AND TECHNOLOGY	3	2	2	1	-	8
<b>Total-A</b>		<b>89</b>	<b>48</b>	<b>27</b>	<b>13</b>	<b>(5)</b>	<b>177</b>
<b>B. CIAE, Bhopal</b>							
a.	AGRICULTURAL ENGG. (Agricultural Processing & Structure)	1	1	-	1	-	3
b.	AGRICULTURAL ENGG. (Farm Power & Equipment)	2	-	1	-	-	3
c.	AGRICULTURAL ENGG. (Soil & Water Conservation Engineering)	1	1	-	-	-	2
<b>Total-B</b>		<b>4</b>	<b>2</b>	<b>1</b>	<b>1</b>	<b>-</b>	<b>8</b>
<b>C. IIHR, Bangalore</b>							
a.	FLORICULTURE AND LANDSCAPING ARCHITECTURE	1	1	-	-	-	2
b.	FRUIT SCIENCE	1	-	-	1	-	2
c.	POST HARVEST TECH. (PHT of Horticultural Crops)	1	-	1	-	-	2
d.	VEGETABLE SCIENCE	1	1	-	-	-	2
<b>Total-C</b>		<b>4</b>	<b>2</b>	<b>1</b>	<b>1</b>	<b>-</b>	<b>8</b>
<b>Grand Total</b>		<b>97</b>	<b>52</b>	<b>29</b>	<b>15</b>	<b>(5)</b>	<b>193</b>

**408.9.2** The following proposals received from concerned BOS was considered by the Academic Council and decided the following:

TS. No.	Discipline	Existing Qualification for Ph.D. Programme	Deletion	Decision of of Academic Council
1.	Post Harvest Technology	<b>For Post Harvest Engineering and Technology:</b> Agricultural Processing and Structures / Food Engineering / Post Harvest Engineering / Biochemical Engineering (Pre-requisite: B.Sc., <b>B.Tech/B.E. in Agricultural Engineering</b> )	<b>B. Tech.</b> <b>(Agricultural Engineering)</b>	Deletion of <b>B. Tech. (Agricultural Engineering)</b> Addition of <b>Food Science &amp; Tech./Food Tech.</b>
2.	Soil Science and Agricultural Chemistry	Soil Science and/ OR Agricultural Chemistry / <b>Environmental Sciences/ Agricultural Microbiology/</b> Chemistry / Agricultural Physics with specialization in Soil Physics	<b>Environmental Sciences and Agricultural Microbiology</b>	Not agreed for any deletion, existing qualification shall be continued

**408.9.3** The following schedule related to All India Entrance Examination for admission to Ph.D. Programme was approved by the Academic Council.

**Date of Entrance Examination : 26.05.2019 (Sunday)**

**Name of the Examination Centres: Anand, Bengaluru, Ludhiana, Coimbatore, Delhi, Guwahati, Jabalpur, Hyderabad, Patna, Kolkata, Pune, Udaipur and Varanasi**

In addition to the seats finalized for open stream, seats for admission to M.Sc. & Ph.D. programmes under other streams are detailed below:

Faculty Up-gradation Scheme	-	10 seats for Ph.D. only
ICAR-In-Service Nominee Scheme	-	10 seats for Ph.D. only
Departmental (Scientific Cadre)	-	10 seats for Ph.D. only
Departmental (Technical Cadre)	-	10 seats for M.Sc. & Ph.D.
Foreign Students	-	30 seats for M.Sc. & Ph.D.
Children/widows of Security Forces	-	5 seats for M.Sc. & Ph.D.

**Agenda Item No. 408.10: *Renewal of all the four Standing Committees' composition of the Academic Council for the period of two years i.e. January 2019 to December 2020.***

The Academic Council approved the re-composition of all the four Standing Committees for the term of two years (January 2019 to December, 2020).

**I *STANDING COMMITTEE ON COURSES CURRICULA & ACADEMIC AFFAIRS***

1.	Dr. Alka Singh, Professor, Agricultural Economics	Chairperson
2.	Dr. Vinod, Professor, Genetics & Plant Breeding	Member
3.	Dr. A.R. Rao, Professor, Bioinformatics	Member
4.	Dr. S. Naresh Kumar, Professor, Environmental Sciences	Member
5.	Dr. Mahesh C. Yadav, Principal Scientist, NBPGR and Faculty Representative to the Academic Council	Member
6.	Ms. Priti Priyadarshni, Student's Representative to the Academic Council	Member
7.	Dr. K.M. Manjaiah, Associate Dean, P.G. School	Member Secretary

**II *STANDING COMMITTEE ON FACULTY & DISCIPLINE***

1.	Dr. Seema Jaggi, Professor, Agricultural Statistics	Chairperson
2.	Dr. D.K. Singh, Professor, Agricultural Engineering	Member
3.	Dr. R.N. Padaria, Professor, Agricultural Extension	Member
4.	Dr. S.P. Datta, Professor, SS&AC	Member
5.	Dr. A. Nagaraja, Senior Scientist, FHT & Faculty Representative to the Academic Council	Member
6.	Dr. K.M. Manjaiah, Associate Dean, P.G. School	Member Secretary

**III *STANDING COMMITTEE ON SCHOLARSHIPS, FINANCIAL ASSISTANCE AND ACADEMIC PROGRESS***

1.	Dr. Subhash Chander, Professor, Entomology	Chairman
2.	Dr. S.K. Jha, Professor, Post Harvest Technology	Member
3.	Dr. M.R. Khan, Professor, Nematology	Member
4.	Dr. T.K. Das, Professor, Agronomy	Member
5.	Mr. Tribhuvan R., President, PGSSU	Member
6.	Ms. Priti Priyadarshni, Student's Representative to the Academic Council	Member
7.	Mr. Kailash Chandra Joshi, Registrar	Member Secretary

**IV *STANDING COMMITTEE ON STUDENT'S PROBLEMS, DISCIPLINE, WELFARE BOARD AND RESIDENCES***


1.	Dr. Man Singh, Project Director (Additional Charge) and Professor, WST	Chairman
2.	Dr. Aruna Tyagi, Professor, Biochemistry	Member
3.	Dr. Madan Pal Singh, Professor, Plant Physiology	Member
4.	Dr. Veena Gunta, Professor, PGR	Member

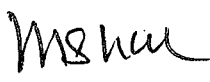



**Agenda Item No. 408.11: Any other items with the permission of the Chair**

1. In view of the revision in ICAR PG & SRF from 2018-19 session and notified by the ICAR, the Academic Council was of the view that the IARI students admitted through All India Entrance Examination too deserve a similar increase in their Institute Scholarships. The details on the additional budget requirements duly vetted by Comptroller, IARI should be sent to the ICAR for sanction and remittance of increased Fellowship funds.
2. On the issue of shortage of hostel accommodation, the Academic Council decided to inscribe clearly in the Information Bulletin for the next academic session 2019-20 that students admitted shall be allotted accommodation in hostels based on merit and rest have to arrange themselves outside the campus.
3. On the issue of student collaboration proposal received from Rani Laxmibai Central Agricultural University, Jhansi the Academic Council was of the view that the concerned authorities from the University may be invited for discussion with Dean and Director, IARI.
4. On the issues raised by the Students Representatives, the Academic Council decided that :
  - (i) Font size of Ph.D. entrance exam question papers must be kept easiest readable.
  - (ii) On the issue of online fee submission by P.G. Students, Comptroller and Registrar shall take immediate necessary action to put the online payment gateway in place.
  - (iii) On the issue of statistical software training to the students, the Professor, Agricultural Statistics shall arrange a training in each Trimester.
  - (iv) On the issue of health insurance to students of IARI, the Academic Council decided that MOHR and President PGSSU shall take appropriate action at the earliest to be applicable compulsorily to all students from next Academic Session 2019-20.
  - (v) On the issue of teaching Hindi to the Staff and students specially the foreign students, Hindi Section of IARI shall make necessary arrangement of initiating Hindi classes on regular basis.

The meeting ended with the vote of thanks to the Chair.

  
(K.C. Joshi)  
Member-Secretary

  
(J.P. Sharma)  
Vice Chairman

  
(A.K. Singh)  
Chairman

List of candidates who have successfully completed all the requirements including final viva-voce examination for the award of degree of Master of Science/Master of Technology as on 12/12/2018

No.	ROLL NO	NAME OF THE STUDENT	Title of Thesis
<b>AGRICULTURAL CHEMICALS</b>			
1	20755	KAILASH PATI TRIPATHI	DEVELOPMENT OF LC-MS/MS METHOD FOR ESTIMATION OF MANCOZEB, A DITHIOCARBAMATE FUNGICIDE RESIDUE
2	20756	ARKADEB MUKHOPADHYAY	BIOINSECTICIDAL FORMULATIONS OF <i>Steinernema thermophilum</i> WITH IMPROVED SHELF-LIFE: LIPID METABOLISM GUIDED IMMOBILIZATION IN CROSS-LINKED BIOPOLYMER GELLING CARRIERS
3	20757	DEBDAS CHAND	PERSISTENCE OF FLUCETOSULFURON HERBICIDE AS AFFECTED BY BIOTIC AND ABIOTIC FACTORS IN INDIAN SOILS
4	20758	AJITH. M	BIOASSAY GUIDED PROFILING OF ESSENTIAL OILS FROM AROMATIC PLANTS FOR POSSIBLE NEMATICIDAL ACTIVITY IN RICE
5	20759	Ms. SUTANWA SAHA	PERSISTENCE AND MOBILITY OF SULFONMIDE ANTIBIOTICS IN SOILS.
<b>AGRICULTURAL ECONOMICS</b>			
6	20760	SUBRATA GORAIN	SOCIO-ECONOMIC IMPACT OF DRIP IRRIGATION IN NORTHERN MAHARASHTRA
7	20761	TAHEER FIRDOSE K.	ROLE OF VALUE ADDITION IN ENHANCING FARM INCOME- A CASE STUDY ON TOMATO IN ANDHRA PRADESH
8	20762	MANASWI B. H.	ENHANCING SMALL FARMERS' ACCESS TO MARKET, FINANCE AND TECHNOLOGY THROUGH FARMER PRODUCER ORGANISATIONS: A CASE STUDY OF TELANGANA
<b>AGRICULTURAL ENGINEERING</b>			
9	20763	ABHINAV DUBEY	DEVELOPMENT OF SOLAR POWERED AIR INFLATED GRAIN DRYER.
10	20764	PADMAPANI EKNATH PACHPINDE	DESIGN AND DEVELOPMENT OF MIXED-MODE SOLAR DRYER FOR SELECTED FLOWERS
11	20765	AMAN MAHORE	DEVELOPMENT OF REAL TIME TRACTOR WHEEL SLIP MEASURING DEVICE
12	20766	PANKAJ MALKANI	DESIGN AND DEVELOPMENT OF SELF-PROPELLED FOLIAR APPLICATOR FOR UAN
13	20767	Ms. ASHA K. R.	DEVELOPMENT OF SENSOR-BASED SAFETY ALARM SYSTEM FOR INJURY PREVENTION IN FODDER CUTTER MACHINE
14	20769	VENKATESH	TENSIOMETER AUTOMATION DEVICE FOR GREEN HOUSE IRRIGATION SCHEDULING

No.	ROLL NO	NAME OF THE STUDENT	Title of Thesis
<b>AGRICULTURAL EXTENSION</b>			
15	20771	RAHUL MANDAL	INSTRUCTIONAL TECHNOLOGY IN AGRICULTURAL EDUCATION : AN EXPLORATORY STUDY
16	20772	SANJAY KUMAR GUPTA	AN ANALYTICAL STUDY OF AGRO-ECOLOGICAL BASES OF CONTEMPORARY WATER MANAGEMENT INNOVATIONS IN SUSTAINABLE AGRICULTURE
17	20773	MANJUNATH H.	FOOD MAPPING : AN ANALYSIS OF FOOD PRODUCTION AND CONSUMPTION PATTERN OF NUTRITIONALLY VULNERABLE COMMUNITY IN TELAGANA
18	20774	Ms. TANNISHTHA BARDHAN	ORGANIC FOOD CONSUMPTION BEHAVIOUR AND STATUS - A CRITICAL ANALYSIS
19	20775	Ms. AISWARYA S.	EFFECTIVENESS OF TRAINING IN ENHANCING CORE COMPETENCIES OF EXTENSION PERSONNEL : AN ANALYTICAL STUDY IN KERALA
20	20776	Ms. GANGUBAI S. MANAGULI	INNOVATIONS IN AGRICULTURAL KNOWLEDGE CREATION, INFORMATION MANAGEMENT AND TECHNOLOGY DELIVERY SYSTEM (AGRI-KITS) IN BUNDELKHAND REGION OF UTTAR PRADESH : A CRITICAL ANALYSIS
21	20908	FAIZAN ULHAQ FAIZAN	ASSESSMENT OF LEADERSHIP STYLE IN THE SCIENTIFIC ORGANIZATIONS
<b>AGRICULTURAL PHYSICS</b>			
22	20777	SUNNY ARYA	SURFACE ENERGY FLUXES OVER IRRIGATED MAIZE-WHEAT USING BOWEN RATIO ENERGY BALANCE METHOD
23	20778	SUJAN ADAK	ASSESSMENT OF SOIL AND CROP PARAMETERS IN WHEAT UNDER DIFFERENT TILLAGE, RESIDUE AND NITROGEN MANAGEMENT USING PROXIMAL HYPERSPECTRAL TECHNIQUE
24	20779	MOHAMMED SHAFEEQ P. M.	MODELLING TEMPORAL DISTRIBUTION OF WATER, AMMONIUM-N AND NITRATE-N IN ROOT ZONE OF WHEAT USING HYDRUS 2D UNDER CONSERVATION AGRICULTURE
25	20780	DEBASISH ROY	EFFECT OF WEATHER ON GRAIN QUALITY OF WHEAT CULTIVARS IN NORTH-WESTERN INDIA
26	20907	POORAN SEERAJ	SIMULATION OF GROWTH AND YIELD OF RICE UNDER CONSERVATION AGRICULTURE PRACTICES USING CROP SIMULATION MODEL
<b>AGRICULTURAL STATISTICS</b>			
27	20781	SANDIPAN SARKAR	STUDY OF WAVELETS AND LONG MEMORY TIME SERIES MODELS FOR FORECASTING
28	20782	JITENDRA KUMAR	STATISTICAL DESIGNS FOR FITTING RESPONSE SURFACES INCORPORATING NEIGHBOUR EFFECTS
29	20783	Ms. GARIMA SINGH	BLOCK DESIGNS FOR COMPARING TEST TREATMENT WITH CONTROLS
30	20784	MAHALINGARAYA	ESTIMATION OF HARVEST AND POST-HARVEST LOSSES OF MAJOR CROPS USING DOUBLE SAMPLING APPROACH
31	20785	KAPIL CHOUDHARY	STUDY ON EMPIRICAL MODE DECOMPOSITION BASED NEURAL NETWORK FOR AGRICULTURAL PRICE FORECASTING
32	20786	ROHIT KUNDU	RESPONSE SURFACE DESIGNS WITH FOUR AND SIX LEVELS
33	20787	Ms. SAYANTANI KARMAKAR	SOIL HEALTH ASSESSMENT USING SPATIAL STATISTICS

No.	ROLL NO	NAME OF THE STUDENT	Title of Thesis
<b>AGRONOMY</b>			
34	20788	BISWARANJAN BEHERA	BROWN MANURING OPTIMISATION FOR WEED MANAGEMENT IN MAIZE AND ITS CARRY-OVER EFFECTS IN ZERO-TILL WHEAT
35	20789	VARATHARAJAN T	INTEGRATED CROP MANAGEMENT MODULES FOR ENHANCING PRODUCTIVITY AND PROFITABILITY OF PIGEONPEA [ <i>Cajanus cajan</i> (L.) Millsp] UNDER PIGEONPEA-WHEAT CROPPING SYSTEM
36	20790	SOMANATH NAYAK	PHOSPHOROUS MANAGEMENT IN SOYBEAN UNDER CONSERVATION AGRICULTURE
37	20791	RADHESHYAM	EVALUATION OF POST EMERGENCE HERBICIDES IN MAIZE ( <i>Zea mays</i> L.)
38	20792	NIRAJ BISWAKARMA	TILLAGE AND NUTRIENT MANAGEMENT IN MAIZE UNDER MAIZE-MUSTARD CROPPING SYSTEM
39	50011	SHUBHAM MARAK	ORGANIC NUTRIENT MANAGEMENT IN RICE ( <i>Oryza sativa</i> L.) VARIETIES UNDER NORTH-EASTERN HILL REGION
40	50012	HITESH S.	WEED AND NITROGEN MANAGEMENT IN TRANSPLANTED RICE ( <i>Oryza sativa</i> L.) UNDER NORTH-EASTERN REGION OF INDIA
41	60010	Ms. SOUMYA SUNIL CHITNIS	EFFECT OF ZINC FERTILIZATION ON PRODUCTIVITY OF DIRECT SEEDED UPLAND RICE VARIETIES
42	60011	Ms. MEGHAMALA B. N.	EFFECT OF INTEGRATED WEED MANAGEMENT PRACTICES ON PRODUCTIVITY AND ECONOMICS OF UPLAND DIRECT-SEEDED RICE ( <i>Oriza sativa</i> L.) IN EASTERN INDIA
<b>BIOCHEMISTRY</b>			
43	20793	THAKARE SWAPNIL SHARADRAO	VALIDATION OF DET1-gRNAs THROUGH TRANSIENT AGROINFILTRATION APPROACH AND ANALYSIS OF CRISPR/Cas9 MEDIATED MUTAGENESIS IN SOYBEAN PLANTS
44	20794	Ms. JOSHNA JOSE	THE DESIGN AND CONSTRUCTION OF CRISPR/CAS9 PLASMID FOR PRECISE EDITING OF GM1PK2
45	20795	Ms. ARTI KUMARI	CHARACTERIZATION OF DYNAMIC CHANGES IN STARCH METABOLISM AND ITS EFFECT ON GRAIN QYALITY OF WHEAT UNDER TERMINAL HEAT STRESS
46	20796	PRATHAP V.	STARCH ACCUMULATION IN RICE GRAINS SUBJECTED TO DROUGHT DURING GRAIN FILLING STAGE
<b>BIOINFORMATICS</b>			
47	20797	Ms. ANKITA NEGI	DEVELOPMENT OF TRANSCRIPTOME BASED WEB-GENOMIC RESOURCES FOR DROUGHT RESPONSIVENESS IN BLACK PEPPER.
48	20800	MOHAN BABU H. S.	DEVELOPMENT OF NON-B DNA DATABASE FOR RICE AND MAIZE
49	20887	DIPRO SINHA	AN ENSEMBLE BASED CLUSTERING APPROACH FOR METAGENOMICS DATA
<b>COMPUTER APPLICATION</b>			
50	20802	Ms. DEBDALI CHOWDHURY	GIS APPROACH FOR MAPPING THE MEGA ENVIRONMENT FOR MAIZE IN INDIA
51	20804	VIVEK KUMAR	DEVELOPMENT OF WEB BASED TOOL FOR VISUALIZATION OF GENETIC VARIANTS
52	20805	VAIJANATH SHIVALINGAPPA KUMAS	DEVELOPMENT OF SOFTWARE PROTOTYPE FOR In-Silico COPY NUMBER VARIATION IDENTIFICATION
53	20807	Ms. LAKSHMI SONKUSALE	DESIGN AND DEVELOPMENT OF MOBILE APP FOR ERGONOMICS ASSESSMENT OF DRUDGERY PRONE ACTIVITIES IN AGRICULTURE

No.	ROLL NO	NAME OF THE STUDENT	Title of Thesis
<b>ENTOMOLOGY</b>			
54	20808	RANJITH H. V.	INVESTIGATIONS ON EFFECTS OF SUBLETHAL DOSES OF PHOSPHINE ON TRIBOLIUM CASTANEUM
55	20809	Ms. GEETHU S.	INVESTIGATION ON BIONOMICS AND PREDATORY POTENTIAL OF CHEILOMENES SEXMACULATA (FAB.) ON COTTON MEALYBUG, PHENACOCOCCUS SOLENOPSIS TINSLEY
56	20810	TANMAYA KUMAR BHOI	STUDIES ON PLANT DEFENCE SYSTEM IN MAIZE SEEDLINGS AGAINST CHILO PARTELLUS (SWINHAE)
57	20811	Ms. ARYA P.S.	COMPARATIVE DAMAGE POTENTIAL OF Sitophilus oryzae AND Rhyzopertha dominica ON WHEAT CULTIVARS
58	20812	HEMANT KUMAR	Biological, behavioural and biochemical investigations for resistance to Chilo partellus (Swinhoe) in Sorghum
<b>ENVIRONMENTAL SCIENCES</b>			
59	20813	PRAKASH BHADORIA	REMOVAL OF HEAVY METALS FROM WASTEWATER USING RICE STRAW BASED BIO-SORBENT
60	20815	PARTHA PRATIM MAITY	INTERACTIVE EFFECT OF ELEVATED CARBON DIOXIDE AND TEMPERATURE ON NITROGEN TRANSFORMATION IN SOIL UNDER RICE CROP
61	20816	JITU MANDOL	EFFECT OF PLANT GROWTH PROMOTING RHIZOBACTERIA AND ELEVATED CARBONDIOXIDE ON GROWTH AND YIELD OF BLACKGRAM UNDER ELEVATED TROPOSPHERIC OZONE
62	20818	PRAKASH KUMAR	EMISSION OF NITROUS OXIDE FROM BLACKGRAM CROP
63	20888	CHANDRA PRAKASH	MICROBIOLOGICAL QUALITY OF PARTICULATE MATTER IN URBAN AND RURAL AREAS
<b>FLORICULTURE AND LANDSCAPE ARCHITECTURE</b>			
64	20819	Ms. UZMA MEHRAJ	In vitro MASS MULTIPLICATION OF DOUBLED HAPLOID LINE OF MARIGOLD (TAGETES ERECTA L.) DERIVED THROUGH OVULE CULTURE
65	20820	SATISH SAINI	IMPACT OF GROWING CONDITIONS, MEDIA AND VARIETY ON PRODUCTION OF LA HYBRID LILIUM
66	20821	Ms. POOJA A.	STANDARDIZATION OF in-vitro PROPAGATION PROTOCOL IN Chrysanthemum coronarium L.
<b>FRUIT SCIENCE</b>			
67	20822	Ms. SHWETA K HADAKAR	STUDIES ON CHANGES IN PHENOLS AND FLAVONOIDS DURING FRUIT DEVELOPMENTAL STAGES IN MANGO GENOTYPES
68	20823	PRASAD SHIVAPPA KAROSHI	
69	20824	AMOL KAILAS JADHAV	STUDIES ON THE PHYSIOLOGY OF FLOWERING IN Citrus SPECIES
70	20825	NAVEEN KUMAR MAURYA	EVALUATION OF PAPAYA GENOTYPES FOR MORPHOLOGICAL, PHYSIO-BIOCHEMICAL AND MOLECULAR TRAITS UNDER LOW TEMPERATURE STRESS

No.	ROLL NO	NAME OF THE STUDENT	Title of Thesis
<b>GENETICS AND PLANT BREEDING</b>			
71	20686	MAHIPAL SINGH GURJAR	GENETIC AND MOLECULAR ANALYSES OF SHEATH BLIGHT RESISTANCE IN O.rufipogon DERIVED RICE INTROGRESSION LINE
72	20826	ABHIJITH K. P.	DEVELOPMENT AND VALIDATION OF GENE-BASED MARKER (S) FOR ipa1 AND ipa2 GENES CONFERRING LOW PHYTIC ACID IN MAIZE KERNEL
73	20827	NILESH JOSHI	ELUCIDATING INHERITANCE AND MOLECULAR MAPPING OF ENCLOSED PANICLE TRAIT IN "SAATHI" RICE
74	20828	LIMBALKAR OMKAR MAHARUDRA	MOLECULAR MAPPING OF LEAF AND STEM RUST RESISTANCE GENES IN A WHEAT-RYE RECOMBINANT "SELECTION 212"
75	20829	SUNIL KUMAR V. P.	MAPPING OF QTLs FOR HEAT TOLERANCE RELATED TRAITS IN WHEAT ( <i>Triticumaetivum</i> L.).
76	20830	RAHUL KUMAR	IDENTIFICATION OF MEAT-QTLs FOR NITROGEN EFFICIENCY AND PROFILING OF THE MQTL DIVERSITY IN INDIAN RICE ( <i>Oryza sativa</i> L.) GERMPLASM
77	20831	VIJAY KAMAL MEENA	STUDIES ON MOLECULAR DIVERSITY AND TOLERANCE ABILITY OF SPRING WHEAT GENOTYPES FOR TERMINAL HEAT TOLERANCE BASED ON DIFFERENT TOLERANCE INDICES.
78	50013	SHIVAKUMAR SHIDENUR	ASSESSMENT OF HETEROTIC POTENTIAL OF TROPICA JAPONICA DERIVED RESTORERS AND COMPARATIVE ANALYSIS FOR FERTILITY RESTORATION EFFICACY OF FERTILITY RESTORER GENES, Rf3 AND Rf4 IN RICE
79	50015	Ms. RAKHI SALAM	STUDY OF GENETIC VARIABILITY IN LENTIL FOR TOLERANCE TO HERBICIDE IMAZETHAPYR
80	60012	SUMAN DUTTA	ANALYSIS OF GENETIC VARIABILITY AND VALIDATION OF CANDIDATE GENE(s) AFFECTING RETENTION OF KERNEL CAROTENOIDS IN MAIZE DURING STORAGE
81	60013	GAURAV JOSHI	MOLECULAR CHARACTERISATION AND MULTI-ENVIRONMENT EVALUATION OF PUSA44 DERIVED PUP1 INTROGRESSION LINES FOR PHOSPHORUS RESPONSE
82	60014	HARSHAVARDHANA Y. S.	GENETICS OF SEMI-DETERMINACY AND IDENTIFICATION OF MOLECULAR MARKER LINKED TO DT1 LOCUS IN CHICKPEA ( <i>Cicer arietinum</i> L.)

## **MICROBIOLOGY**

83	20832	KRASH KUMAR KUSHWAHA	IMPACT OF PADDY STRAW BURNING ON SOIL MICROBIAL DYNAMICS
84	20833	SHIVARANJAN C S	ASSESSMENT OF THE COMBINED EFFECT OF SALINITY AND COPPER ON THE GROWTH AND PHYSIOLOGICAL VARIABLES OF A CYANOBACTERIUM ANABAENA DOLIOLUM
85	20834	PRASANT K PRUSTY	FUNCTIONAL DIVERSITY OF THE MICROBIAL NITROGEN CYCLE IN THE RHIZOSPHERE MICROBIOME OF RICE
86	20835	ANIL KUMAR	PHYLOGENETIC DIVERSITY OF MESORHIZOBIIUM STRAINS AND ITS EFFICIENCY ON PLANT GROWTH AND PRODUCTIVITY IN CHICKPEA

No.	ROLL NO	NAME OF THE STUDENT	Title of Thesis
<b>MOLECULAR BIOLOGY AND BIOTECHNOLOGY</b>			
87	20837	NILADRI BARMAN	CLONING AND CHARACTERIZATION OF DROUGHT INDUCIBLE PM 19 PROMOTER FROM WHEAT
88	20838	SOURAV KUMAR DAS	MARKER DEVELOPMENT FOR MAJOR DROUGHT AND HEAT STRESS TOLERANCE QTLs AND THEIR VALIDATION IN RICE ( <i>Oryza sativa</i> L.)
89	20839	BIPRATIP DUTTA	CHARACTERIZATION OF Magnaporthe-RESPONSIVE WRKY GENES IN CONTRASTING RICE GENOTYPES FOR PANICLE BLAST RESISTANCE
90	20840	Ms. SHAZIYA SULTANA	EXPRESSION PROFILING DURING ANTHESIS UNDER HEAT STRESS AND MOLECULAR CLONING OF GLYCEROL-3-PHOSPHATE ACYL TRANSFERASE (gpat) GENE FROM WHEAT
91	20841	AKASH PAUL	CO-EXPRESSION STUDIES OF NAR2 -LIKE GENES WITH HIGH AFFINITY NITRATE TRANSPORTER GENE (NRT2.1) IN ROOT TISSUES OF WHEAT ( <i>Triticum aestivum</i> )
92	20842	SUNIL NINGOMBAM	DEVELOPMENT OF MSATELLITE MARKER ASSOCIATED WITH HEAT STRESS TOLERANCE IN <i>Pennisetum glaucum</i> (L) R. Br.
93	20843	Ms. TAKU MONYA	ISOLATION, CLONING AND FUNCTIONAL VALIDATION OF A TAL EFFECTOR GENE FROM <i>Xanthomonas oryzae</i>
<b>NEMATOLOGY</b>			
94	20845	AMIT AHUJA	CHARACTERIZATION OF PHOTOX TOXIN FROM PHOTORHABDUS BACTERIA ISOLATED FROM INDIAN STRAINS OF HETERORHABDITIS NEMATODE
95	20847	VINAY K. Y.	QUALITY ASSESSMENT OF TOMATO IN RESPONSE OT MANAGEMENT OF ROOT KNOT NEMATODE , MELOIDOGYNE INCOGNITA WITH NEMATICIDES
<b>PLANT GENETIC RESOURCES</b>			
96	20848	LAXMISHA K. M.	AGRO-MORPHOLOGICAL AND BIOCHEMICAL CHARACTERIZATION OF INDIGENOUS ACCESSIONS OF JOB'S TEARS ( <i>Coix lacrymajobi</i> L.) IN INDIA
97	20849	PUNEETH G. M.	GENETIC PURITY TESTING OF F1 HYBRIDS OF COTTON USING DNA MARKERS
98	20850	P. PRABHU	GENETIC DIVERSITY ANALYSIS OF <i>Garcinia indica</i> (DUPETIT-THOUARS.) CHOISY BASED ON MORPHOLOGICAL AND MOLECULAR MARKERS.
99	20851	NAVAL KISHOR MEENA	STUDIES ON SEED LONGEVITY OF WILD AND CULTIVATED SESAME ( <i>Sesamum spp.</i> )



No.	ROLL NO	NAME OF THE STUDENT	Title of Thesis
<b>PLANT PATHOLOGY</b>			
100	20852	JAGMOHAN SINGH	IDENTIFICATION AND EXPRESSION ANALYSIS OF PATHOGENICITY-RELATED GENES IN <i>Tilletia indica</i> INCITING KARNAL BUNT OF WHEAT
101	20853	SHREENATH Y. S.	CHARACTERIZATION OF PATHOGEN(S) ASSOCIATED WITH CHICKPEA STUNT DISEASE AND IDENTIFICATION OF THEIR NATURAL RESERVOIRS
102	20854	Ms. PANKHURI SINGHAL	CHARACTERIZATION OF VIROIDS INFECTING GRAPEVINE AND DEVELOPMENT OF RAPID DIAGNOSTIC PROTOCOL
103	20855	VINEETH VIJAYAN	IDENTIFICATION OF RESISTANT SOURCES IN SOYBEAN AGAINST YELLOW MOSAIC DISEASE
104	20856	Ms. ASHARANI PATEL	INVESTIGATION ON BACTERIAL VOLATILE MEDIATED PRIMING OF RICE AGAINST BLAST DISEASE
105	20857	MRUTYUNJAYA S.	STUDYING THE ROLE OF XopQ T3SS EFFECTOR OF <i>Xanthomonas axonopodis</i> pv. <i>punicae</i> ON THE DEVELOPMENT OF BACTERIAL BLIGHT IN POMEGRANATE
106	20858	NAVEEN NAYAKA S.	IDENTIFICATION OF EFFICIENT DELIVERY METHOD OF INFECTIOUS DNA CONSTRUCT OF CUCUMBER GREEN MOTTLE MOSAIC VIRUS AND QUANTIFICATION OF VIRAL LOAD IN CUCURBIT PLANT
107	20859	PRASHANTHA S. T.	UNDERSTANDING THE INTERACTIONS OF ANASTOMOSIS GROUPS (AG) OF <i>Rhizoctonia solani</i> WITH RICE ( <i>Oryza sativa</i> L.)
<b>PLANT PHYSIOLOGY</b>			
108	20861	BIRENDRA KUMAR PADHAN	IMPACT OF ELEVATED CO <sub>2</sub> ON REGULATION OF NITROGEN METABOLISM UNDER HIGH NITROGEN AVAILABILITY IN WHEAT
109	20862	DIVTE PANDURANG RAGHUNATH	REGULATION OF PHYTOSIDEROPHORE (PS) PRODUCTION AND RELEASE DYNAMICS BY ETHYLENE UNDER Fe DEFICIENCY IN WHEAT
110	20863	Ms. NISHA	DYNAMICS OF EPICUTICULAR WAX AND MINERAL NUTRIENTS IN WHEAT UNDER HEAT AND DROUGHT STRESS
111	20864	DIPANKAR BARMAN	DECIPHERING THE ROLE OF miRNA IN MELATONIN INDUCED THERMO-TOLERANCE IN RICE ( <i>Oryza sativa</i> )
<b>POST HARVEST TECHNOLOGY</b>			
112	20865	GOWTHAM R.	NEURAL NETWORK MODELING OF PEARL MILLET EXTRUSION PROCESS
113	20867	Ms. MONIKA G. TOTAD	NUTRITIONAL PROFILING AND SHELF LIFE EXTENSION OF BLUEBERRY USING EDIBLE COATINGS
114	20906	AHMAD FARID AZIZI	DEVELOPMENT OF FABRICATED POTATO SNACK WITH HIGH FIBER AND REDUCED FAT

No.	ROLL NO	NAME OF THE STUDENT	Title of Thesis
<b>SEED SCIENCE AND TECHNOLOGY</b>			
115	20734	AJAY	EFFECT OF BIOLOGICAL SEED TREATMENTS AND STORAGE CONTAINERS ON THE SEED QUALITY OF ONION SEED LOTS
116	20868	SATISH KUMAR	STUDIES ON SEEDLING EMERGENCE, CROP PERFORMANCE AND VIGOUR ASSESSMENT IN BITTER GOURD ( <i>Momordica charantia</i> L.)
117	20869	NIRANJAN PRASAD H. P.	STUDIES ON SEED QUALITY PARAMETERS IN FRUIT ROT INFECTED SEEDS OF BRINJAL ( <i>Solanum melongena</i> L.) CAUSED BY <i>Phomopsis vexans</i> AND DEVELOPMENT OF ECO-FRIENDLY MANAGEMENT
118	20870	PRAVEEN KUMAR YADAV	EFFECT OF GA RESPONSIVE REDUCED HEIGHT GENES ON SEEDLING VIGOUR TRAITS IN WHEAT ( <i>TRITICUM AESTIVUM</i> L.)
119	20871	Ms. KARABI BANIA	STUDIES ON SYNCHRONIZATION OF FLOWERING IN PARENTAL LINES OF HYBRID RICE
120	20873	DILSHAD AHMAD	STUDIES ON SEED DEVELOPMENT, ON-SET OF GERMINATION, PHYSIOLOGICAL AND HARVEST MATURITY IN CUCUMBER ( <i>CUCUMIS SATIVUS</i> L.) CV.

### **SOIL SCIENCE AND AGRICULTURAL CHEMISTRY**

121	20874	MD. BASIT RAZA	SYNTHESIS AND EVALUATION OF ZINC LOADED NANO CLAY BIOPOLYMER COMPOSITES FOR ENHANCING USE EFFICIENCY OF ZINC
122	20875	SUBHASIS SATAPATHY	ASSESSING POTASSIUM SUPPLYING PARAMETERS OF SOIL UNDER CONSERVATION AGRICULTURE
123	20876	Ms. VANDANA KUMARI	LONG TERM EFFECT OF FERTILIZATION AND MANURING ON QUALITY AND LEVEL OF CARBON IN FOUR SOIL ORDERS OF INDIA
124	20877	KINGSHUK MODAK	IMPACT OF CONSERVATION AGRICULTURAL PRACTICES ON ORGANIC CARBON STABILIZATION WITHIN SOIL AGGREGATES UNDER SOYBEAN WHEAT SYSTEM IN AN INCEPTISOL
125	50016	ANSHUMAN DAS	POTASSIUM SUPPLYING CAPACITY IN SOIL UNDER DIFFERENT LAND USE SYSTEMS OF ASSAM
126	60015	Ms. ATHULYA S	SYNTHESIS AND EVALUATION OF SUSTAINED RELEASE PHOSPHATIC FERTILIZER PRODUCTS FOR ENHANCING PHOSPHORUS USE EFFICIENCY
127	60016	AJIN S ANIL	INTERACTIVE EFFECT OF CALCIUM AND BORON ON THE AVAILABILITY OF BORON IN ACID SOILS

No.	ROLL NO	NAME OF THE STUDENT	Title of Thesis
<b>VEGETABLE SCIENCE</b>			
128	20878	MANOJ KUMAR MAHALIK	IDENTIFICATION OF RESISTANT GENOTYPES OF OKRA AND VIRUS ASSOCIATED WITH BHINDI YELLOW VEIN MOSAIC DISEASE
129	20879	PUNEETH P. V.	EVALUATION OF HOT PEPPER ( CAPSICUM ANNUUM L.) GENOTYPES FOR HEAT STRESS TOLERANCE.
130	20880	YOGANANDA H. S.	CHARACTERIZATION AND DIVERSITY ANALYSIS OF CABBAGE (Brassica oleracea L. var. capitata) GERMPLASM USING AGRO-MORPHOLOGICAL TRAITS AND SSR MARKERS
131	20881	Ms. BHANUSHREE N.	GENETICS AND MOLECULAR CHARACTERIZATION OF FRUIT TRAIT IN EGG PLANT (SOLANUM MELONGENA L.)
132	50019	HARISHA S M	EFFECT OF TIME OF PLANTING AND SPACING IN THE QUALITY SEED PRODUCTION OF OKRA CV. PUSA BHINDI-5
133	60017	ABHAY VIKRAM SINGH	EFFECT OF SPACING AND MICRONUTRIENT ON GROWTH, YIELD AND QUALITY TRAITS OF BITTER GOURD VARIETIES GROWN UNDER PROTECTED STRUCTURES
134	60018	RAMESHWAR MEENA	ASSESSMENT OF GENETIC VARIABILITY FOR HORTICULTURAL AND QUALITY TRAITS IN DOLICHOS BEAN
<b>WATER SCIENCE AND TECHNOLOGY</b>			
135	20885	ASHOK IRAPPA HALLI	PHYTOREMEDIATION OF HEAVY METALS, SOIL HEALTH IMPACTS AND PRODUCTIVITY OF GLADIOLUS UNDER IRRIGATIONS WITH METALS SPIKED WASTEWATER
136	50021	RAGHAV MAURYA	HYDROLOGICAL BEHAVIOUR AND NUTRIENT FLUX IN A RAINFED HORTI-AGRI SYSTEM WITH DIFFERENT WATER CONSERVATION PRACTICES
137	60019	MANJUNATH DALI	IMPACT OF POLLUTED HINDON RIVER WATER IRRIGATION ON SOIL HEALTH AND ASSESSING RISK IN RELATION TO TRANSFER OF METALS TO HUMAN FOOD CHAIN

List of candidates who have successfully completed all the requirements including final viva-voce examination for the award of degree of Doctor of Philosophy as on 12/12/2018.

No.	ROLL NO	NAME OF THE STUDENT	Title of Thesis
<b>AGRICULTURAL ENGINEERING</b>			
1	10391	PREM KUMAR SUNDARAM	STUDIES ON DESIGN PARAMETERS OF UREA AMMONIUM NITRATE (UAN) APPLICATOR SYSTEM
<b>AGRICULTURAL EXTENSION</b>			
2	9935	ANIRBAN MUKHERJEE	AN ANALYTICAL STUDY ON STATUS, PROSPECTS AND CHALLENGES OF FARMERS' PRODUCER COMPANIES
3	10574	Ms. JASNA V.K.	PESTICIDE USE BEHAVIOUR OF VEGETABLE FARMERS WITH SPECIAL FOCUS ON FOOD AND ENVIRONMENTAL SAFETY: A MULTIDIMENSIONAL STUDY
4	10575	Ms. SHRUTI	CRITICAL ANALYSIS OF ENTREPRENEURIAL ENVIRONMENT FOR VALUE CHAIN DEVELOPMENT
<b>AGRICULTURAL PHYSICS</b>			
5	10581	SURAJIT MONDAL	ROOT DISTRIBUTION AND WATER UPTAKE IN WHEAT UNDER TILLAGE- INDUCED MODIFIED SOIL PHYSICAL ENVIRONMENT
<b>AGRICULTURAL STATISTICS</b>			
6	10544	SAURAV GUHA	USE OF CALIBRATION APPROACH IN THE ESTIMATION OF DOMAIN TOTAL IN THE PRESENCE OF AUXILIARY INFORMATION
7	10582	SHYAMSUNDAR PARUI	EFFICIENT DESIGNS FOR INCOMPLETE FACTORIAL TREATMENT STRUCTURE
<b>AGRONOMY</b>			
8	10260	RAMESH KUMAR SINGH	EVALUATION OF SYSTEM CROP INTENSIFICATION FOR DIFFERENT GENOTYPES IN SOYBEAN-WHEAT SEQUENCE
9	10547	BHARGAVI B.	DIVERSIFICATION OF FARMING SYSTEMS WITH HIGH-VALUE CROPS FOR LIVELIHOOD IMPROVEMENT OF MARGINAL FARMERS
<b>BIOCHEMISTRY</b>			
10	9960	GAURAV KUMAR	FUNCTIONAL SIGNIFICANCE OF Tomato leaf curl New Delhi virus PATHOGENICITY FACTORS IN REDIRECTING HOST GENE REGULATION AND THEIR INVOLVEMENT IN HOST-VIRUS INTERFACE
11	10107	Ms. KALPANA TEWARI	ISOLATION AND FUNCTIONAL ANALYSIS OF THE PROMOTERS OF $\gamma$ -tocopherol methyl transferase ( $\gamma$ -TMT) GENE FROM HIGH AND LOW $\alpha$ -tocopherol CONTAINING GENOTYPES OF SOYBEAN (Glycine max)
12	10108	ASHISH MARATHE	ASSOCIATION PATTERNS OF GENE EXPRESSION AND METABOLITE PROFILES FOR PHYTATE BIOSYNTHESIS DURING SEED DEVELOPMENT AND RNA INDUCED DOWNREGULATION OF ITPK2 IN SEEDS THROUGH Agrobacterium MEDIATED GENETIC TRANSFORMATION FOR LOW PHYTATE SOYBEAN

No.	ROLL NO	NAME OF THE STUDENT	Title of Thesis
<b>ENTOMOLOGY</b>			
13	9968	DIVEKAR PRATAP ADINATH	STUDY ON PLANT PHYSICO-CHEMICAL BASES OF RESISTANCE IN MAIZE AGAINST SHOOT FLY AND PINK STEM BORER
14	10278	JONI KUMAR	EFFECT OF SEMIOCHEMICALS ON NATURAL ENEMIES OF <i>Lipaphis erysimi</i> (Kaltenbach) AND <i>Myzus persicae</i> (Sulzer) OCCURRING IN MUSTARD
<b>GENETICS AND PLANT BREEDING</b>			
15	10287	AMIT KUMAR	CHARACTERIZATION OF ISOCYTOPLASMIC RESTORER LINES DERIVED FROM ELITE RICE HYBRIDS AND THEIR UTILIZATION IN HYBRID DEVELOPMENT
16	10289	SUMAN PARRE	IDENTIFICATION OF QUANTITATIVE TRAIT LOCI FOR PLANT TYPE, SEED YIELD COMPONENTS AND BIOCHEMICAL TRAITS RELATED TO POD BORER RESISTANCE IN PIGEONPEA [ <i>Cajanus cajan</i> (L) MILLSPAUGH]
17	10458	Ms. PHILANIM W.S.	GENOME WIDE ASSOCIATION MAPPING OF YIELD TRAITS IN CHICKPEA ( <i>Cicer arietinum</i> L.)
<b>HORTICULTURE</b>			
18	10139	CHAVLESH KUMAR	MORPHOLOGICAL AND MOLECULAR DIVERSITY ANALYSES OF WILD APPLE ( <i>Malus</i> sp.) GERMPLASM
19	10297	Ms. OMEM TAMUT	EXPLOITATION OF HETEROSIS FOR QUANTITATIVE TRAITS IN MARIGOLD THROUGH INTER-SPECIFIC HYBRIDIZATION
20	10459	ABHAY KUMAR GAURAV	PHYLOGENETIC RELATIONSHIPS IN THE GENUS <i>Rosa</i> (Rosaceae): BASED ON MORPHOLOGICAL AND MOLECULAR MARKERS
21	10462	Ms. PRATIKSHA KUMARI	IMPROVEMENT IN CHINA ASTER [ <i>Callistephus chinensis</i> (L.) NEES.] THROUGH HYBRIDIZATION AND MUTATION
22	10463	VELURU BHARGAV	MORPHO-BIOCHEMICAL AND MOLECULAR CHARACTERIZATION OF CHINA ASTER [ <i>Callistephus chinensis</i> (L.) NEES]
23	10476	NIMBOLKAR PRASHANT KISAN	STUDIES ON SALT TOLERANCE IN POLYEMBRYONIC MANGO ( <i>Mangifera indica</i> L.) ROOTSTOCK SEEDLINGS
24	10477	RAHUL KUMAR	MAP-BASED MOLECULAR DIVERSITY ANALYSIS AND ASSOCIATION MAPPING STUDIES OF HORTICULTURAL TRAITS IN CUCUMBER
25	10486	Ms. NANGSOL DOLMA BHUTIA	ASSESSMENT OF HETEROSIS FOR YIELD AND QUALITY TRAITS AND MOLECULAR MAPPING OF CLUSTER BEARING HABIT IN <i>Luffa</i>
26	10548	Ms. THANESHWARI	INDUCTION OF EMBRYOGENY AND PLANT REGENERATION THROUGH INDUCED ANDROGENESIS/GYNOGENESIS IN MARIGOLD ( <i>Tagetes</i> spp. L.)
27	10634	VIJAYAKUMAR RATHOD	GENETIC STUDIES AND TAGGING OF GENE(S) RELATED TO ECONOMIC TRAITS IN BITTER GOURD ( <i>Momordica charantia</i> L.)
<b>MICROBIOLOGY</b>			
28	10308	JAIRAM CHOUDHARY	APPROACHES FOR SIMULTANEOUS SACCHARIFICATION AND FERMENTATION OF LIGNOCELLULOSIC BIOMASS

No.	ROLL NO	NAME OF THE STUDENT	Title of Thesis
<b>PLANT PATHOLOGY</b>			
29	10165	RISHIKESH KUMAR	INVESTIGATION ON THE POSSIBLE ROLE OF XopN-T3SS EFFECTOR IN MODULATING BACTERIAL BLIGHT DISEASE IN POMEGRANATE ( <i>Punica granatum</i> L.)
30	10336	NENAVATH BALRAM	CHARACTERIZATION OF SATELLITE MOLECULES ASSOCIATED WITH COTTON LEAF CURL DISEASE COMPLEX IN PUNJAB AND RAJASTHAN AND IDENTIFICATION OF RESISTANCE SOURCE
31	10513	GOPALA	CHARACTERIZATION AND NATURAL SPREAD SOURCES OF PHYTOPLASMA DISEASES ASSOCIATED WITH IMPORTANT ORNAMENTAL CROPS
<b>PLANT PHYSIOLOGY</b>			
32	10037	KRISHNA KUMAR G.	MOLECULAR ANALYSIS OF ROOT SYSTEM ARCHITECTURE IN RICE UNDER DROUGHT STRESS
<b>POST HARVEST TECHNOLOGY</b>			
33	10342	JANAGAM VENU MADHAV	ENHANCEMENT OF POSTHARVEST LIFE OF GUAVA ( <i>psidium guajava</i> L.) FRUIT BY APPLICATION OF GRAS SUBSTANCES
34	10522	K. RAMA KRISHNA	STUDIES ON JELLY SEED DISORDER IN MANGO AND ITS DETECTION WITH X-RAY IMAGING
35	10658	K PRASAD	POST HARVEST LOSS REDUCTION AND QUALITY RETENTION OF MANGO FRUITS UNDER AMBIENT STORAGE
<b>SEED SCIENCE AND TECHNOLOGY</b>			
36	10551	MURALI C N	SEED DEVELOPMENT, MATURATION AND CHARACTERIZATION IN SELECTED MARIGOLD ( <i>Tagetes</i> spp)
37	10705	VISHWANATH ROHIDAS YALAMALLE	STUDIES ON APPLICATION OF POLYMER, POLYAMINES AND SCAPE REGULATION ON SEED YIELD AND QUALITY IN ONION ( <i>Allium cepa</i> L.)
<b>SOIL SCIENCE AND AGRICULTURAL CHEMISTRY</b>			
38	10192	DEBARUP DAS	EFFECT OF LONG-TERM FERTILIZATION AND MANURING ON POTASSIUM DYNAMICS IN SOILS OF VARYING MINERALOGICAL MAKE-UP
39	10197	ARIJIT BARMAN	MANGANESE DYNAMICS IN DIFFERENT SOILS IN RELATION TO ITS AVAILABILITY TO WHEAT ( <i>Triticum</i> sp.)

**POST GRADUATE SCHOOL**  
**INDIAN AGRICULTURAL RESEARCH INSTITUTE**  
**NEW DELHI-110012**

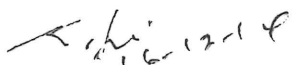
No. PGS-I/1-411/AC/2019

December 13, 2019

**ENDORSEMENT**

A copy of the proceedings of the 411<sup>th</sup> meeting of the Academic Council held on 14<sup>th</sup> November, 2019 is forwarded herewith for information and necessary action. Comments, if any, may please be sent to the PG School within 15 days from the date of issue of the Proceedings.

1. All the members of the Academic Council and concerned Officers (By name)\_\_\_\_\_
2. PS to Director General, ICAR, Krishi Bhawan, New Delhi-110001
3. PS to Deputy Director General (Edn.), ICAR, KAB-II, Pusa, New Delhi-110012
4. Master of Halls of Residences, P.G. School Hostel Office
5. Sr. Admn. Officer, IMC (For members of Board of Management)
6. PS to Director/PS to Dean & Joint Director (Edn.), IARI/PA to Registrar/PS to Comptroller
7. Technical Assistant, P G School (IT Cell/Stats. Cell)
8. Assistant Administrative Officer, Post Graduate School-II
9. Concerned Dealing Assistants, PGS-I



**(Ratnesh Kumar)**  
**Registrar**





**PROCEEDINGS OF THE 411<sup>th</sup> MEETING OF THE ACADEMIC COUNCIL  
HELD ON NOVEMBER 14, 2019 AT 10.30 AM IN THE CONFERENCE  
HALL OF PROF. M.S. SWAMINATHAN LIBRARY, IARI, NEW DELHI -  
110012**

The following members were present:

- |   |                  |
|---|------------------|
| 1. Dr. A.K. Singh, Director (Additional charge), IARI   | Chairman         |
| 2. Dr. (Mrs.) Rashmi Aggarwal, Dean & J.D. (Edn.) (Additional charge), IARI                               | Vice-Chairperson |
| 3. Dr. P.K. Joshi, Director, South Asia, IFPRI  | Member           |
| 4. Dr. A.K. Singh, Former Vice-Chancellor, RVSKVV, Gwalior  | Member           |
| 5. Dr. S.N. Puri, Former VC, CAU, Imphal  | Member           |
| 6. Dr. J.P. Sharma, Joint Director (Extn.)  | Member           |
| 7. Dr. A.K. Singh, Joint Director (Res.) (Additional charge), IARI  | Member           |
| 8. Dr. P.S. Tiwari, Director, CIAE, Bhopal (Additional charge)  | Member           |
| 9. Dr. Man Singh, Project Director (Acting), WTC and Professor, WST                                       | Member           |
| 10. Dr. K.M. Manjaiah, Associate Dean, PG School  | Member           |
| 11. Dr.(Ms.) Neera Singh, Professor, Agricultural Chemicals   | Member           |
| 12. Dr.(Ms.) Alka Singh, Professor, Agricultural Economics  | Member           |
| 13. Dr. D.K. Singh, Professor, Agricultural Engineering   | Member           |
| 14. Dr. R.N. Padaria, Professor, Agricultural Extension   | Member           |
| 15. Dr. V.K. Sehgal, Professor, Agricultural Physics  | Member           |
| 16. Dr. Seema Jaggi, Professor, Agricultural Statistics   | Member           |
| 17. Dr. T.K. Das, Professor, Agronomy   | Member           |
| 18. Dr. Anil Dahuja, Professor, Biochemistry  | Member           |
| 19. Dr. A.R. Rao Professor, Bioinformatics  | Member           |
| 20. Dr. Sudeep Marwaha, Professor, Computer Application   | Member           |
| 21. Dr. Subhas Chander, Professor, Entomolgy  | Member           |
| 22. Dr. Soora Naresh Kumar, Professor, Environmental Sciences   | Member           |
| 23. Dr. K.P. Singh, Professor, Floriculture and Landscape Architecture                                    | Member           |
| 24. Dr. O.P. Awasthi, Professor, Fruit Science  | Member           |
| 25. Dr. Vinod, Professor, Genetics and Plant Breeding   | Member           |
| 26. Dr. (Ms.) Radha Prasanna, Professor, Microbiology   | Member           |
| 27. Dr. M.R. Khan, Professor, Nematology  | Member           |
| 28. Dr. (Ms.) Veena Gupta, Professor, PGR   | Member           |
| 29. Dr. V.K. Baranwal, Professor, Plant Pathology   | Member           |
| 30. Dr. Madan Pal Singh, Professor, Plant Physiology  | Member           |
| 31. Dr. S.K. Jha, Professor, PHT  | Member           |
| 32. Dr. S.K. Jain, Professor, Seed Science & Technology   | Member           |
| 33. Dr. S.P. Datta, Professor, SS&AC  | Member           |
| 34. Dr. T.K. Behera, Professor, Vegetable Science   | Member           |
| 35. Dr. Anil Sirohi, MOHR, PG Hostels   | Member           |
| 36. Shri. V.R. Srinivasan, Comptroller, IARI  | Member           |
| 37. Dr. Mahesh C. Yadav, Principal Scientist, NBPGR<br>and Faculty Representative to the Academic Council | Member           |
| 38. Mrs. Rajshree Anand, Incharge, Library Services   | Member           |
| 39. Mr. Jagmohan Singh, President, PGSSU  | Member           |
| 40. Mr. Rahul Kumar, Students' Representative to the AC   | Member           |
| 41. Shri. Ratnesh Kumar, Registrar & Joint Director (Admn.)   | Member Secretary |

Leave of absence was sought and granted to the following members:

- |   |        |
|---|--------|
| 1. Dr. R.C. Agarwal, Deputy Director General (Edn.), ICAR, (Additional charge)                              | Member |
| 2. Dr. H.S. Gupta, Former DG, BISA & Director, IARI   | Member |
| 3. Dr. Kuldeep Singh, Director, NBPGR   | Member |
| 4. Dr. N.K. Singh, Director, (NIPB) (Additional charge)   | Member |
| 5. Dr. Tauqueer Ahmad, Director, IASRI (Additional Charge)  | Member |
| 6. Dr. M.R. Dinesh, Director, IIHR  | Member |
| 7. Dr. Debasis Pattanayak, Professor, MBB   | Member |
| 8. Dr. A Nagaraja, Principal Scientist, Fruit Science<br>and Faculty Representative to the Academic Council | Member |

Dr. Rashmi Aggarwal, Joint Director (Edn.) extended a formal welcome to Dr. A.K. Singh, Director, IARI and Chairman, Academic Council. Thereafter, Dr. A.K. Singh, Chairman of Academic Council warmly welcomed the outside members of the Academic Council and all the members present in the meeting. The Chairman also welcomed the new members of the Academic Council attending the meeting for the first time:

#### New members

1. Dr. P.S. Tiwari, Director, CIAE, Bhopal (Additional charge)
2. Dr. Anil Dahuja, Professor, Biochemistry
3. Mr. Jagmohan Singh, newly elected President, PGSSU
4. Mr. Rahul Kumar, newly elected Students' Representative to the Academic Council

The Chairman also placed on record the valuable contributions of the following outgoing members of the Academic Council in strengthening the PG education at IARI:

1. Dr. N.S. Rathore, Former Deputy Director General (Edn.), ICAR
2. Dr. Maharani Din, Former Director, CIAE, Bhopal (Additional charge)
3. Dr. L.M. Bhar, Former Director, IASRI (Additional charge)
4. Dr. (Mrs.) Aruna Tyagi, Former Professor, Biochemistry
5. Mr. B.R. Tribhuvan, Former President, PGSSU
6. Ms. Preeti Priyadarshni, Former Students' Representative to the Academic Council

The Director and Chairman, Academic Council apprised the Academic Council about the educational, research, extension and other activities/achievements of the Institute.

Thereafter, the following agenda items were taken up for consideration:

Agenda Item No.	Description of Agenda Items
411.1	Confirmation of the proceedings of the 410 <sup>th</sup> meeting of the Academic Council held on July 25, 2019
411.2	Action Taken Report on the Proceedings of 410 <sup>th</sup> meeting of the Academic Council held on July 25, 2019
411.3	Recommendations of the Standing Committee on Scholarships, Financial Assistance & Academic Progress made in its meeting held on 02.11.2019
411.4	Recommendations of the Standing Committee on Courses Curricula and Academic Affairs made in its meeting held on 07.11.2019
411.5	Recommendations of the Standing Committee on Faculty & Discipline made in its meeting held on 08.11.2019
411.6	Finalization of the Academic Calendar for the 63 <sup>rd</sup> Academic Session 2020-2021



411.7	Finalization of "Convocation Week" programme
411.8	List of candidates who have become eligible for the award of their respective degrees of M.Sc./M.Tech. and Ph.D.
411.9	Finalization of number of seats and eligibility qualification for admission to M.Sc./M.Tech. and Ph.D. degree programmes for the Academic Session 2020-2021
411.10	Consideration of Dual degree PhD exchange programme between WSU-IARI, New Delhi
411.11	Any other item with the permission of the Chair

***Agenda Item No. 411.1: Confirmation of the proceedings of the 410<sup>th</sup> meeting of the Academic Council held on 25.7.2019***

The Chairman called for the comments, if any, from the members of the Academic Council on the proceedings of the 410<sup>th</sup> meeting. Since no comment was there, the proceedings of the previous meeting was confirmed by the house.

***Agenda Item No. 411.2: Report on action taken on the proceedings of the 410<sup>th</sup> meeting of the Academic Council held on 25.7.2019***

Action taken report was presented by the Dean and Joint Director (Education) which was approved by the house, except on item No. 410.4.6. On the Item No.410.4.6 regarding recognition of two scientists from IIVR, Varanasi as Co- Research Guides, the Academic Council was of the opinion that the decision needs a review and decided that henceforth not to consider such proposals from any other ICAR Institutes.

***Agenda Item No. 411.3: Consideration of the proceedings of the Standing Committee on Scholarships, Financial Assistance & Academic Progress made in its meeting held on 02.11.2019***

The Academic Council approved the following recommendations of Standing Committee. The decision of Chairman, Academic Council on disbursement of Scholarship was also ratified by the Academic Council.

- 411.3.1** As per P.G. School Calendar para 15.3.3 and 15.3.5, the scholarships shall be awarded initially for a period of one academic year from the date of joining the Post Graduate School or the commencement of the academic year, whichever is later. The payment of Scholarship/Fellowship shall be reviewed at the end of 3<sup>rd</sup> trimester and only those students will be permitted to continue getting fellowship who maintain the OGPA of 6.50 out of 10.00 at the end of 3<sup>rd</sup> trimester. (*Commencement of the Academic Year 2019-20 is 29.07.2019*).
- 411.3.2** Award of Institute's Sr. Scholarship @ Rs.25,000/- per month + Rs.10,000/- per annum as contingent grant to 205 candidates (**Appendix-I**) admitted at IARI, New Delhi.
- 411.3.3** Award of Institute's Sr. Scholarship @ Rs.25,000/- per month + Rs.10,000/- per annum as contingent grant to the following 12 students admitted at CIAE, Bhopal under IARI PG Outreach Programme.

Sl. No.	NAME OF THE STUDENT	ROLL NO	DISCIPLINE/Sub-Discipline	DATE OF ENROLMENT
1.	Ms. BOGALAPRAVALLIKA	11391	AGRICULTURAL ENGINEERING (APS)	19/08/2019
2.	RAJENDRA HAMAD	11394	-do-	19/08/2019
3.	Ms. ASEEYA WAHID	11398	-do-	19/08/2019
4.	PARMANANDSAHU	11404	AGRICULTURAL ENGINEERING (FPE)	19/08/2019
5.	ABHISHEK PATEL	11405	-do-	19/08/2019
6.	Ms. MATTAPARTHI LAKSHMI DURGA	11407	-do-	19/08/2019
7.	NAVEEN KUMAR T	11413	-do-	19/08/2019
8.	KANTHAVAL	11420	AGRICULTURAL ENGINEERING (SWCE)	19/08/2019
9.	GOTTAM KISHORE	11422	-do-	19/08/2019
10.	VINOD KUMAR S	11423	-do-	19/08/2019
11.	Ms. SHILPA S SELVAN	11647	AGRICULTURAL ENGINEERING (APS)	03/09/2019
12.	Ms. LAKSHMI POOJITHACHALLA	11658	AGRICULTURAL ENGINEERING (SWCE)	11/09/2019

**411.3.4** Award of Institute's Sr. Scholarship @ Rs.25,000/- per month + Rs.10,000/- per annum as contingent grant to the following 12 students admitted at IIHR, Bengaluru under IARI PG Outreach Programme.

S.No.	NAME OF THE STUDENT	ROLL NO	DISCIPLINE/Sub-Discipline	DATE OF ENROLMENT
1.	Ms. SANGEETHAPRIYA S	11500	FLORICULTURE AND LANDSCAPE ARCHITECTURE	19/08/2019
2.	Ms. CHETNAJYOTI	11504	-do-	19/08/2019
3.	Ms. AYESHA N	11505	-do-	19/08/2019
4.	NITIN P S	11512	FRUIT SCIENCE	19/08/2019
5.	Ms. SUSHMITHA B H	11516	-do-	19/08/2019
6.	Ms. BINDU H	11591	POST HARVEST TECHNOLOGY OF HORTICULTURAL CROPS	19/08/2019
7.	HARISH T	11594	-do-	19/08/2019
8.	VITTALKAMBLE	11595	-do-	19/08/2019
9.	YATHISH V C	11623	VEGETABLE SCIENCE	19/08/2019
10.	Ms. PYDIROSHNI	11625	-do-	19/08/2019
11.	Ms. LAVANYA H N	11631	-do-	19/08/2019
12.	Ms. S PHIBAHUNJAISIEM	11634	-do-	19/08/2019

**411.3.5** Award of Institute's Sr. Scholarship @ Rs. 3,000/- per month + Rs. 10,000/- per annum as contingent grant to the following 7 (6 IARI + 1 CIAE) students who were admitted under Faculty Up-gradation Scheme/ICAR-Inservice Scheme/ Inservice Candidate of Open scheme.

S. No.	NAME OF THE STUDENT	ROLL NO	DISCIPLINE/Sub-Discipline	DATE OF ENROLMENT
1.	GOPAL CARPENTER, CISH, LUCKNOW	11402	AGRICULTURAL ENGINEERING (FPE)	19/08/2019
2.	ABHISHEK MITARAMWAGHAYE, CIAE, BHOPAL	11418	AGRICULTURAL ENGINEERING (SWCE)	19/08/2019
3.	KAMLESH KUMAR, IIFSR, MODIPURAM	11452	AGRONOMY	19/08/2019
4.	AMRUT SANJAY MORADE, IISWC, DEHRADUN	11510	FRUIT SCIENCE	19/08/2019
5.	SREEKANTH H S, COLLEGE. OF HORT. BENGALURU	11518	-do-	19/08/2019
6.	DEVINDRAPPA, IIPR, KANPUR	11560	NEMATOLOGY	19/08/2019
7.	ALOK KUMAR, IIPR, KANPUR	11655	SEED SCIENCE AND TECHNOLOGY	04/09/2019



**411.3.6** Award of Contingent grant only @ Rs.10,000/- per annum to the following 5 (4 IARI + 1 CIAE) ICAR Inservice/Departmental Technical Candidates working at the same station.

S. No.	NAME OF THE STUDENT	ROLL NO	DISCIPLINE/Sub-Discipline	DATE OF ENROLMENT
1.	VIJAY KUMAR, CIAE, BHOPAL	11403	AGRICULTURAL ENGINEERING (FPE)	19/08/2019
2.	LOKENDRA SINGH, IARI, NEW DELHI	11507	FLORICULTURE AND LANDSCAPE ARCHITECTURE	19/08/2019
3.	HARENDRA KUMAR YADAV, IARI, NEW DELHI	11506	-do-	19/08/2019
4.	SHIV KUMAR SINGH, IARI, NEW DELHI	11538	GENETICS AND PLANT BREEDING	19/08/2019
5.	Ms. PAVITHRA S, NIAP, NEW DELHI	11388	AGRICULTURAL ECONOMICS	19/08/2019

**411.3.7** Following 19 students who were admitted in the discipline of Agricultural Statistics, Bioinformatics and Computer Application will get their Institute Sr. Scholarship from IASRI.

S.NO.	NAME OF THE STUDENT	ROLL NO	DISCIPLINE/Sub-Discipline	DATE OF ENROLMENT
1.	KRISHNA PADA SARKAR	11436	AGRICULTURAL STATISTICS	19/08/2019
2.	DEBOPAMRAKSHIT	11437	-do-	19/08/2019
3.	Ms. TANIMA DAS	11438	-do-	19/08/2019
4.	Ms. ANKITAVERMA	11439	-do-	19/08/2019
5.	VINAYKUMAR L N	11440	-do-	19/08/2019
6.	RAHUL KUMAR GUPTA	11441	-do-	19/08/2019
7.	VINAYAKA	11442	-do-	19/08/2019
8.	PRABHAT KUMAR	11443	-do-	19/08/2019
9.	RAJUBHAIHARJIBHAICHAUDHARI	11444	-do-	19/08/2019
10.	Ms. TANWYDASMANDAL	11465	BIOINFORMATICS	19/08/2019
11.	NITESH KUMAR SHARMA	11466	-do-	19/08/2019
12.	BAIBHAV KUMAR	11467	-do-	19/08/2019
13.	JUTAN DAS	11468	-do-	19/08/2019
14.	ABHISHEKH M P	11469	COMPUTER APPLICATION	19/08/2019
15.	AMIT SAHA	11470	-do-	19/08/2019
16.	Ms. PREETYDAGAR	11471	-do-	19/08/2019
17.	BANOTHJAGDISHNAIK	11472	-do-	19/08/2019
18.	ROHIT KUMAR SINGH	11474	-do-	19/08/2019
19.	MURARI KUMAR	11475	-do-	19/08/2019

**411.3.8** The Standing Committee did not recommend award of Institute's Sr. Scholarship to the following 4 In-service candidates as they have already availed the benefit of Scholarship during their previous admission at IARI for the same programme and left the course incomplete. Further, the Standing Committee was also of the view that necessary recovery on account of Surety Bond, Fellowship amount, etc. as per rules may also be made from these students, if due. Further, to avoid second time award of fellowship, a suitable undertaking to the effect that the students has not availed the benefit of Scholarship for the same programme earlier from or through IARI/ICAR, may be obtained.

S.NO.	NAME OF THE STUDENT	ROLL NO	DISCIPLINE/Sub-Discipline	DATE OF ENROL.
1.	DEEPAK SABAJITHORAT, CIAE, BHOPAL	11400	AGRICULTURAL ENGINEERING (FPE)	19/08/2019
2.	MANJUNATHA GOWDA THONDIHALU, IIVR, VARANASI	11554	NEMATOLOGY	19/08/2019
3.	MANISH KUMAR MITTAL, DMAPR, ANAND	11563	PLANT GENETIC RESOURCES	19/08/2019
4.	CHANDERBHAN, SKRAU, BIKANER	11596	POST HARVEST TECHNOLOGY OF HORTICULTURAL CROPS	19/08/2019

**411.3.9.** During the current academic session 2019-20, Education Division of ICAR referred 192 candidates including 12 for IARI Assam and 12 for IARI Jharkhand for admission to M.Sc. degree programmes in different disciplines at IARI through online counseling. Out of 192, two students did not report for admission and six have been removed from the rolls. For these 8 vacant seats offline counseling was held and seven seats were filled. One seat remained vacant in the discipline of WST as no candidate reported for admission.

The candidates who are not awarded ICAR P.G. Scholarship are considered for award of Institute Scholarship. Award of ICAR-PG Scholarship is yet to be received from the Education Division, ICAR. The Academic council decided that the duly filled application form for IARI Jr. Scholarship may be obtained from all the M.Sc./M.Tech. students at the earliest and to avoid financial hardship, the Scholarship may be paid to these students from IARI fund after obtaining the approval from the Chairman, Academic Council. After the award of ICAR-PG Scholarship, the duly filled application forms (from these students) be sent to ICAR Education Division for further necessary action (i.e. regarding release of funds). On obtaining the funds from ICAR, necessary adjustment may be made accordingly.

***Agenda Item No. 411.4: Consideration of the proceedings of the meeting of the Standing Committee on Course Curricula and Academic Affairs held on 07.11.2019***

The Academic Council discussed the recommendations of the Standing Committee and approved the following:

**411.4.1: Introduction of two New Courses :(i) Science and Society PGS 508, (ii) Information Technologies for Agricultural Extension (CA 579/AG EXT 579)**

The Academic council discussed the recommendation of the Standing Committee and decided to Introduce a compulsory Course to all PhD students "Science and Society"(PGS 508) wef 2019-20 (I/II/III Trimester) academic session.

With regard to "Information Technologies for Agricultural Extension (CA 579/AG EXT 560)" course, the Academic Council suggested to revise the title and contents, to include ICT applications in agriculture and more emphasis on practical aspects. Board of Studies of the Division of Agricultural Extension to revise the compulsory course for implementation from III-Trimester of 2019-20 session for the PhD students of Agricultural Extension.



**411.4. 2: Introduction of new Course "Non-coding RNAs "BI 644" in the discipline of Bioinformatics**

The Academic Council approved the Introduction of above new Course(Optional) as per detail given below:

Title of the Course: **Non-coding RNAs BI 644**

Number of credits: 1L + 1P

To be offered: II/III

Objective: To orient the students towards the developments recently taken place in the field of non-coding RNAs and their characterization, prediction using computational algorithms, pipelines and tools.

**Course contents (Theory)**

**UNIT I**

Course overview; RNA molecules: biogenesis, types, structure and functions.

Introduction to ncRNAs: types of ncRNAs, small ncRNAs, long ncRNAs, function of ncRNAs, Role of ncRNAs in plants and animals

**UNIT II**

**Small ncRNA:** Introduction, miRNAs, siRNAs, hiRNAs, piRNAs, shRNAs; Post-transcriptional processing of microRNA; microRNA: target pairing and RISC function; miRNA target genomics; Functions and roles of miRNAs in growth & development of plants and animals. Stress responsive miRNAs, oncomiRs&tumour suppresser miRNAs.

**UNIT III**

lncRNAs: biogenesis, classifications, structure & function of lncRNAs. Endogenous target mimic lncRNAs, triplet associated lncRNAs (miRNA, mRNA, lncRNAs); Circular RNAs: structure and functions. Role of circular RNA in cancer, growth and development.

**UNIT IV**

Splicing and splice variants; Alternative splicing; Alternative splicing regulation; Nonsense mediated RNA decay; RNA editing.

**UNIT-V**

Coding and non-coding sequences; TEs; lincRNAs and lncRNAs; Bacterial RNAs; riboswitches; Introduction to CRISPRs.

**Practical**

Exploration of databases and tools for identification and characterization of ncRNAs (miRNA, lncRNAs, circular RNAs); Prediction and characterization of ncRNAs from RNA-seq profiles; Structure prediction and validation of ncRNAs; Generation of new ncRNA resources and submission to genomic databases.

**Suggested additional Readings**

1. Ernesto Picardi (Ed.). 2015. RNA bioinformatics. Springer
2. Gordokin, Jan Ruzyo, L.Walter (Eds.). 2014. RNA sequence, structure and function: computational and bioinformatic methods –Springer
3. Jocelyn E. Krebs, Benjamin Lewin, Elliott S. Goldstein, Stephen T. Kilpatrick. 2014. Lewin's Genes XI- Jones & Bartlett Publishers
4. MRS Rao. (ed.). 2017. Long non-coding RNA biology — springer
5. James Darnell .2011.RNA: Life's indispensable molecule – CSH press  
KrishnaraoAppasani. 2008. microRNA-from basic science to disease biology- Cambridge university press

**411.4.3: Introduction of Ph.D. programme in Development Economics and Policy at NIAP, New Delhi**

The Academic Council discussed the issue in detail and decided that Board of Studies of the Discipline of Agricultural Economics shall prepare a comparative note and authorized the Chairman to constitute a committee for further discussion/deliberations on this issue.

**411.4.4: Institution of new award: Best Extension Scientist Award for outstanding contribution in Agricultural Extension**

The Academic Council approved the Institution of new award: Best Extension Scientist Award for outstanding contribution in Agricultural Extension received from the Board of Studies of Discipline of Agricultural Extension commencing from the biennial 2019-20. The guidelines, marking scheme and proforma approved by the Academic Council is placed at **Appendix-II**.

**411.4.5: To make MB 607 Microbial Genetics (3L+1P) as Core Course for M.Sc. Students**

The Academic Council approved the proposal of Board of Studies of Microbiology for making Course MB 607 Microbial Genetics (3L+1P) as a Core Course for M.Sc. students.

**411.4.6: NAAS rating of 3.50 out of 10.00 / NAAS rating of 5.00 out of 10.00 for meeting the requirement of PhD thesis submission**

The Academic Council discussed the current status/trends of publication of research papers from PhD theses and decided to enhance the NAAS rating requirement to  $\geq 6.0$  out of 10.0 from 2019-20 academic session (with the exception to Discipline of Agricultural Engineering, Agricultural Extension, Agricultural Economics, Agricultural Statistics and Computer Application).

The Academic Council also recommended for the revision of guidelines of the IARI Merit Medal.



**Agenda Item No. 411.5: Consideration of the proceedings of the meeting of the Standing Committee on Faculty & Discipline held on 08.11.2019**

The Academic Council discussed the recommendations of the Standing Committee and approved the following:

**411.5.1: Induction** of following 14 Scientists into PG School Faculty in their respective disciplines at IARI (8) and IARI PG outreach Programme at IIHR (3) and IARI-Jharkhand/IARI Assam (3) as they meet the qualifications/eligibility as per the prescribed guidelines.

S. No.	Name & Designation	Name of the Discipline
<b>IARI, New Delhi</b>		
1.	Dr. Raju Kumar, Scientist	Agricultural Statistics
2.	Dr. M. Balasubramanian, Scientist	Agricultural Economics
3.	Dr. Chavlesh Kumar, Scientist	Fruit Science
4.	Dr. Rajna S., Scientist	Entomology
5.	Dr. T. Boopathi, Sr. Scientist	Entomology
6.	Dr. Gowthami R., Scientist	Genetic and Plant Breeding
7.	Dr. Sudhir Srivastava, Scientist	Bioinformatics
8.	Dr. Vandita Kumari, Scientist	Agricultural Statistics
<b>IIHR, Bengaluru</b>		
9.	Ms. Rohini M.R, Scientist	Plant Genetic Resource
10.	Dr. Raja Shankar, Principal Scientist	Vegetable Science
11.	Dr. Linta Vincent, Scientist	Fruit Science
<b>For IARI-Assam</b>		
12.	Dr. Amit Kumar, Scientist, NEH (Umiam)	Genetics and Plant Breeding
13.	Dr. Harish G.D, Scientist (ICAR-NBPGR R.S-Shillong)	Genetics and Plant Breeding
<b>For IARI-Jharkhand</b>		
14.	Dr. Shashi Bhushan Choudhary, Scientist (SS) (Ranchi)	Genetics and Plant Breeding

**411.5.2:** Keeping in view the Academic Council decision taken in its 410<sup>th</sup> meeting held on 25/7/2019, **approved** transfer of faculty membership of following three faculty as per detail given below:

S. No.	Name & Designation	Faculty membership transferred from Discipline of	Faculty membership transferred to Discipline of
1	Dr. Soumen Pal, Scientist	Agricultural Statistics	Computer Application
2	Dr. Tejpal Singh, Sr. Scientist	Plant Genetic Resources	Seed Science & Technology
3	Dr. Nagamani Sandra, Scientist	Plant Pathology	Seed Science & Technology

**411.5.3 Recognition** of following 3 faculty members of IARI as Research guides for M.Sc. guidance in their respective disciplines as they meet the prescribed requirements for becoming the research guides:

S. No.	Name & Designation	Name of the Discipline
1	Dr. Kumar Durgesh, Scientist	Genetics and Plant Breeding
2	Dr. Manjunath Prasad C.T, Scientist	Seed Science & Technology
3	Dr. Ankur Biswas, Scientist	Agricultural Statistics

**411.5.4 Recognition** of Dr. Karan Singh, Principal Scientist (ComputerApplication), CIAE, Bhopal as PhD Research Guide in the discipline of Agricultural Engineering and in light of the Academic Council decision taken in its 410<sup>th</sup> meeting held on 25/7/2019 (as a special case, after relaxing requirement of two M.Sc./M.Tech Students guidance experience) in the discipline of Agricultural Engineering (FMP).

**411.5.5 Non-Recognition** of the following three faculty members of CIAE, Bhopal as Research Guides as they did not meet the prescribed requirement of teaching experience/Research Publications:

S. No.	Name and Designation	Name of the Discipline	Reason for declining
1	Dr. Chandra Kant Saxena, Principal Scientist	Agricultural Engineering(SWCE)	Short of Research papers, two M.Sc./M. Tech students guidance experience
2	Dr. N.S. Chandel, Scientist	Agricultural Engineering(FPE)	Short of teaching, two M.Sc./M. Tech students guidance experience
3	Dr. Sandip Mandal, Scientist	Agricultural Engineering	Short of teaching, M.Sc./M. Tech students guidance experience

**411.5.6: Recognition** of following four scientists as Adjunct Faculty at IARI as per prescribed guidelines approved by the Academic Council in its 402<sup>nd</sup> meeting held on 30/11/2016 and notified vide Notification No. PGS/1-402/AC/2016 dated 20/1/2017.

S. No.	Name & Designation	Name of the Discipline
1.	Dr.(Mrs.) Malavika Dadlani, Former Joint Director (Res.), IARI	Plant Physiology
2.	Dr. S.C. Datta, Former Principal Scientist, IARI	Soil Science and Agricultural Chemistry
3.	Dr. P. Kumar, Former Head of the Division, IARI	Agricultural Economics
4.	Dr. V.C. Mathur, Former Professor, IARI	Agricultural Economics

**Agenda Item No. 411.6      Consideration of the Academic Calendar for the 63<sup>rd</sup> Academic Session 2020-21**

The Academic Council approved the Academic Calendar of the P G School for the Academic Session 2020-21.

<b>Admission Process for the Academic Session 2020-21</b>		
<b>2020</b>		
<b>June 1</b>	<b>Monday</b>	<b>ICAR AIEEA- 2020</b>
June 26	Friday	Last date for submission of thesis by IARI M.Sc./M.Tech. students who will apply for admission to Ph.D. Programme
June 27	Saturday	Declaration of result of ICAR AIEEA 2020 for admission to M.Sc./M.Tech. and Ph.D. programme
July 04	Saturday	Last date for receipt of mark sheet from the candidates who are studying in M.Sc./M.Tech. final year
<b>July 11</b>	<b>Saturday</b>	<b>Academic Council meeting</b>
July 23-24	Thursday & Friday	Verification of original documents and online Registration of newly admitted M.Sc./M.Tech. and Ph.D. students for the academic session 2020-21
July 25	Saturday	Orientation Programme: Newly admitted students to be addressed by Dean and Director, IARI
<b>I – Trimester</b>		
July 27	Monday	First Trimester begins, payment of fees and online registration of continuing students
July 28	Tuesday	Commencement of Class Work
August 10	Monday	Last date for adding/dropping of course
September 05	Saturday	Teacher day celebration and lecture
<b>November 16 to November 21</b>	<b>Monday to Saturday</b>	<b>Final Examination of I Trimester</b>
<b>II – Trimester</b>		
November 23	Monday	Online Registration of students
November 24	Tuesday	Commencement of Class Work
December 03	Thursday	Agricultural Education Day
December 07	Monday	Last date for adding/dropping of courses
<b>December 20 to January 03</b>	<b>Sunday to Sunday</b>	<b>Winter Break</b>
<b>2021</b>		



February 1	Monday	Last date for holding the Final Viva-Voce Examination for consideration for the award of IARI Merit Medals and award of degree in the 59 <sup>th</sup> Convocation, 2021
February 08	Monday	<b>Commencement of 59<sup>th</sup> Convocation Week Programme</b>
February 11	Thursday	<i>51<sup>st</sup> Lal Bahadur Shastri Memorial Lecture</i>
February 12	Friday	59 <sup>th</sup> Convocation
February 20 to February 22	Saturday to Monday	Annual Sports Meet (Tentative)
<b>March 22 to March 27</b>	<b>Monday to Saturday</b>	<b>Final Examination of II Trimester</b>
<b>III - Trimester</b>		
March 29	Monday	Online Registration of students
March 30	Tuesday	Commencement of Class Work
April 14	Wednesday	Last date for adding/dropping of course
<b>May 23 to June 13</b>	<b>Sunday to Sunday</b>	<b>Summer Vacation</b>
July 12 to July 17	Monday to Saturday	Final Examination of III Trimester
July 18 to July 25	Sunday to Sunday	Trimester Break

**Agenda Item No. 411.7:      *Finalisation of 58<sup>th</sup> Convocation Week Programme  
February 3-7, 2020***

The Academic Council approved the following 58<sup>th</sup> Convocation programme of IARI.

**Venue: Dr. B.P. Pal Auditorium**

**Monday, February 03, 2020**

09.30-18.00 hrs.      Presentation of "Significant Post Graduate Students Research" by M.Sc./M.Tech.& Ph.D. students for "Merit Medals" and "Best Student of the Year" award

**Tuesday, February 04, 2020**

**Presentation of Significant Educational Achievements for the year 2019 by the Professors representing different schools of the teaching disciplines**

- 09.30-11.15 hrs.      Session I – Crop Improvement
- 11.30-13.00 hrs.      Session II – Crop Protection
- 14.00-15.45 hrs.      Session III – Resource Management
- 16.00-17.00 hrs.      Session IV – Basic Sciences
- 17.15-18.30 hrs.      Session V – Horticultural Sciences

**Wednesday, February 05, 2020**

**Presentation of Significant Educational Achievements for the year 2019 by the Professors representing different schools of the teaching disciplines**

09.30-10.45 hrs. Session VI – Social Sciences

**Award Lectures**

11.00-12.15 hrs. Lecture by the Recipient of XXI<sup>th</sup> Sukumar Basu Memorial Award  
 12.30-13.45 hrs. Lecture by the Recipient of XX<sup>th</sup> Shri Harikrishna Shastri Memorial Award  
 15.00-16.15 hrs. Lecture by the Recipient of 1<sup>st</sup> Best Extension Scientist Award  
 16.30-17.15 hrs. Lecture by the Recipient of V<sup>th</sup> Dr. A.B. Joshi Memorial Award

**Thursday, February 06, 2020**

**Venue: Conference Hall, Prof. M.S.Swaminathan Library**

09.30-10.30 hrs. 412<sup>th</sup> Meeting of the Academic Council, IARI  
 11.00-12.00 hrs. Meeting of Board of Management, IARI  
 12.15-13.00 hrs. Press Conference

**Venue: Dr. B.P. Pal Auditorium**

14.00-15.30 hrs. 50<sup>th</sup> Lal Bahadur Shastri Memorial Lecture

**Venue: New Auditorium, NASC Complex**

15.45-16.30 hrs. Full Dress Rehearsal

**Friday, February 07, 2020**

**Venue: New Auditorium, NASC Complex**

11.00-13.00 hrs. 58<sup>th</sup> Convocation  
 18.00 hrs. Cultural Programme by P. G. Students  
 20.00 hrs. Convocation Dinner

The process on the following items has already been initiated/completed with the approval of the Chairman of the Academic Council to enable the P.G. School to complete all the pre-convocation requirements well in time. The action taken is submitted for kind information of the Academic Council and its ratification.

1. Finalization of Chief Guest
2. Chairpersons for the various Programmes
  - i) Chairman, Judging Committee and Convenor for the programme “Significant Post Graduate Students Research-2019 presentation” by the PG students for IARI Merit Medals” and Best Student of the Year Award on Monday, February 03, 2020 (to be finalised in due course of time)
  - ii) Chairpersons and Conveners for the Programme “Presentation of Significant Educational Achievements of IARI for the year 2019” by the Professors of teaching disciplines representing schools on Tuesday, February 04, 2020 (to be finalised in due course of time)
3. Lecture by the recipients of the following awards
  - i) Shri Hari Krishna Shastri Memorial Award
  - ii) Sukumar Basu Memorial Award
  - iii) Best Extension Scientist Award

iv) Dr. A.B. Joshi Memorial Award

4. Speaker to deliver 50<sup>th</sup> Lal Bahadur Shastri Memorial Lecture:
5. Chairman and Convenor for the 50<sup>th</sup> Lal Bahadur Shastri Memorial Lecture:
6. Chairpersons for the below mentioned Committees:

i) Pandal and Seating Arrangements Committee	Dr. Indra Mani, Head, Agril Engineering, Chairperson
ii) Catering Arrangement Committee for Various Occasions	Sh. Ratnesh Kumar, Registrar & JD (A), Chairperson
iii) Invitation Committee	Dr. V.K. Baranwal, Professor, Plant Pathology, Chairperson
iv) Reception Committee	Dr. (Ms.) Anupama Singh, Head, Division of Agril. Chemicals, Chairperson
v) Cultural Programme & Invocation Song Committee	Dr. (Mrs.) K. Annapurna, Head, Microbiology Chairperson
vi) Decoration Committee	Dr. Markandey Singh, Floriculture(Coordinator)
vii) Publicity Committee	Dr. Rabindra Nath Padaria, Prof. Agril. Extension, Chairperson
viii) Transport and Accommodation Committee	Sh. Pushpender Kumar, Chief Admin. Officer, Directorate, IARI

**Agenda Item No.411.8:** *Consideration of the list of the candidates who have become eligible for award of their respective degrees of Master of Science and Doctor of Philosophy as on 11.11.2019*

The Academic Council approved the list of 147 candidates who have become eligible for the award of degree of M.Sc./M.Tech. and 30 candidates for Doctor of Philosophy who have completed all the requirements including final viva-voce examination as on 13.11.2019(Appendix-III).

**Agenda Item No. 411.9:** *Finalization of number of seats and eligibility qualification for admission to M.Sc./M.Tech. and Ph.D. degree programmes for the Academic Session 2020-21*

The Academic Council approved the following:

**M. Sc./M.Tech. and Ph.D. programme:** The seat requirement will be sent to the Education Division of ICAR as they conduct the All India Entrance Examination for Admission (AIEEA – PG- 2020, AIEEA PGS 2020) and Award of ICAR-JRF to Master's degree programme and ICAR-SRF to Doctoral degree programme of IARI, IVRI, NDRI, CIFE, CAU and SAU's. The exam shall be conducted by NTA and 100% of seats at IARI will be filled by this exam.



**Discipline-wise Seat positions for M.Sc./M.Tech. programmes at IARI-New Delhi, IARI-Jharkhand and IARI-Assam**

S.No.	Discipline	GEN	EWS	OBC	SC	ST	PH	Total
1.	AGRICULTURAL CHEMICALS	2	1	2	0	1	0	6
2.	AGRICULTURAL ECONOMICS	2	1	1	1	0	(1)	5
3.	AGRICULTURAL ENGG. (Agricultural Processing & Structure)	1	1	0	0	0	0	2
4.	AGRICULTURAL ENGG. (Farm Power & Equipment)	2	1	1	1	0	0	5
5.	AGRICULTURAL ENGG. (Soil & Water Conservation Engineering)	2	1	1	1	0	0	5
6.	AGRICULTURAL EXTENSION	2	0	2	2	1	0	7
7.	AGRICULTURAL PHYSICS	2	0	2	1	0	0	5
8.	AGRICULTURAL STATISTICS	3	1	2	1	1	0	8
9.	AGRONOMY	2	1	2	1	0	0	6
10.	BIOCHEMISTRY	2	0	2	1	0	0	5
11.	BIOINFORMATICS	3	0	1	1	1	(1)	6
12.	COMPUTER APPLICATION	3	1	2	1	0	0	7
13.	ENTOMOLOGY	3	1	2	1	0	0	7
14.	ENVIRONMENTAL SCIENCES	2	1	2	1	1	0	7
15.	FLORICULTURE AND LANDSCAPING ARCHITECTURE	2	1	1	0	1	0	5
16.	FRUIT SCIENCE	3	1	1	1	0	0	6
17.	GENETICS AND PLANT BREEDING	3	1	3	1	0	0	8
18.	MICROBIOLOGY	3	0	2	1	1	0	7
19.	MOLECULAR BIOLOGY AND BIOTECHNOLOGY	4	0	2	1	1	0	8
20.	NEMATOLOGY	3	0	1	0	1	0	5
21.	PLANT GENETIC RESOURCES	2	0	2	1	0	(1)	5
22.	PLANT PATHOLOGY	4	0	2	2	1	0	9
23.	PLANT PHYSIOLOGY	2	1	1	1	1	(1)	6
24.	POST HARVEST TECH. (PHT of Horticultural Crops)	2	1	1	1	0	0	5
25.	POST HARVEST TECH. (Post Harvest Engineering & Technology)	1	0	1	0	0	0	2
26.	SEED SCIENCE AND TECHNOLOGY	3	0	2	1	1	0	7
27.	SOIL SCIENCE AND AGRICULTURAL CHEMISTRY	2	1	2	0	1	0	6
28.	VEGETABLE SCIENCE	2	1	1	1	0	(1)	5
29.	WATER SCIENCE AND TECHNOLOGY	1	0	1	1	0	0	3
<b>Total-A</b>		<b>68</b>	<b>17</b>	<b>45</b>	<b>25</b>	<b>13</b>	<b>(5)</b>	<b>168</b>

**B- IARI, Assam**

S.No.	Discipline	GEN	EWS	OBC	SC	ST	PH	Total
1.	AGRONOMY	1	0	1	0	1	0	3
2.	GENETICS AND PLANT BREEDING	1	0	1	1	0	0	3
3.	SOIL SCIENCE AND AGRICULTURAL CHEMISTRY	2	0	1	0	0	0	3
4.	VEGETABLE SCIENCE	1	1	0	1	0	0	3
<b>Total-B</b>		<b>5</b>	<b>1</b>	<b>3</b>	<b>2</b>	<b>1</b>	<b>0</b>	<b>12</b>

**C- IARI, Jharkhand**

S.No.	Discipline	GEN	EWS	OBC	SC	ST	PH	Total
1.	AGRONOMY	1	0	1	1	0	0	3
2.	GENETICS AND PLANT BREEDING	1	0	1	1	0	0	3
3.	SOIL SCIENCE AND AGRICULTURAL CHEMISTRY	1	1	1	0	0	0	3
4.	VEGETABLE SCIENCE	2	0	0	0	1	0	3
<b>Total-C</b>		<b>5</b>	<b>1</b>	<b>3</b>	<b>2</b>	<b>1</b>	<b>0</b>	<b>12</b>
<b>Grand Total=A+B+C</b>		<b>78</b>	<b>19</b>	<b>51</b>	<b>29</b>	<b>15</b>	<b>(5)</b>	<b>192</b>

**Discipline-wise Seat positions for Ph.D. programmes at IARI-New Delhi, IARI-PG outreach programme at CIAE and IIHR**

S. No.	Discipline	GEN	EWS	OBC	SC	ST	PH	Total
1.	AGRICULTURAL CHEMICALS	3	1	2	2	0	0	8
2.	AGRICULTURAL ECONOMICS	2	0	2	1	1	(1)	6
3.	AGRICULTURAL ENGG. (Agricultural Processing & Structure)	1	0	1	0	0	0	2
4.	AGRICULTURAL ENGG. (Farm Power & Equipment)	2	1	2	1	1	0	7
5.	AGRICULTURAL ENGG. (Soil & Water Conservation Engineering)	2	1	1	1	0	0	5
6.	AGRICULTURAL EXTENSION	3	1	2	2	1	0	9
7.	AGRICULTURAL PHYSICS	3	0	2	1	0	0	6
8.	AGRICULTURAL STATISTICS	3	1	3	1	1	(1)	9
9.	AGRONOMY	4	1	4	2	2	0	13
10.	BIOCHEMISTRY	4	1	2	1	0	0	8
11.	BIOINFORMATICS	4	1	2	1	0	(1)	8
12.	COMPUTER APPLICATION	3	1	2	1	0	0	7
13.	ENTOMOLOGY	2	1	2	1	1	(1)	7
14.	ENVIRONMENTAL SCIENCES	2	1	2	1	1	(1)	7
15.	FLORICULTURE AND LANDSCAPING ARCHITECTURE	3	1	1	1	1	0	7
16.	FRUIT SCIENCE	4	1	2	1	1	0	9
17.	GENETICS AND PLANT BREEDING	6	2	5	2	1	(1)	16
18.	MICROBIOLOGY	5	1	2	1	0	0	9
19.	MOLECULAR BIOLOGY AND BIOTECHNOLOGY	4	1	2	1	1	0	9
20.	NEMATOLOGY	2	1	0	1	0	0	4
21.	PLANT GENETIC RESOURCES	2	1	2	1	0	0	6
22.	PLANT PATHOLOGY	5	1	3	2	1	0	12
23.	PLANT PHYSIOLOGY	3	0	1	1	0	0	5
24.	POST HARVEST TECH. (PHT of Horticultural Crops)	2	0	2	1	0	0	5
25.	POST HARVEST TECH. (Post Harvest Engineering & Technology)	1	0	0	0	0	0	1
26.	SEED SCIENCE AND TECHNOLOGY	3	0	2	1	1	0	7
27.	SOIL SCIENCE AND AGRICULTURAL CHEMISTRY	6	1	4	2	1	(1)	14
28.	VEGETABLE SCIENCE	4	1	3	2	1	0	11
29.	WATER SCIENCE AND TECHNOLOGY	3	1	3	1	1	0	9
<b>Total-A</b>		<b>91</b>	<b>23</b>	<b>61</b>	<b>34</b>	<b>17</b>	<b>(7)</b>	<b>226</b>

**B. CIAE, BHOPAL**

S. No.	Discipline	GEN	EWS	OBC	SC	ST	PH	Total
1.	AGRICULTURAL ENGG. (Agricultural Processing & Structure)	1	1	0	1	0	0	3
2.	AGRICULTURAL ENGG. (Farm Power & Equipment)	1	0	1	0	1	0	3
3.	AGRICULTURAL ENGG. (Soil & Water Conservation Engineering)	1	0	1	0	0	0	2
<b>Total-B</b>		<b>3</b>	<b>1</b>	<b>2</b>	<b>1</b>	<b>1</b>	<b>0</b>	<b>8</b>

**C. IIHR, BENGALURU**

S. No.	Discipline	GEN	EWS	OBC	SC	ST	PH	Total
1.	FLORICULTURE AND LANDSCAPING ARCHITECTURE	2	0	1	0	1	0	4
2.	FRUIT SCIENCE	1	0	1	1	0	0	3
3.	POST HARVEST TECH. (PHT of Horticultural Crops)	1	1	0	0	0	0	2
4.	VEGETABLE SCIENCE	1	0	1	1	0	0	3
<b>Total-C</b>		<b>5</b>	<b>1</b>	<b>3</b>	<b>2</b>	<b>1</b>	<b>0</b>	<b>12</b>
<b>Grand Total= A+B+C</b>		<b>99</b>	<b>25</b>	<b>66</b>	<b>37</b>	<b>19</b>	<b>(7)</b>	<b>246</b>

**Date of Entrance Examination (ICAR AIEEA-2020) :01.06.2020 (Sunday)**



In addition to the seats finalized for open stream, seats for admission to M.Sc. & Ph.D. programmes under other streams are detailed below:

Faculty Up-gradation Scheme	-	10 seats for Ph.D.
ICAR-In-Service Nominee Scheme	-	10 seats for Ph.D.
Departmental (Scientific)	-	10 seats for Ph.D.
Departmental (Technical)	-	10 seats (5 seats each for M.Sc./M.Tech.& Ph.D.)
Foreign Students	-	30 seats for M.Sc./M.Tech.& Ph.D.
J & K migrants	-	10 seats (5 seats each for M.Sc./M.Tech. & Ph.D.)
Children/widows of Security Forces	-	5 seats for M.Sc./M.Tech. & Ph.D.

***Agenda Item No. 411.10: Consideration of Dual degree PhD exchange programme between WSU-IARI, New Delhi***

Under the approved broad MoU and agreed work plan between ICAR and Western Sydney University, Australia a dual degree PhD exchange programme which has been finalized recently by the senior officials of both the countries was discussed and agreed by the Academic Council. Under this programme to start with five PhD students, two each in Soil Science & Vegetable Science (Protected Cultivation) and one in the discipline of Agricultural Extension has been finalized for the current academic session 2019-20.

The details of the selected candidates are given below:

S.No	Name of the Student, Roll No. & Discipline	Name of the Research Guide
<b>Agricultural Extension</b>		
1.	Mr. Bhagirath Das Roll No. 11425	Dr. R.N. Padaria Principal Scientist & Professor Division of Agricultural Extension, IARI
<b>Soil Science and Agricultural Chemistry</b>		
2.	Mr. Arkaprava Roy Roll No. 11604	Dr. S.P. Datta Principal Scientist & Professor Division of Soil Science and Agricultural Chemistry, IARI
3.	Mr. Ranabir Chakraborty Roll No. 11605	Dr. T.J. Purakayastha Principal Scientist Division of Soil Science and Agricultural Chemistry, IARI
<b>Vegetable Science</b>		
4.	Mr. Anjan Das Roll No. 11621	Dr. A.D. Munshi Principal Scientist Division of Vegetable science, IARI
5.	Mr. Dhananjay A. Hongal Roll No. 11619	Dr. T.K. Behera Principal Scientist & Professor Division of Vegetable science, IARI

***Agenda Item No. 411.11: Any other item with the permission of the Chair***

1. The Academic Council discussed the proposal of discipline of "Plant Genetic Resources" for renaming the degree as "Plant Genetic Resources and Agriculture Botany". The Academic Council did not agree to the proposal and was of the opinion that Board of Studies may submit a detailed proposal for further consideration of Standing Committee on Course Curricula and Academic Affairs.
2. Regarding the issue of limited hostel accommodation facilities at IARI, the Academic Council constituted a Committee under the Chairmanship of Dean (Members: MOHR, Registrar and President PGSSU) to formulate allotment guidelines for the approval of Director.

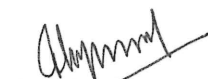
The meeting ended with the vote of thanks to the Chair.



**(Ratnesh Kumar)**  
Member-Secretary



**(A.K. Singh)**  
Chairman



**(Rashmi Aggarwal)**  
Vice Chairperson

APPENDIX-I

LIST OF STUDENTS ENROLLED AT IARI, NEW DELHI IN PH.D. PROGRAMME IN THE ACADEMIC YEAR 2018-19 ELIGIBLE FOR INSTITUTE SCHOLARSHIP @ Rs. 25000/- p.m. WITH CONTINGENCY @ Rs. 10000/-p.a				
S. No.	NAME OF THE STUDENT	ROLL NO	DISCIPLINE/SUB-DISCIPLINE	DATE ENROLMENT
1.	RAKESH KUMAR	11375	AGRICULTURAL CHEMICALS	19/08/2019
2.	VIJAY KUMAR	11376	-do-	19/08/2019
3.	Ms. MADHUTIPPANNAVAR	11377	-do-	19/08/2019
4.	SUBHASIS SARKAR	11378	-do-	19/08/2019
5.	RANDEEP KUMAR	11379	-do-	19/08/2019
6.	Ms. NANDINISHA	11380	AGRICULTURAL ECONOMICS	19/08/2019
7.	Ms. GEETHA M L	11381	-do-	19/08/2019
8.	Ms. MOUSUMIPRIYADARSHINI	11382	-do-	19/08/2019
9.	NEELAKANTAPPA P	11383	-do-	19/08/2019
10.	ATHARE PRAKASH GORAKSHA	11384	-do-	19/08/2019
11.	OMPRAKASHNAIK N	11385	-do-	19/08/2019
12.	SUBRATAGORAIN	11386	-do-	19/08/2019
13.	VISHALKUMAR SURESH HOSAMANI	11387	-do-	19/08/2019
14.	DHARMENDER	11389	AGRICULTURAL ENGINEERING	19/08/2019
15.	Ms. SILPA MANDAL	11392	-do-	19/08/2019
16.	Ms. KHUSHBOO GUPTA	11393	-do-	19/08/2019
17.	Ms. CHINMAYEEPARIDA	11395	-do-	19/08/2019
18.	NRUSINGHCHARAN PRADHAN	11399	-do-	19/08/2019
19.	OMKAR GUPTA	11401	-do-	19/08/2019
20.	AJAY KUSHWAH	11406	-do-	19/08/2019
21.	RAMINENIHARSHA NAG	11408	-do-	19/08/2019
22.	SOMNATHGANGARAMYAMAGAR	11409	-do-	19/08/2019
23.	RATHOD SUNIL KUMAR	11410	-do-	19/08/2019
24.	SIDHARTHASEKHAR SWAIN	11411	-do-	19/08/2019
25.	ACHUGATLAKESAV KUMAR	11412	-do-	19/08/2019
26.	KUNDAN KUMAR	11415	-do-	19/08/2019
27.	AMIT KUMAR	11417	-do-	19/08/2019
28.	Ms. SADHANIKUMARI	11419	-do-	19/08/2019
29.	MALKHAN SINGH JATAV	11421	-do-	19/08/2019
30.	SUJAYBASAPPAKADDEMANI	11426	AGRICULTURAL EXTENSION	19/08/2019
31.	Ms. JUHEE AGRAWAL	11427	-do-	19/08/2019
32.	SURJYAKANTA ROY	11430	-do-	19/08/2019
33.	KOUSHIK BAG	11431	AGRICULTURAL PHYSICS	19/08/2019
34.	SONA KUMAR	11432	-do-	19/08/2019
35.	Ms. PRIYA BHATTACHARYA	11433	-do-	19/08/2019
36.	ARAVIND K S	11434	-do-	19/08/2019
37.	Ms. SONIA DEVI	11435	-do-	19/08/2019
38.	KIRTTIRANJANBARAL	11445	AGRONOMY	19/08/2019
39.	HARI SANKARNAYAK	11446	-do-	19/08/2019
40.	KAMAL GARG	11447	-do-	19/08/2019
41.	AKSHAY KUMAR YOGI	11448	-do-	19/08/2019
42.	SHYAM C S	11449	-do-	19/08/2019
43.	Ms. ANKURBHAKAR	11450	-do-	19/08/2019
44.	CHUNENDRA PRAKASH	11451	-do-	19/08/2019
45.	SANDEEP GAWDIYA	11453	-do-	19/08/2019
46.	R RUSTUMZHIIPAO	11454	-do-	19/08/2019
47.	MADAM VIKRAMARJUN	11455	-do-	19/08/2019
48.	ARKAPRAVA ROY	11456	-do-	19/08/2019
49.	SACHIN K S	11457	-do-	19/08/2019
50.	BANKERLANGKHONGWIR	11458	-do-	19/08/2019
51.	Ms. ARTIKUMARI	11459	BIOCHEMISTRY	19/08/2019
52.	NAGESH C R	11460	-do-	19/08/2019
53.	SHAHNOORALAM	11461	-do-	19/08/2019
54.	DURGASIVENKATABHARGAV	11462	-do-	19/08/2019
55.	ABHISHEK CHITRANASHI	11463	-do-	19/08/2019
56.	Ms. SIMARDEEP KAUR	11464	-do-	19/08/2019
57.	MAHESH MAHADEVJADHAV	11476	ENTOMOLOGY	19/08/2019
58.	NIRAJGULERIA	11477	-do-	19/08/2019
59.	K SRINIVAS	11478	-do-	19/08/2019



60.	SANTHOSH NAIK	11479	-do-	19/08/2019
61.	Ms. JAT MONICA	11480	-do-	19/08/2019
62.	Ms. DEEKSHA M G	11481	-do-	19/08/2019
63.	ASHOK KUMAR SAU	11482	-do-	19/08/2019
64.	G R HITHESH	11483	-do-	19/08/2019
65.	Ms. KARSHANAL J	11484	-do-	19/08/2019
66.	SANDEEP KUMAR	11485	-do-	19/08/2019
67.	ANIL KUMAR S T	11486	-do-	19/08/2019
68.	DEVENDRA KUMAR MEENA	11487	-do-	19/08/2019
69.	BASAVARAJ N HADIMANI	11488	-do-	19/08/2019
70.	Ms. PYNHUNLIN NOLA KHARKRANGDOHLING	11489	-do-	19/08/2019
71.	Ms. DIVYA POOJA B	11490	ENVIRONMENTAL SCIENCES	19/08/2019
72.	Ms. SHRAVANISANYAL	11491	-do-	19/08/2019
73.	Ms. MAMTABISHT	11492	-do-	19/08/2019
74.	Ms. VINITA	11493	-do-	19/08/2019
75.	Ms. J GAYATHRI	11494	-do-	19/08/2019
76.	RAVI KUMAR	11495	-do-	19/08/2019
77.	KUDIMETHA GANESH KUMAR	11496	-do-	19/08/2019
78.	DAVENDRA KUMAR	11497	FLORICULTURE AND LANDSCAPE ARCHITECTURE	19/08/2019
79.	SAGAR C T	11498	-do-	19/08/2019
80.	ROHITH R	11499	-do-	19/08/2019
81.	TEJUKUMAR B K	11501	-do-	19/08/2019
82.	Ms. KOPPALADEEPTHI	11502	-do-	19/08/2019
83.	Ms. RAYAVARAPUTEJASWI	11503	-do-	19/08/2019
84.	Ms. MEGHA R	11508	FRUIT SCIENCE	19/08/2019
85.	SANDEEP	11509	-do-	19/08/2019
86.	NIKHIL H N	11511	-do-	19/08/2019
87.	Ms. ANUSHA N M	11513	-do-	19/08/2019
88.	Ms. JNAPIKA K H	11514	-do-	19/08/2019
89.	RAKESH KUMAR PANDEY	11515	-do-	19/08/2019
90.	ASHOK DHAKAD	11517	-do-	19/08/2019
91.	RAHUL	11519	GENETICS AND PLANT BREEDING	19/08/2019
92.	HRIIPULOU DUO	11520	-do-	19/08/2019
93.	NANDAKUMAR S	11521	-do-	19/08/2019
94.	Ms. SONU	11522	-do-	19/08/2019
95.	MANOJ GOWDA M	11523	-do-	19/08/2019
96.	ANUJ KUMAR	11524	-do-	19/08/2019
97.	MANORANJANSENAPATI	11525	-do-	19/08/2019
98.	PRASHANT VASISTH	11526	-do-	19/08/2019
99.	I GOPINATH	11528	-do-	19/08/2019
100.	Ms. MENARITAKU	11529	-do-	19/08/2019
101.	MANOJ KUMAR PATEL	11530	-do-	19/08/2019
102.	Ms. SUNAINA YADAV	11531	-do-	19/08/2019
103.	Ms. NIKKI KUMARI	11532	-do-	19/08/2019
104.	SHIVANAGOUDAPATIL N	11533	-do-	19/08/2019
105.	MANJUNATHA P B	11534	-do-	19/08/2019
106.	NARAYANA BHAT DEVATE	11535	-do-	19/08/2019
107.	KAMREKRANTHIKUMAR	11536	-do-	19/08/2019
108.	HARISHA R	11537	-do-	19/08/2019
109.	Ms. SAGIA S	11539	MICROBIOLOGY	19/08/2019
110.	Ms. SNEHA G R	11540	-do-	19/08/2019
111.	Ms. KRUTIKAPATIL	11541	-do-	19/08/2019
112.	Ms. ASWINI K	11542	-do-	19/08/2019
113.	Ms. S.RAMYA	11543	-do-	19/08/2019
114.	Ms. KOKILA V	11544	-do-	19/08/2019
115.	DILBAG	11545	-do-	19/08/2019
116.	KRISHNAYAN PAUL	11546	MOLECULAR BIOLOGY AND BIOTECHNOLOGY	19/08/2019
117.	MUHAMMED SHAMNAS V	11547	-do-	19/08/2019
118.	NARESH KUMAR SAMAL	11548	-do-	19/08/2019
119.	ZAHERUL ISLAM	11549	-do-	19/08/2019
120.	DEEPESH KUMAR	11550	-do-	19/08/2019
121.	DHIVYANANDHAM K	11551	-do-	19/08/2019
122.	GOPAL	11552	-do-	19/08/2019
123.	ARTHAKUNDU	11553	NEMATOTOLOGY	19/08/2019
124.	MANISH KUMAR	11555	-do-	19/08/2019
125.	ABHISHEK GOWDA A P	11556	-do-	19/08/2019

126.	SACHINGANGWAR	11557	-do-	19/08/2019
127.	PRAKASH YALLAPASHANKHU	11558	-do-	19/08/2019
128.	Ms. VYSHALI	11559	-do-	19/08/2019
129.	Ms. MONIKA JHA	11561	PLANT GENETIC RESOURCES	19/08/2019
130.	Ms. DEEPIKA D D	11562	-do-	19/08/2019
131.	Ms. RAMYA K R	11564	-do-	19/08/2019
132.	Ms. SHARMILA M	11565	-do-	19/08/2019
133.	SHANKAR M	11566	-do-	19/08/2019
134.	Ms. PANKHURISINGHAL	11567	PLANT PATHOLOGY	19/08/2019
135.	Ms. CHARISHMA K	11568	-do-	19/08/2019
136.	Ms. RASHMI E R	11569	-do-	19/08/2019
137.	ROHITH M	11570	-do-	19/08/2019
138.	GANGARAJ R	11571	-do-	19/08/2019
139.	LHAMDORJEE	11572	-do-	19/08/2019
140.	Ms. NISHMITHA K	11573	-do-	19/08/2019
141.	MANIKANDAN K	11575	-do-	19/08/2019
142.	SURYAKANTMANIK	11576	-do-	19/08/2019
143.	Ms. SANGHMITRA ADITYA	11577	-do-	19/08/2019
144.	PEDAPUDILOKESHBABU	11578	-do-	19/08/2019
145.	EMMADIVENU	11579	-do-	19/08/2019
146.	Ms. CHAITHRA M	11580	-do-	19/08/2019
147.	JAGADHESAN B	11582	PLANT PHYSIOLOGY	19/08/2019
148.	Ms. JYOTIPRIYA	11583	-do-	19/08/2019
149.	Ms. PRIYA PAUL	11584	-do-	19/08/2019
150.	Ms. NEHA ANAND	11585	-do-	19/08/2019
151.	SURIYAPRAKASHRAJENDRAN	11586	-do-	19/08/2019
152.	Ms. DEEPTI TIWARI	11587	-do-	19/08/2019
153.	AJIT KUMAR SINGH	11588	POST HARVEST TECHNOLOGY	19/08/2019
154.	HARISH H	11589	-do-	19/08/2019
155.	Ms. SAMPADA SHANKAR	11590	-do-	19/08/2019
156.	RAGHAVENDRA H R	11592	-do-	19/08/2019
157.	VIVEKSAURABH	11593	-do-	19/08/2019
158.	URHESUMITBHAUSAHEB	11597	-do-	19/08/2019
159.	Ms. ARCHANA H R	11598	SEED SCIENCE AND TECHNOLOGY	19/08/2019
160.	AKASH A	11599	-do-	19/08/2019
161.	RAMAPPA S	11600	-do-	19/08/2019
162.	Ms. SHOBHARANI M	11601	-do-	19/08/2019
163.	Ms. SHRUTIKUMARI	11602	-do-	19/08/2019
164.	Ms. ASHWINI VIJAY SAKPAL	11603	-do-	19/08/2019
165.	ARKAPRAVA ROY	11604	SOIL SCIENCE AND AGRICULTURAL CHEMISTRY	19/08/2019
166.	RANABIR CHAKRABORTY	11605	-do-	19/08/2019
167.	ANIT DAS	11606	-do-	19/08/2019
168.	KHURSHIDALAM	11607	-do-	19/08/2019
169.	Ms. MOUMITA ASH	11608	-do-	19/08/2019
170.	MOHAN KUMAR K T	11610	-do-	19/08/2019
171.	Ms. MAMTA - -	11611	-do-	19/08/2019
172.	SUBHADIP PAUL	11612	-do-	19/08/2019
173.	ABHISHEK DAS	11613	-do-	19/08/2019
174.	Ms. PREMLATAMEENA	11614	-do-	19/08/2019
175.	Ms. POOJA TAMUK	11615	-do-	19/08/2019
176.	VISHWANATH	11616	-do-	19/08/2019
177.	THUMMALAGIRISHASHANK REDDY	11617	-do-	19/08/2019
178.	Ms. ANN MARIA JOSEPH	11618	-do-	19/08/2019
179.	DHANANJAY A HONGAL	11619	VEGETABLE SCIENCE	19/08/2019
180.	Ms. SANTHIYA S	11620	-do-	19/08/2019
181.	ANJAN DAS	11621	-do-	19/08/2019
182.	ARUNA T S	11622	-do-	19/08/2019
183.	Ms. JANANI R	11624	-do-	19/08/2019
184.	SHOHAIB SHEIKH AYUB CHAUHAN	11626	-do-	19/08/2019
185.	SHUBHAM SINGH	11627	-do-	19/08/2019
186.	Ms. BICHHINNAMAITRI ROUT	11628	-do-	19/08/2019
187.	MANJU SN	11629	-do-	19/08/2019
188.	MANJUNATHA K G	11630	-do-	19/08/2019
189.	Ms. PARAMITA ROY	11632	-do-	19/08/2019
190.	RAHUL CHANDEL	11633	-do-	19/08/2019
191.	Ms. AROCKIAANUSTY J	11635	WATER SCIENCE AND TECHNOLOGY	19/08/2019

192.	Ms. DIANA DHAYAL	11636	-do-	19/08/2019
193.	CHANDAN T	11637	-do-	19/08/2019
194.	Ms. KIRUTHIGA B	11638	-do-	19/08/2019
195.	Mr. KISHOR N	11639	-do-	19/08/2019
196.	Mr. VED PRAKASH MEENA	11640	-do-	19/08/2019
197.	Ms. RASHMI YADAV	11641	-do-	19/08/2019
198.	Ms. SANGEETA	11642	-do-	19/08/2019
199.	GAVHANEKISHORPANDURANG	11648	AGRICULTURAL ENGINEERING	29/08/2019
200.	EDULAUDAYKUMAR	11651	ENTOMOLOGY	02/09/2019
201.	CHETHAN KUMAR V	11652	GENETICS AND PLANT BREEDING	30/08/2019
202.	Ms. CHANDANA BS	11653	-do-	03/09/2019
203.	RAKTIMMITRA	11654	PLANT PHYSIOLOGY	30/08/2019
204.	Ms. NIDHILUTHRA	11656	SOIL SCIENCE AND AGRICULTURAL CHEMISTRY	30/08/2019
205.	MADHUSUDAN B S	11657	AGRICULTURAL ENGINEERING	09/09/2019



**Post Graduate School  
Indian Agricultural Research Institute  
New Delhi-110012**



**Application for the Best Extension Scientist Award for  
the biennial 2019-2020**

Name of the Institute forwarding application : .....

Photograph

1. Name of the candidate: -----  
First Middle Surname

- a) Father's Name  
b) Mother's name

2. Designation:

3. Address:

4. Contacts:

Office:

TELEPHONE

FAX

E-MAIL

Res.:

TELEPHONE

FAX

E-MAIL

5. Date of Birth:

(Please provide the proof)

Day

Month

Year

**6. (a) Academic Qualifications**

Degree/Diploma	Year	Major field	University/ Institution	Division/ Distinction
Graduation				
Masters				
Ph.D.				
Any other degree/diploma				
Post Doctoral Experience				



**(b) Training in India and/or Abroad (In the area relevant to the award)**

Training	Institution/Country	Sponsored by	Duration	Subject

**7. Employment status**

Designation	Pay scale (Rs.)	Nature of work	Institute (Organization)	Period (From - To)

**8. Achievements****(a) Research and extension**

Sl. No.	Item*	Details in quantifiable and verifiable terms (Whether applicant is a Developer, Co-developer or Associate)
1.	New extension models/approaches developed	
2.	Technology refined/package of practice developed and transferred to the farmers with the extent of coverage	
3.	New/concepts/methodologies/tools and techniques developed	
4.	Development of Value Chain/Model Village/Seed Village/Custom Hiring Centres/Climate Smart Village/Nutri-Smart Village/Contract Farming Arrangement etc.,	
5.	Software/Apps/Web resources/educational videos developed	
6.	Mobilized farmers for group action (Formation of FIG/SHG/FPO/Growers Association/Community seed banks)	
7.	Popularization of technologies and success stories	

*\*Documentary evidence should be enclosed for the product/technology, adoption of products and technologies and their impact on livelihood of farmers/commercial value and acceptance by clients/stakeholders.*



**(b) Teaching**

S.No.	Item	Detail	Year
1.	Courses taught and number of classes taken in each course		
2.	M.Sc./Ph.D. Students Guided as Chairman		
3.	New concept introduced in course/Design of innovative course curriculum/New Course introduced or course(s) revised		
4.	Success of students (in terms of their recognition for awards)		
5.	Books/Manuals/Bulletins/ Quality reference material		
6.	Organization/participation in Training/Summer or Winter school		

(c) Please state the most significant achievements in bullet form (*Not more than 300 words*)

[illegible]

## 9.Capacity building

Type of program	Name of the program organized	Sponsoring agency	Year	Period

**10. (a) List 20 most important & highest NAAS rated publications in chronological order (attach one set of reprints)**

S.No.	Name of authors	Year of publication	Title of paper	Journal, Volume, issue & page Nos.	NAAS Journal ID and NAAS Score (2019)	Number of citations based on ISI Science Citation Index
1						
2						

3						
4						
5						
6						
7						
8						
9						
10						

**10 (b). Other publications**

Categories of publications	Title of publication	Name of authors	First Author (Yes/No)	Year and Number of pages	Publisher
Practical/ Training Manual/ Books/ Monographs					
Book chapters/ Policy papers/ Economic reviews					
Books authored					
Books edited					
Popular Articles/Short Communications					
Extension Bulletins					
IT Material for Technology Transfer/Human Resource Development					

**11. Awards and Honors received**

S. No.	Name of the Award/ Honor	Year	National/ International	Academy/Institutional /Professional Society
1				
2				

**12. Special attainments**

Special attainment		
Category of Special Attainment	Details of Special Attainment	Additional details/ Information


**13. Please mention if this work has been submitted/ recognized for any other award.**

**14. Any other information**

This is certified that all the information furnished by me is correct to the best of my knowledge and belief.

**Place:**

**Date:**

**(Signature of the applicant)**

*“Certified that the information given by the candidate in this application has been verified and fully authenticated and that there are no disciplinary action or proceedings pending or contemplated against the candidate.*

**Recommendation of the Head of the Institution**

**(Signature)**

**& Seal**

*Enclosures:*

1. Application in original, duly forwarded and complete in all respect (5 copies)
2. Reprints of one set of papers listed at Sl. No. 10(a) of application
3. Documentary proof for all the claims made in the application

# **Guidelines governing “Best Extension Scientist Award” for outstanding contribution in Agricultural Extension**

## **1. Name of the Award**

The "Best Extension Scientist Award" for outstanding contribution in Agricultural Extension

## **2. Nature of the Award**

The award will carry a sum of Rs. 50,000 and a Certificate for the outstanding contribution in Agricultural Extension.

## **3. Source of fund:** Revenue receipt head or unified budget of IARI

## **4. Objective of the Award**

To motivate the Agricultural Scientists by recognizing their outstanding contributions in Agricultural Extension in India.

The award shall be made for either fundamental or applied research as well as outreach and capacity building in agricultural extension leading to results of practical values and empowerment of farming community.

## **5. Periodicity of the Award**

The award shall be made biennium, commencing from 2019-2020.

## **6. Eligibility for the Award**

Applicant should be an active scientist up to the age of 62 years with a standing of 20 years outstanding contributions in the area of agricultural extension while working in India.

The award shall be made for notable research both fundamental and applied as well as outreach and capacity building in agricultural extension as revealed in papers, articles, books, monographs, manuals, modules, e-modules, e-publications; development of concepts, frameworks, tools and techniques; development of extension models and approaches; development of model villages, climate smart villages, seed villages, seed banks, nutri-smart village, etc; development and mobilization of farmers' organizations; patents or any other published account of outstanding research work, education and extension activities.

However, the contributions or achievements which have received any other award, shall not be eligible for consideration of this Award.

## **7. Administration of the Award**

The Institute shall have the sole right of selection of recipients of the award and of the formulation of rules governing such selection from time to time.



### **8. Screening Committee**

Dean and Joint Director (Edn.) will constitute a Screening Committee consisting of five (5) members for scrutinizing and scoring the applications. The quorum of the Screening Committee, for finalizing the recommendation shall be at least four (4) members including Chair & Member-Secretary.

### **9. Judging Committee**

There will be a Judging Committee consisting of at least 5 (five) members. The Chairman of the Academic Council will nominate the Chairman for the Judging Committee and its members. Dean and Joint Director (Edn.), IARI will be the Member-Secretary of the Committee. The quorum of the Judging Committee, for finalizing the recommendation shall be at least 4 members including Chairman & Member-Secretary.

If any member of the Judging Committee himself/herself is to be considered for the award, he/she shall cease to be a member of the committee and some other Scientist will be nominated by the Chairman, Academic Council in his/her place.

The function of the Judging Committee shall be to recommend the name of the recipient for the award in accordance with procedure laid down herein after for approval of the Director, IARI.

In the opinion of the Judging Committee, if no deserving candidate is available, the award will not be given.

The award shall be given to only one person at one time and will not be shared.

### **10. Procedures for selection of recipient**

Applications are invited from Agricultural Scientists for the above award duly forwarded through concerned authorities. Each such application, which shall be in the prescribed form accompanied with detailed statement of the work and attainments of the candidate with documentary evidences, should be submitted by a specific date.

The Judging Committee shall recommend the name of the recipient for the award from the eligible and shortlisted applicants who secured a minimum of 75% marks.

The Award shall be withheld by the Judging Committee if in their opinion no sufficiently meritorious candidate is forthcoming in that year.

After the acceptance of the recommendations of the Judging Committee by the Academic Council, the award shall be announced.

### **11. Presentation of the Award**

The award shall be made at the Convocation of the Institute and the awardee shall be required to deliver a lecture based on his/her contributions during the Convocation Week Programme.

The expenditure relating to the arrangements for the award and the TA/DA to the awardee to be paid as per the ICAR rules.

## Allocation of marks for scoring applications for the “Best Extension Scientist Award” for the biennial 2019-2020

S.N.	Criteria	Marks	Weightage
1.	Research achievements	40	80%
2.	Teaching innovations and achievements	10	
3.	Capacity building of farmers and extension professionals	10	
4.	Research Publications	20	
5.	Books, manuals, bulletins, quality reference material	10	
6.	Awards and Honors/Recognition	10	
7.	<b>Total marks</b>	<b>100</b>	
	Weightage for Judging Committee		20%

### 1. Research Achievements

(Maximum marks – 40)

- New extension models developed and recognized at national level/ developed technologies with impact on largescale (State/National level) – 5 marks each (Maximum 20)
- Participatory Technology Development (PTD), Technology refined/package of practice developed and transferred to the farmers with large extent of coverage/Large scale success stories - 2 mark each
- New concepts/methodologies/tools and techniques developed - 1 mark each
- Success stories with impact on a large scale (State/National level). - 2 marks each
- Development of Value Chain/Model Village/Seed Village/Custom Hiring Centres/Climate Smart Village/Nutri-Smart Village/Contract Farming Arrangement etc., - 3 marks each
- Mobilized farmers for group action (formation of FIG/SHG/FPO/Growers Association/Community Seed Bank) - 1 mark each
- Software/Apps/Web resources developed - 2 marks each

Note: Developer (one) shall be awarded 100% marks, Co-developers (max two) 75% marks and associates 50% marks.

*Documentary evidence should be enclosed for each of the product/technology claimed along with the extent of adoption of products and technologies and their impact on livelihood of farmers/commercial value and acceptance by clients/stakeholders.*

### 2. Teaching innovations and achievements

(Maximum marks – 10)

- Must have taught 3 courses with a total 8 credit hour load during each academic year - 0.5 mark for each year of teaching with a cap of maximum 5 marks

- Innovative teaching methods applied - Development of e-course, Modules, Teaching Model, Case Studies - 1 mark each with a cap of maximum 3 marks

- New courses introduced – 1 mark each with a cap of maximum 2 marks

*(Documentary evidence should be enclosed for each of the claim.)*

### **3. Capacity Building of farmers and extension professionals (Maximum marks – 10)**

- Organized CAFT/Summer/Winter School/Other training programmes of minimum 21 days' duration 1 mark each
- Organised training courses with duration from 5 to less than 21 days for farmers /extension professionals 0.5 marks each

**Note:** Course Director will get 100% weightage and Coordinators will get 75% marks

*(Documentary evidence should be enclosed for each of the claim.)*

### **4. Research Publications (Maximum marks – 20)**

Research publications will be given marks according to the NAAS score of Journals:

- Best twenty research papers (An applicant must identify 20 best research papers published in refereed journals for allocation of score according to current NAAS journal rating (latest). The sum total of NAAS score for 20 publications will be multiplied by 0.2 to obtain Marks).
- First author and corresponding author will get full marks in a publication and rest of the authors 75% marks.

*(Documentary evidence should be enclosed for each of the claim.)*

### **5. Books, training manuals, extension bulletins, quality reference material (Maximum marks – 10)**

- Books/Monographs with ISBN number of minimum 100 pages published - Authored/ Edited. Award 1 Mark for each publication, if first author/editor or award 0.75 Mark for other authors with a cap of maximum 5 marks
- Book Chapters and Training Manuals – 0.5 Mark for each publication with a cap of maximum 3 marks.
- Popular articles/Extension folders – 0.25 Mark for each publication with a cap of maximum 5 marks
- Policy Papers/Policy Briefs – 0.5 Mark for each publication with a cap of maximum 2 marks.

*(Documentary evidence should be enclosed for each of the claim.)*

**6. Awards and Honors/Recognitions****(Maximum marks - 10)**

- Awards by ICAR, CSIR, DST, DBT, NRDC, Government Ministries etc. - 2 marks each
- National Level Institutional Awards - 2 marks each
- National and International level Professional Society and Academy (not covered above)  
Awards/Recognition - 1 each limited to maximum 5 marks
- Recognition such as Member of Taskforce/Policy making bodies at Institute/Zonal/National level - 1 mark each limited to maximum 2 marks
- Recognition such as Member of IRC/RAC/IMC/BOM/Extension Council/Executive Council etc. at Institute/Zonal/National level - 0.5 mark each limited to maximum 1 mark
- Office bearer (President/Secretary/Joint Secretary/Treasurer) of National/International professional societies - 0.5 marks each limited to maximum 1 mark
- Chief editor/Editor of NAAS rated Journals - 0.5 marks each limited to maximum 1

*(Documentary evidence should be enclosed for each of the claim.)*



**POST GRADUATE SCHOOL**  
**INDIAN AGRICULTURAL RESEARCH INSTITUTE**  
**NEW DELHI-110012**

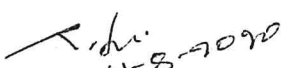
No. PGS-I/1-413/AC/2020

Dated the August 11, 2020

**ENDORSEMENT**

A copy of the proceedings of the 413<sup>th</sup> meeting of the Academic Council held on 27<sup>th</sup> July, 2020 is forwarded herewith for information and necessary action. Comments, if any, may please be sent to the PG School within 15 days from the date of issue of the Proceedings.

1. All the members of the Academic Council and concerned Officers (By name) \_\_\_\_\_
2. PS to Director General, ICAR, Krishi Bhawan, New Delhi-110001
3. PS to Deputy Director General (Edn.), ICAR, KAB-II, Pusa, New Delhi-110012
4. Master of Halls of Residences, P.G. School Hostel Office
5. Sr. Admn. Officer, IMC (For members of Board of Management)
6. PS to Director/PS to Dean & Joint Director (Edn.), IARI/PA to Registrar/PS to Comptroller
7. Technical Assistants, P G School (IT Cell/Stats. Cell)
8. Assistant Administrative Officer, Post Graduate School-II
9. Concerned Dealing Assistants, PGS-I

  
(Ratnesh Kumar)  
Registrar



**PROCEEDINGS OF THE 413<sup>th</sup> MEETING OF THE ACADEMIC COUNCIL HELD  
ONLINE ON JULY 27, 2020 AT 11.00 AM at IARI, NEW DELHI - 110012**

The following members attended the Online meeting:

1. Dr. A.K. Singh, Director, IARI	Chairman
2. Dr. (Ms.) Rashmi Aggarwal, Dean & JD (Edn.) (Additional Charge)	Vice Chairman
3. Dr. R.C. Agrawal, DDG (Edn.), ICAR (Additional Charge)	Member
4. Dr. H.S. Gupta, Former DG, BISA & Director, IARI	Member
5. Dr. S.N. Puri, Former VC, CAU, Pune	Member
6. Dr. P. Das, Former DDG (Ag. Extension), ICAR, New Delhi	Member
7. Dr. A.K. Sikka, Former DDG (NRM), IWMI, NASC Complex, Pusa	Member
8. Dr. A.K. Singh, Joint Director (Res.) (Additional charge), IARI	Member
9. Dr. V.K. Singh, Joint Director (Extn.) (Additional Charge)	Member
10. Dr. N.K. Singh, Director, NIPB (Additional Charge)	Member
11. Dr. Tauqueer Ahmed, Director, IASRI (Additional Charge)	Member
12. Dr. M.R. Dinesh, Director, IIHR, Bengaluru	Member
13. Dr. C.R. Mehta, Director, CIAE, Bhopal	Member
14. Dr. K.M. Manjaiah, Associate Dean, PG School	Member
15. Dr.(Ms.) Neera Singh, Professor, Agricultural Chemicals	Member
16. Dr.(Ms.) Alka Singh, Professor, Agricultural Economics	Member
17. Dr. D.K. Singh, Professor, Agricultural Engineering	Member
18. Dr. R.N. Padaria, Professor, Agricultural Extension	Member
19. Dr. V.K. Sehgal, Professor, Agricultural Physics	Member
20. Dr.(Ms.) Seema Jaggi, Professor, Agricultural Statistics	Member
21. Dr. T.K. Das, Professor, Agronomy	Member
22. Dr. Anil Dahuja, Professor, Biochemistry	Member
23. Dr. Anil Rai, Professor, Bioinformatics	Member
24. Dr. Sudeep Marwaha, Professor, Computer Application	Member
25. Dr. Subhas Chander, Professor, Entomology	Member
26. Dr. Soora Naresh Kumar, Professor, Environmental Sciences	Member
27. Dr. K.P. Singh, Professor, Floriculture and Landscape Architecture	Member
28. Dr. O.P. Awasthi, Professor, Fruit Science	Member
29. Dr. Vinod, Professor, Genetics and Plant Breeding	Member
30. Dr.(Mrs.) Radha Prasanna, Professor, Microbiology	Member
31. Dr. Debasis Pattanayak, Professor, MBB	Member
32. Dr. M.R. Khan, Professor, Nematology	Member
33. Dr.(Ms.) Veena Gupta, Professor, PGR	Member
34. Dr. V.K. Baranwal, Professor, Plant Pathology	Member
35. Dr. Madan Pal Singh, Professor, Plant Physiology	Member
36. Dr. S.K. Jha, Professor, Post Harvest Technology	Member
37. Dr. S.K. Chakrabarty, Professor, Seed Science & Technology	Member
38. Dr. S.P. Datta, Professor, SS&AC	Member
39. Dr. T.K. Behera, Professor, Vegetable Science	Member
40. Shri. V.R. Srinivasan, Comptroller	Member
41. Dr. A. Nagaraja, Senior Scientist, Fruit Science and Faculty Representative to the Academic Council	Member
42. Dr. Renu Pandey, Principal Scientist, Plant Physiology and Faculty Representative to the Academic Council	Member
43. Mr. Deep Chand, Incharge, IARI Library	Member
44. Mr. Jagmohan Singh, President, PGSSU	Member
45. Mr. Rahul Kumar, Students' Representative to the AC	Member
46. Mr. Ratnesh Kumar, Registrar & Joint Director (Admn.)	Member Secretary

The Directors of the following three ICAR Institute attended as Special Invitees:

1. Dr. Himanshu Pathak, Director, NIASM, Baramati
2. Dr. Arunava Pattanayak, Director, IIAB, Ranchi
3. Dr. P.K. Ghosh, Director, NIBSM, Raipur

Leave of absence was sought and granted to the following members:

1. Dr. Kuldeep Singh, Director, NBPGR, New Delhi
2. Dr. Man Singh, Project Director, WTC (Acting) & Professor, WST
3. Dr. Anil Sirohi, MOHR, PG Hostels

Dr. (Ms.) Rashmi Aggarwal, Dean and Joint Director (Edn.) extended a formal welcome to Dr. A.K. Singh, Director, IARI and Chairman, Academic Council. Thereafter, Dr. A.K. Singh, Chairman of Academic Council warmly welcomed the outside members of the Academic Council and all the members and special invitees present in the meeting. The Chairman also welcomed the new members of the Academic Council attending the meeting for the first time. He also placed on record the valuable contributions of the outgoing members of the Academic Council in strengthening the PG education at IARI.

#### **New members**

1. Dr. V.K. Singh, Joint Director (Extn.) (Additional Charge)
2. Dr. Anil Rai, Professor, Bioinformatics, IARI
3. Dr. S.K. Chakrabarty, Professor, Seed Science & Technology, IARI
4. Mr. Deep Chand, Incharge, IARI Library

#### **Outgoing Members:**

1. Dr. J.P. Sharma, Joint Director (Extn.), IARI
2. Dr. A.R. Rao, Professor, Bioinformatics, IARI
3. Dr. S.K. Jain, Professor, Seed Science & Technology, IARI
4. Mrs. Rajshree Anand, Incharge, IARI Library

Dr. A.K Singh, the Director and Chairman apprised the Academic Council about (i) Dr. Rattan Lal, IARI Alumnus winning the World Food Prize (2020), (ii) constitution of Dr. P.L. Gautam Committee for strengthening of IARI as Global University, (iii) special lectures arranged, (iv) Celebration of Foundation Day of ICAR-IARI Jharkhand; Inauguration of Guesthouse and dedicating of Administrative and Academic block in the name of Pandit Deen Dayal Upadhyaya, (v) achievements of IARI Faculty and students by winning 15 ICAR Awards and (vi) initiation of NAHEP-CAST Webinar Series for the benefit of students and faculty of IARI and all other AUs.

Thereafter, the following agenda items were taken up for consideration:

<b>Agenda Item No.</b>	<b>Description of Agenda Items</b>
<b>413.1</b>	Confirmation of the proceedings of the 412 <sup>th</sup> meeting of the Academic Council held on February 13, 2020
<b>413.2</b>	Action Taken Report on the Proceedings of the 412 <sup>th</sup> meeting of the Academic Council held on February 13, 2020
<b>413.3</b>	Consideration of the recommendations of the Standing Committee on Faculty & Discipline made in its meeting held on July 18, 2020
<b>413.4</b>	Consideration of the recommendations of the Standing Committee on Courses Curricula and Academic Affairs made in its meeting held on July 20, 2020
<b>413.5</b>	Online Academic activities implemented during Covid-19 pandemic
<b>413.6</b>	Finalization of number of M.Sc. seats at IARI-Jharkhand for the academic session



	2020-21
413.7	Finalization of number of M.Sc. seats at NIASM, NIBSM and IIAB for the academic session 2020-21
413.8	The proposal on the nomination of two distinguished IARI alumni and world Food Prize winners viz., Dr. Sanjaya Rajaram and Dr. Rattan Lal for the Conformation of the degree of Doctorate of Science ( <i>Honoris causa</i> ).
413.9	Any other item with the permission of the Chair

**Agenda Item No. 413.1: Confirmation of the Proceedings of the 412<sup>th</sup> meeting of the Academic Council held on 13.2.2020**

The Chairman called for the comments, if any, from the members of the Academic Council on the proceedings of the 412<sup>th</sup> meeting. Since no comment was there, the proceedings of the previous meeting was confirmed by the house.

**Agenda Item No. 413.2: Report on action taken on the proceedings of the 412<sup>th</sup> meeting of the Academic Council held on 13.2. 2020**

Dean and Joint Director (Education) presented the action taken report which was approved by the house. On the issue of switching over from Trimester to Semester system at IARI, New Delhi, the Academic Council unanimously approved the change for its implementation from the current Academic Session 2020-21.

**Agenda Item No. 413.3 Consideration of the recommendations of the Standing Committee on Faculty and Discipline made in its meeting held on 18.7.2020**

The Academic Council discussed the recommendations of the Standing Committee and approved the following:

**413.3.1 Induction of the following 18 Scientists into PG Faculty in their respective Disciplines at IARI (9) and for IARI PG outreach Programme at CIAE (3) and IIHR (6) as they met the qualifications/eligibility criteria as per the prescribed guidelines.**

S. No.	Name & Designation	Discipline
<b>IARI, New Delhi</b>		
1	Dr. Rajkumar Dhakar, Scientist (SS)	Agricultural Physics
2	Dr. Aditya K.S., Scientist	Agricultural Economics
3	Dr. Harish Kumar H.V, Scientist	-do-
4	Dr. Dipaka Ranjana Sena, Principal Scientist	Agricultural Engineering (SWCE)
5	Mr. Anooj S, Scientist	Entomology
6	Dr. Devaramane Raghavendra, Scientist (SS)	-do-
7	Dr. Manimaran B, Scientist	Nematology
8	Dr. Gore Padmavati Ganpat, Scientist	Plant Genetic Resources
9	Dr. Selvakumar R, Scientist	Vegetable Science
<b>IARI PG outreach Programme at CIAE, Bhopal</b>		
1	Dr. Sawant Chetan Kumar P, Scientist	Agricultural Engineering (FPE)
2	Dr. M. Muthamil Selvan, Senior Scientist	-do-

3	Dr. Ravindra Naik, Principal Scientist	Agricultural Engineering (APS)
<b>IARI PG outreach Programme at IIHR, Bengaluru</b>		
1	Dr. R. Senthil Kumar, Principal Scientist	Fruit Science
2	Dr. Sridhar Gutam, Senior Scientist	Plant Physiology
3	Dr. Rajendiran. S, Scientist	Soil Science & Agricultural Chemistry
4	Dr. Ponnamm Naresh, Scientist	Vegetable Science
5	Dr. Meenu Kumari, Scientist	-do-
6	Dr. V. Sankar, Principal Scientist	-do-

**413.3.2 Recognition of the following 25 faculty members of IARI as Research guides for M.Sc. guidance in their respective Disciplines as they met the prescribed requirements/eligibility criteria for becoming the research guides:**

S. No.	Name & Designation	Discipline
1	Dr. Prashant Kaushik, Scientist	Agricultural Chemicals
2	Dr. Abhishek Mandal, Scientist	-do-
3	Dr. Suman Manna, Scientist	-do-
4	Dr. Neethu Narayanan, Scientist	-do-
5	Dr. Akriti Sharma, Scientist	Agricultural Economics
6	Dr. S.K. Srivastava, Scientist	-do-
7	Dr. Sukanya Barua, Scientist	Agricultural Extension
8	Dr. Arun Kumar T.V., Scientist	Agricultural Engineering (APS)
9	Dr. G.A. Rajanna, Scientist	Agronomy
10	Dr. Sneha Narwal, Principal Scientist	Biochemistry
11	Dr. Soumen Pal, Scientist	Computer Application
12	Dr. Muraleedhar S. Aski, Scientist (SS)	Genetics and Plant Breeding
13	Dr. M.G. Mallikarjuna, Scientist	-do-
14	Dr. Niranjana M, Scientist	-do-
15	Dr. Haritha Bollinedi, Scientist	-do-
16	Dr. Ganapati Mukri, Scientist	-do-
17	Dr. Rama Prashaad G, Scientist	-do-
18	Dr. Kiran B. Gaikwad, Scientist(SS)	-do-
19	Dr. Ranjith Kumar Ellur, Scientist	-do-
20	Dr. Pranita Jaiswal, Principal Scientist	Microbiology
21	Dr. Subrata Nath Bhowmik, Principal Scientist	-do-
22	Dr. D.P. Semwal, Principal Scientist	Plant Genetic Resources
23	Dr. Amrita Das, Scientist	Plant Pathology
24	Dr. Basavaraj, Scientist	-do-
25	Dr. Zakir Hussain, Principal Scientist	Vegetable Science

**413.3.3 Non-Recognition of Dr. Indu Chopra, Scientist (SS) in the Discipline of Agricultural Chemicals as she did not meet the prescribed requirement of three research publications (short of one research paper).**



**413.3.4 Recongnition** of following Three (3) Faculty members for IARI PG outreach programme at CIAE-Bhopal & Six (7) Faculty Members at IIHR-Bengaluru as Research Guides for Ph.D. guidance **as a special case with one time relaxation** (but not to be cited in future) due to paucity of Research Guides at these Institutes to run the Ph.D. programme.

S. No.	Name & Designation	Discipline	Recommended for Research Guide with one time Relaxations
<b>IARI PG outreach Programme at CIAE, Bhopal</b>			
1	Dr. Vinod Kumar Bhargav Principal Scientist	Agricultural Engineering (FMP)	Relaxation of 2 M.Tech. students guidance
2	Dr. Chandra Kant Saxena Senior Scientist	Agricultural Engineering (SWCE)	-do-
3	Dr. Ranjay Kumar Singh Principal Scientist	Agricultural Engineering (SWCE)	Relaxation of one year teaching & 2 M.Tech. students guidance
<b>IARI PG outreach Programme at IIHR, Bengaluru</b>			
1	Dr. H.S. Oberoi Principal Scientist, Microbiology	Microbiology (Sought Research guide in PHT)	Guided one Ph.D. student and approved for the Discipline of PHT as per the guidelines of 410 <sup>th</sup> Meeting of Academic Council held on 25.7.2019
2	Dr. Ranjitha.K Senior Scientist, Microbiology	Microbiology (Sought Research guide in PHT)	Relaxation of One M.Sc. student guidance. Approved for the Discipline of PHT as per the guidelines of 410 <sup>th</sup> Meeting of Academic Council held on 25.7.2019
3	Dr. T. Usha Bharathi Scientist	Floriculture and Landscape Architecture	Guided 2 M.Sc. studensts. Relaxation of 2 year teaching
4	Dr. G.R.Smitha Scientist	-do-	Guided 2 M.Sc. studensts. Relaxation of 2 year teaching
5	Dr. Tejaswani Prakash Principal Scientist	Genetics (Sought Research guide in Floriculture and Landscape Architecture Discipline)	Approved the change of Discipline from Genetics to Floriculture & Landscape Architecture as per the guidelines of 410 <sup>th</sup> meeting of Academic Council held on 25.7.2019
6	Dr. Gobindacharya, Principal Scientist	Vegetable Science	Approved for Research Guide as he has already guided one M.Sc. and One Ph.D. student
7	Dr. S. Shankara Hebbar, Principal Scientist	Agronomy (Sought Research guide in Vegetable Science Discipline)	Keeping in view of his vast experience in Vegetable Science, the Academic Council approved his recognition in the Discipline of Vegetable Sceince

**413.3.5 Non-Recongnition** of Dr. Sandip Mandal, Scientist as Research Guide as he did not meet the prescribed requirement of eligibility criteria for becoming Research Guide.

S. No.	Name & Designation	Discipline	Institute	Reason for declining
1	Dr. Sandip Mandal, Scientist	Agricultural Engineering (FMP)	CIAE	Short of four year teaching and 2 M.Tech. student guidance

**413.3.6 Induction** of the following Three (3) Scientists posted at **IARI-Jharkhand** into PG Faculty in their respective Disciplines, as they met the qualifications/eligibility criteria as per the prescribed guidelines.

S. No.	Name & Designation	Discipline
1	Mr. Monu Kumar, Scientist	Genetics & Plant Breeding
2	Mr. Santosh Kumar, Scientist	Genetics & Plant Breeding
3	Ms. Preeti Singh, Scientist	Soil Science and Agricultural Chemistry

**413.3.7a**      **Recognition** of the following Six (6) Scientists posted at IARI-Jharkhand, Nine (9) Scientists posted at ICAR-Research Complex for Eastern Region Farming System Research Centre for Hill and Plateau Region (ICAR RCER FSRCHPR), Ranchi and Three (3) Scientists posted at Central Rainfed Upland Rice Research Station, ICAR-National Rice Research Institute (CRRURRS, NRRI), Hazaribag as **Faculty Member and also as Research Guide for M.Sc. guidance as a special case with one time relaxation (but not to be cited in future) to run the programme at IARI-Jharkhand.**

S. No.	Name & Designation	Discipline	Recommended for Research Guide with one time relaxation
<b>Scientists posted at IARI-Jharkhand</b>			
1	Dr. Priya Ranjan Kumar Principal Scientist	Seed Science and Technology	He was a Faculty Member at IARI and taught courses at IARI
2	Dr. Manoj Chaudhary Scientist (Senior Scale)	Soil Science and Agricultural Chemistry	He had taught courses at RLBCAU, Jhansi
3	Dr. Dipak Kumar Gupta Scientist	Environmental Science	Relaxation of 3 years teaching
4	Dr. Krishna Prakash Scientist	Spices Plantation Medicinal and Aromatic Plants (Horticulture)	--do--
5	Dr Himani Priya Scientist	Agricultural Microbiology	--do--
6	Dr. Anima Mahato Scientist	Genetics & Plant Breeding	--do--
<b>ICAR-Research Complex for Eastern Region Farming System Research Centre for Hill and Plateau Region (ICAR RCER FSRCHPR), Ranchi</b>			
1	Dr. Arun Kumar Singh Head	Vegetable Science	Relaxation of one year teaching
2	Dr. Rabi Sankar Pan Principal Scientist	-do-	--do--
3	Dr. B.K. Jha Principal Scientist	Horticulture	--do
4	Dr. Bikash Das Principal Scientist	Fruit Science	-do-
5	Dr. Sushanta Kumar Naik Principal Scientist	-do-	--do--
6	Dr. Santosh S. Mali Senior Scientist	Agricultural Engineering	--do--
7	Dr. P. Bhavana Senior Scientist	Genetics & Plant Breeding	--do--
8	Dr. Jaipal Singh Choudhary Senior Scientist	Entomology	--do--
9	Dr. Mahesh Kumar Dhakar Scientist	Fruit Science	Relaxation of 3 years teaching



CRRURRS, NRRI, Hazaribag			
1	Dr. Somnath Roy Scientist	Genetics & Plant Breeding	Relaxation of 3 years teaching
2	Dr. Amrita Banerjee Scientist	Plant Pathology	-do-
3	Dr. Bibhash Chandra Verma Scientist	Soil Science and Agricultural Chemistry	-do-

**413.3.7b** The following two Scientists who are eligible to be inducted as Faculty Members but Not-Recommended for Research Guidance as they did not meet the prescribed research paper requirements for becoming the Research Guide.

S. No.	Name & Designation	Discipline	Institute	Reason for declining
1	Dr. V.K. Yadav Scientist	Agricultural Extension	ICAR RCER FSRCHPR, Ranchi	Short of two Research Papers
2	Dr. Pankaj Kumar Sinha Scientist	Agricultural Extension	IARI-Jharkhand	Short of Two research papers

**413.3.8 Induction** of the following Scientists of NIASM- Baramati (3), NIBSM- Raipur (6) and IIAB- Ranchi (5) into PG Faculty in their respective Disciplines as they met the qualifications/eligibility criteria as per prescribed guidelines.:

S. No.	Name & Designation	Discipline
<b>NIASM, Baramati</b>		
1	Dr. Vanita N.S., Scientist SS	Plant Pathology
2	Dr. Aliza Pradhan, Scientist	Environmental Sciences
3	Dr. Boraiah K.M., Scientist	Genetics & Plant Breeding
<b>NIBSM, Raipur</b>		
1	Dr. Lalit Laxman Kharbikar, Scientist	Molecular Biology and Biotechnology
2	Dr. Sridhar Jandrajupalli, Scientist	Entomology
3	Dr. Mallikarjuna J, Scientist	Entomology
4	Dr. Lata Jain, Sr. Scientist, Veterinary Microbiology	<i>Other faculty</i>
5	Dr. Ashish Marathe, Scientist	Biochemistry
6	Dr. P. Mooventhana, Scientist	Agricultural Extension
<b>IIAB, Ranchi</b>		
1	Mr. Shambhu Krishan Lal, Scientist	Molecular Biology and Biotechnology
2	Mr. Kishore Uttam Rao T., Scientist	-do-
3	Dr. Madan Kumar, Scientist	Plant Physiology
4	Dr. Soumen Naskar, Sr. Scientist Animal Genetics & Breeding	<i>Other faculty</i>
5	Dr. Sanjay Kumar Gupta, Scientist (SS) Fisheries Resource Management	<i>Other faculty</i>

**413.3.9 Recognition of the following scientists of NIASM- Baramati (1), NIBSM- Raipur (5) and IIAB- Ranchi (4) for recognition as Faculty Member and also as Research Guide for both M.Sc and Ph.D. guidance in their respective Disciplines as they met the prescribed requirements.**

S. No.	Name & Designation	Discipline
<b>NIASM, Baramati</b>		
1	Dr. Himanshu Pathak, Director	Environmental Sciences
<b>NIBSM, Raipur</b>		
1	Dr. P.K.Ghosh, Director	Agronomy
2	Dr. Pankaj Kaushal, Joint Director (Research)	Genetics and Plant Breeding
3	Dr. Anil Dixit, Principal Scientist	Agronomy
4	Dr. R.K. Murali Baskaran, Principal Scientist	Entomology
5	Dr. Kailash Chander Sharma, Senior Scientist	-do-
<b>IIAB, Ranchi</b>		
1	Dr. Arunava Pattanayak, Director	Genetics and Plant Breeding
2	Dr. Tilak Raj Sharma, Joint Director (Research)	Molecular Biology and Biotechnology
3	Dr. Anil Kumar Singh, Sr. Scientist	-do-
4	Dr. Biplab Sarkar, Sr. Scientist	-do-

**413.3.10 Recognition of the following Scientists of NIASM- Baramati (6), NIBSM- Raipur (5) and IIAB- Ranchi (6) as Faculty Member and also as Research Guide for M.Sc. guidance as a special case with one time relaxation (but not to be cited in future) to run the programme at these Institutes from the current Academic Session 2020-21.**

S. No.	Name & Designation	Discipline	Recommended for Research Guide with Relaxation
<b>NIASM, Baramati</b>			
1	Dr. Jagdish Rane Principal Scientist	Plant Physiology	Relaxation of 2 years teaching
2	Dr. Mahesh Kumar Scientist	-do-	Relaxation of 3 years teaching
3	Dr. Goraksha C.W. Sr. Scientist	Agricultural Engineering (FPE)	Relaxation of One year teaching
4	Dr. Dhananjaya D.N. Sr. Scientist	Soil & Water Conservation Engineering	Relaxation of One year teaching
5	Dr. Kamlesh Kumar Meena Sr. Scientist	Environmental Sciences	Relaxation of 2 years teaching
6	Dr. Ajay Kumar Singh Sr. Scientist	-do-	-do-
<b>NIBSM, Raipur</b>			
1	Dr. S.K. Ambast Principal Scientist	Agricultural Engineering (SWCE)	Relaxation of 2 years teaching
2	Dr. S.K. Sharma Pr. Scientist	Microbiology	-do-
3	Dr. P.N. Sivalingam Sr. Scientist	Molecular Biology and Biotechnology	-do-
4	Dr. Vinay Kumar Scientist	-do-	Relaxation of 3 years teaching



5	Dr. S.K. Jain Pr. Scientist	Plant Pathology	Relaxation of one year teaching
<b>IIAB, Ranchi</b>			
1	Dr. Vijai Pal Bhadana Principal Scientist	Genetics and Plant Breeding	Relaxation of one year teaching
2	Dr. Sudhir Kumar Scientist	Genetics and Plant Breeding	Relaxation of 3 years teaching
3	Dr. Sujit Kumar Bishi Scientist (SS)	Biochemistry	-do-
4	Dr. Binay Kumar Singh Sr. Scientist	Molecular Biology and Biotechnology	Relaxation of 2 years teaching
5	Dr. Avinash Pandey Scientist	Genetics and Plant Breeding	Relaxation of One year teaching
6	Dr. Sujatha T.P. Scientist	Molecular Biology and Biotechnology	Relaxation of 3 years teaching

**Agenda Item No. 413.4 *Consideration of the Recommendations of the Standing Committee on Course Curricula and Academic Affairs made in its meeting held on 20.7.2020***

The Academic Council discussed the recommendations of the Standing Committee and approved the following:

**413.4.1** As per the directives of the 411<sup>th</sup> Academic Council meeting held on 14.11.2019, the revised guidelines of the IARI Merit Medal recommended by the Standing Committee was discussed in detail and the Academic Council approved the guidelines with some modifications.

<b>Existing Criteria</b>	<b>Revised Criteria Approved</b>
<p><b>13.1.1 Criteria for assessment of comparative merit</b></p> <p>(i) The weightage given to the different aspects for consideration of the award of IARI Merit Medal is given below:</p> <p><b>For M.Sc./M.Tech. (60+30+10 = 100 Marks)</b></p> <p>(a) OGPA : 60 marks (OGPA 10= 60 marks)</p> <p>(b) Thesis presentation &amp; discussion: 30 marks</p> <p>(c) Research Papers and patents etc. (Maximum 10 marks):</p> <p>(i) No. of research papers accepted/published in journals with NAAS rating:</p> <p>NAAS rating &lt;6.0 : 4 marks each  NAAS rating 6.0 : 6 marks each  NAAS rating &gt;6.0 : Marks equal to NAAS rating</p> <p>Patent filed/Software or Prototypes registered/models/methods/verities/IPR options :4 marks each</p>	<p><b>13.1.1 Criteria for assessment of comparative merit</b></p> <p>(i) The weightage given to the different aspects for consideration of the award of IARI Merit Medal is given below:</p> <p><b>For M.Sc./M.Tech. (50+30+20 = 100 Marks)</b></p> <p>(a). OGPA : 50 marks (OGPA 10= 50 marks)</p> <p>(b). Thesis presentation &amp; discussion: 30 marks</p> <p>(c). Research Papers (Maximum 10 marks):</p> <p>No. of research papers accepted/ published in journals with NAAS rating</p> <ul style="list-style-type: none"> <li>• NAAS rating 5.00-6.00: 4 marks (Only one paper considered)</li> <li>• NAAS rating 6.01-6.99: 6 marks each</li> <li>• NAAS rating ≥7.00: 10 marks each</li> </ul> <p>(d). Special achievements, Awards &amp; Co-Curricular activities (Maximum 10 marks):</p> <p>(i). Measurable and verifiable special achievements/output (Maximum 5 marks):</p> <ul style="list-style-type: none"> <li>• Patent filed/varieties (5 marks each)</li> <li>• Software or Prototypes registered</li> </ul>

	<p>/Models/Process /Methods/Sequences documented (2.5 marks each)</p> <p>(ii). Awards and recognitions from National/International Professional Societies/Govt. bodies (Maximum 2.5 Marks)</p> <ul style="list-style-type: none"> <li>• Best Poster award (National): 2 marks each</li> <li>• Best poster award (International): 2.5 marks each</li> <li>• Professional Society award/Govt. bodies award: 2.5 marks each</li> </ul> <p>(iii). Co-Curricular activities (Maximum 2.5 Marks)</p> <ul style="list-style-type: none"> <li>• Paper/poster presentation in International Conference abroad: 2.5 marks each</li> <li>• Oral Paper presentation in National/International Conference in India: 2.5 marks each</li> </ul>
<p><b>For Ph.D. (30+40+30 = 100 marks)</b></p> <p>(a) OGPA : 30 marks (OGPA 10=30 marks)</p> <p>(b) Thesis presentation &amp; discussion : 40 marks</p> <p>(c) Research Papers and patents etc. (Maximum 30 marks):</p> <p>(i). No. of research papers accepted/published in journals with NAAS rating:</p> <p>NAAS rating &lt;5.00: 4 marks each</p> <p>NAAS rating 5.01-5.99: 6 marks each</p> <p>NAAS rating 6.00-6.99: 8 marks each</p> <p>NAAS rating 7.00-7.99: 10 marks each</p> <p>NAAS rating 8.00: 10 marks + additional 2 mark each for every unit increase in NAAS rating</p> <p>(ii) Patent filed/Software or Prototypes registered/models/methods/verities/IPR options: 4 marks each</p>	<p><b>For Ph.D. (20+30+50 = 100 marks)</b></p> <p>(a). OGPA : 20 marks (OGPA 10=20 marks)</p> <p>(b). Thesis presentation &amp; discussion : 30 marks</p> <p>(c). Research Papers (Maximum 40 marks):</p> <p>No. of research papers accepted/ published in journals with NAAS rating NAAS rating</p> <p>5.00 – 6.99: 8 marks each</p> <p>NAAS rating 7.00– 7.99:12 marks each</p> <p>NAAS rating 8.00–8.99:16 marks each</p> <p>NAAS rating 9.00–9.99:20 marks each</p> <p>NAAS rating ≥10.00:30 marks each</p> <p>(d). Special achievements, Awards &amp; Co-Curricular activities (Maximum 10 marks):</p> <p>(i). Measurable and verifiable special achievements/output (Maximum 5 marks):</p> <ul style="list-style-type: none"> <li>• Patent filed/varieties (5 marks each)</li> <li>• Software or Prototypes registered /Models/Process /Methods/Sequences documented (2.5 marks each)</li> </ul> <p>(ii). Awards and recognitions from National/International Professional Societies/Govt. bodies (Maximum 2.5 Marks)</p> <ul style="list-style-type: none"> <li>• Best Poster award (National): 2 marks each</li> <li>• Best poster award (International): 2.5 marks each</li> <li>• Professional Society award/Govt. bodies award: 2.5 marks each</li> </ul> <p>(iii). Co-Curricular activities (Maximum 2.5 Marks)</p> <ul style="list-style-type: none"> <li>• Paper/poster presentation in International Conference abroad: 2.5 marks each</li> <li>• Oral Paper presentation in National/International Conference in India: 2.5 marks each</li> <li>• Fellowship for abroad visit/training (other than that for a conference): 2.5 marks each</li> </ul>

*Note:* The student should be the First author in all the publications/products etc. claimed for the award.



**413.4.2: Introduction of Ph.D. programme in Development Economics and Policy at NIAP, New Delhi**

Initiation of Ph.D. programme in **Development Economics and Policy at NIAP**, New Delhi was deliberated and the Academic Council was of the opinion that the proposal may be developed jointly by NIAP and Division of Agricultural Economics, IARI for further consideration of Standing Committee and Academic Council.

**413.4.3** The Academic Council discussed the proposal for the revision in **Best Extension Scientist Award** for outstanding contribution in Agricultural Extension instituted during 2019-2020. After detailed deliberations, the Academic Council approved the revised criteria for allocation of marks:

S.N.	Criteria	Marks	Weightage
1	Research achievements	30	80%
2	Impact of technology	10	
3	Teaching innovations and achievements	10	
4	Capacity building of farmers and extension professionals	10	
5	Research Publications	20	
6	Books, manuals, bulletins, quality reference material	10	
7	Awards and Honors/Recognition	10	
	<b>Total marks</b>	<b>100</b>	
	Weightage for Judging Committee		20%

**Agenda Item No. 413.5      Online Academic activities implemented during Covid -19 pandemic**

The Academic Council ratified all the PG School online academic activities implemented during the Covid-19 lockdown period and also permitted to continue the online work.

Following are the major online activities implemented by PG School:

- Online teaching of courses
- Online registration and fee payment
- Webinar series on topical interest
- Upgradation of PGS Online management system
- Open book examination for comprehensive exam and III-Trimester examination (2019-20 session)
- During II-Trimester (2019-20 session), awarding of grades based on midterm exam marks/assignments.
- Online mode of - Thesis submission & evaluation, pre-qualifying & Qualifying exam, Final Viva Voce Exam, Credit seminar, ORW presentation and thesis seminar.
- Online meeting of Standing Committees, Academic Council, Professors meeting, Advisory Committee, and Board of Studies.
- In some special cases, considered changes in approved ORWs without affecting Merit Medal nomination guidelines.

Keeping in view the mandate of the IARI-Jharkhand, the Academic Council approved 32 seats in 12 Disciplines for M.Sc. programme for the academic session 2020-21. It was also decided that senior faculty members from IARI to be included in the student Advisory Committees.

S No.	Discipline	No. of Faculty & Guides Approved at RS-NRRI, Hazaribag	No. of Faculty & Guides approved at ICAR-RCER Research Centre, Ranchi	No. of Faculty & Guides Approved at IARI-Jharkhand Hazaribag	Total No. of Faculty & Guides Approved with relaxations as a special case	No. of M.Sc. Seats Approved
<b>Present Disciplines</b>						
1	Agronomy	0	0	0	0	2*
2	Genetics and Plant Breeding	1	1	1 Guide (2 Faculty)	3 (2 Faculty)	6
3	Soil Science and Agricultural Chemistry	1	1	1 (1 Faculty)	3 (1 Faculty)	4
4	Vegetable Science	0	2	0	2	3
<b>Additional Disciplines approved</b>						
5	Agricultural Engineering (Soil & water conservation Engineering)	0	1	0	1	1
6	Agricultural Extension	0	0 (1 Faculty)	0 (1 Faculty)	0 (2 Faculty)	3*
7	Environmental Sciences	0	0	1	1	2
8	Entomology	0	1	0	1	2
9	Fruit Science	0	3	1	4	3
10	Microbiology	0	0	1	1	2
11	Plant Pathology	1	0	0	1	2
12	Seed Science and Technology	0	0	1	1	2
	<b>Total</b>	<b>3</b>	<b>9 (1 Faculty)</b>	<b>6 (4 Faculty)</b>	<b>18 (5 Faculty)</b>	<b>32</b>

\*Guides are to be allotted from IARI, New Delhi

**Agenda Item No. 413.7 Finalization of M.Sc. seats at NIASM, NIBSM and IIAB**

The Academic Council accepted the decision of the DG ICAR and Secretary DARE taken in the ICAR Directors meeting held on May 1, 2020 to initiate the academic programme in collaboration with IARI at NIASM, Baramati, NIBSM, Raipur and IIAB, Ranchi.

As a special case, the Academic Council approved the recommendations of Standing Committee to induct/recognise scientists from these institutions as Faculty/Research guides with one time relaxation (Agenda No. 413.3.8 to 413.3.10) and the number of M.Sc. seats in different Disciplines for the current academic session 2020-21.

The Academic Council decided that the students to be admitted during the current session will be accommodated at these institutes and the teaching to be initiated by the faculty of these institutions in collaboration with IARI. Regarding the fellowship, the PG School shall compile and submit the demand to Education Division of ICAR.

**NIASM, Baramati**

S No.	Discipline	No of Faculty Approved	No. of Faculty & Guides approved	No. of M.Sc. seats approved
1	Agricultural Engineering		2*	2
2	Environmental Sciences	1	1 + 2* = 3	3
3	Genetics & Plant Breeding	1		
4	Plant Pathology	1		
5	Plant Physiology		2*	2
	<b>Total</b>	<b>10</b>	<b>7</b>	<b>7</b>

**NIBSM, Raipur**

S No.	Discipline	No of Faculty Approved	No. of Faculty & Guides approved	No. of M.Sc. seats Approved
1	Agricultural Engineering(SWCE)		1*	
2	Agricultural Extension	1		
3	Agronomy		2	2
4	Biochemistry	1		
5	Entomology	2	2	2
6	Genetics & Plant Breeding		1	1
7	Microbiology		1*	1
8	Molecular Biology and Biotechnology	1	2*	2
9	Plant Pathology		1*	1
10	<i>Other faculty</i>	1		
	<b>Total</b>	<b>6</b>	<b>10</b>	<b>9</b>

**IIAB, Ranchi**

S No.	Discipline	No of Faculty Approved	No. of Faculty & Guides approved	No. of M.Sc. seats Approved
1	Biochemistry		1*	1
2	Genetics & Plant Breeding		1 + 2* = 3	4
3	Plant Physiology	1		5
4	Molecular Biology and	2	3 + 3* = 6	



	Biotechnology			
5	Other faculty	2		
	<b>Total</b>	<b>5</b>	<b>10</b>	<b>10</b>

*\*Approved as Research Guides for M.Sc. guidance as a special case with one time relaxation (but not to be cited in future)*

**Agenda Item No. 413.8** *The proposal on the nomination of two distinguished IARI alumni and world Food Prize winners viz., Dr. Sanjaya Rajaram and Dr. Rattan Lal for the Conformation of the degree of Doctorate of Science (Honoris causa).*

On the recommendation of the special Committee constituted by the Director and Chairman, Academic Council, the Academic Council approved the proposal for confirmation of degree of Doctorate of Science (*Honoris causa*) to two eminent IARI alumni namely Dr. Sanjaya Rajaram and Dr. Rattan Lal, the World Food Prize winners who have distinguished themselves in the field of science .


**Agenda Item No. 413.9** *Any other item with the permission of the Chair.*

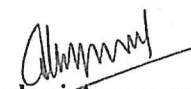
413.9.1 The Academic Council approved the revised proposal received from the Discipline of Molecular Biology and Biotechnology (MBB) recommending Dr. K.C.Bansal, Former, Director, NBPGR as Adjunct Faculty in view of his vast experience in the subject.


413.9.2 The Academic Council deliberated on several issues concerning how to improve the visibility and standard of IARI; IARI attaining the status of Global University; IARI as a national leader to train students and faculty of SAUs; emphasis on practical's & hands on training during Covid-19 pandemic; relevance of Ph.D. students research in the context of national policies; balance between basic and applied research, and use of digital technologies in the field of agricultural sciences.

The Academic Council authorised the Director and Chairman, Academic Council to constitute a Committee under the Chairmanship of Dean and Joint Director (Edn.) to visit some of the leading institutions in the country and to come up with recommendations on how the IARI could attain a Global University status.

The meeting ended with the vote of thanks to the Chair.

  
(Ratnesh Kumar)  
Member-Secretary

  
(Rashmi Aggarwal)  
Vice Chairperson

  
(A.K. Singh)  
Chairman





**POST GRADUATE SCHOOL**  
**INDIAN AGRICULTURAL RESEARCH INSTITUTE**  
**NEW DELHI-110012**

No. PGS-I/1-415/AC/2021

October 25, 2021

**ENDORSEMENT**

A copy of the proceedings of the 415<sup>th</sup> meeting of the Academic Council held on 1<sup>st</sup> October, 2021 is forwarded herewith for information and necessary action. Comments, if any, may please be sent to the PG School within 15 days from the date of issue of the Proceedings.

1. All the members of the Academic Council (By name \_\_\_\_\_)
2. PS to Director General, ICAR, Krishi Bhawan, New Delhi-110001
3. PS to Deputy Director General (Edn.), ICAR, KAB-II, Pusa, New Delhi-110012
4. Master of Halls of Residences, P.G. School Hostel Office
5. Sr. Admn. Officer, IMC (For members of Board of Management)
6. PS to Director/PS to Dean & Joint Director (Edn.), IARI/PS to Registrar/PS to Comptroller
7. Technical Assistants, P G School (IT Cell/Stats. Cell)
8. Assistant Administrative Officer, Post Graduate School-II
9. Concerned Dealing Assistants, PGS-I

  
(Pushpendra Kumar)  
Registrar



**PROCEEDINGS OF THE 415<sup>th</sup> MEETING OF THE ACADEMIC COUNCIL (Online Mode) HELD ON OCTOBER 1, 2021 AT 11.00 AM AT IARI, NEW DELHI - 110012**

The following members attended online meeting:

1. Dr. A.K. Singh, Director, IARI	Chairman
2. Dr. Rashmi Aggarwal, Dean & JD (Edn.) (Additional Charge)	Vice Chairperson
3. Dr. P. Das, Former DDG (Ag. Extension), ICAR, New Delhi	Member
4. Dr. A.K. Sikka, Former DDG (NRM) IWMI, NASC Complex, Pusa	Member
5. Prof. B. D. Singh, Professor Emeritus, BHU, Varanasi	Member
6. Dr. Seema Jaggi ADG (HRD), ICAR represented DDG(Edn.)	Member
7. Dr. Rajender Parsad, Director, IASRI	Member
8. Dr. C.R. Mehta, Director, CIAE, Bhopal	Member
9. Dr. Ajit Kumar Shashany, Director, NIPB	Member
10. Dr. B.N. Shrinivasa Murthy, Director, IIHR, Bengaluru (Additional Charge)	Member
11. Dr. Ashok Kumar, Director, NBPGR (Additional Charge)	Member
12. Dr. B.S. Tomar, JD (Extn.) and Professor, Veg. Science (Additional Charge )	Member
13. Dr. Man Singh, Project Director, WTC(Additional Charge) and Professor, WST	Member
14. Dr. K.M. Manjaiah, Associate Dean, PG School	Member
15. Dr. Neera Singh, Professor, Agricultural Chemicals	Member
16. Dr. D.K. Singh, Professor, Agricultural Engineering	Member
17. Dr. R.N. Padaria, Professor, Agricultural Extension	Member
18. Dr. V.K. Sehgal, Professor, Agricultural Physics	Member
19. Dr. Cini Varghese, Professor, Agricultural Statistics	Member
20. Dr. T.K. Das, Professor, Agronomy	Member
21. Dr. Anil Rai, Professor, Bioinformatics	Member
22. Dr. Alka Arora, Professor, Computer Application	Member
23. Dr. Debjani Dey, Professor, Entomolgy	Member
24. Dr. Soora Naresh Kumar, Professor, Environmental Sciences	Member
25. Dr. K.P. Singh, Professor, Floriculture and Landscape Architecture	Member
26. Dr. O.P. Awasthi, Professor, Fruit Science	Member
27. Dr. Vinod, Professor, Genetics and Plant Breeding	Member
28. Dr. Radha Prasanna, Professor, Microbiology	Member
29. Dr. Debasis Pattanayak, Professor, MBB	Member
30. Dr. M.R. Khan, Professor, Nematology	Member
31. Dr. Veena Gupta, Professor, PGR	Member
32. Dr. V.K. Baranwal, Professor, Plant Pathology	Member
33. Dr. Madan Pal Singh, Professor, Plant Physiology	Member
34. Dr. V.R. Sagar, Professor, Post Harvest Technology(Additional Charge)	Member
35. Dr. S.K. Chakrabarty, Professor, SST (Additional Charge)	Member
36. Dr. S.P. Datta, Professor, SS&AC	Member
37. Dr. Anil Sirohi, MOHR, P.G. Hostels	Member
38. Dr. V.R. Srinivasan, Comptroller	Member
39. Dr. A. Nagaraja, Principal Scientist, Fruit Science and Faculty Representative to the Academic Council	Member
40. Dr. Renu Pandey, Principal Scientist, Plant Physiology and Faculty Representative to the Academic Council	Member
41. Mr. Deep Chand, Incharge, IARI Library	Member
42. Mr. Rahul Kumar, President, PGSSU	Member
43. Mr. Manu S.M., Students' Representative to the AC	Member
44. Mr. Pushpendra Kumar, Registrar	Member Secretary

The following members could not attend the meeting:

Dr. C. Devakumar, Former ADG, ICAR (Outside Member)	Member
Dr. (Mrs.) Alka Singh, Professor, Agricultural Economics	Member
Dr. Anil Dahuja, Professor, Biochemistry	Member

Dr. (Ms.) Rashmi Aggarwal, Dean and Joint Director (Edn.) extended a formal welcome to Dr. A.K. Singh, Director, IARI and Chairman, Academic Council. Thereafter, Dr. A.K. Singh, Chairman of Academic Council warmly welcomed the outside members of the Academic Council and all the members present in the meeting. The Chairman also welcomed the new members of the Academic Council attending the meeting for the first time:

**New members**

1. Dr. Ashok Kumar, Director, NBPGR (Additional Charge)
2. Dr. B.N. Shrinivasa Murthy, Director, IIHR Bengaluru
3. Dr. B.S. Tomar, Joint Director(Extension) and Professor, Vegetable Science (additional charge)
4. Dr. (Mrs.) Cini Varghese, Professor, Agricultural Statistics
5. Dr. (Mrs.) Alka Arora, Professor, Computer Application
6. Dr. V.R. Sagar, Professor, Post Harvest Technology

The Chairman also placed on record the valuable contributions of the following outgoing members of the Academic Council in strengthening the PG education at IARI:

1. Dr. Kuldeep Singh, Former Director, NBPGR
2. Dr. M.R. Dinesh, Former Director, IIHR Bengaluru
3. Dr. (Ms.) Seema Jaggi, Former Professor, Agricultural Statistics
4. Dr. Sudeep Marwaha, Former Professor, Computer Application
5. Dr. S.K. Jha, Former Professor, Post Harvest Technology
6. Dr. T.K. Behra, Former Professor, Vegetable Science

The following officials attended as Special Invitees:

1. Dr. H. Pathak, Director, NIASM, Baramati
2. Dr. Shri Vishal Nath, OSD, IARI Jharkhand

The Director and Chairman, Academic Council apprised the Academic Council about the educational, research, extension and other activities/achievements of the Institute specially the IARI's Global University proposal/presentation before the Hon'ble Union Minister of Agriculture and Farmers Welfare.

Thereafter, the following agenda items were taken up for consideration:

<b>Agenda Item No.</b>	<b>Description of Agenda Items</b>
415.1	Confirmation of the proceedings of the 414 <sup>th</sup> meeting of the Academic Council held on February 11, 2021
415.2	Action Taken Report on the Proceedings of the 414 <sup>th</sup> meeting of the Academic Council held on February 11, 2021
415.3	Consideration of the recommendations of the Standing Committee on Faculty & Discipline made in its meetings held on March 6, 2021 and July 17, 2021
415.4	Consideration of the recommendations of the Standing Committee on Scholarships, Financial Assistance & Academic Progress made in its



	meeting held on April 12, 2021
415.5	Consideration of observation of National Agricultural Education Accreditation Board (NAEAB) of ICAR on granting accreditation to IARI, New Delhi
415.6	Considerations of degree nomenclature of M.Sc. and Ph.D. of PHT discipline
415.7	Consideration of the recommendations of the meeting of the Standing Committee on Course Curricula and Academic Affairs held on July 17, 2021 to discuss on three non-accredited programmes
415.8	Consideration of the recommendations of the Committee constituted for revision of guidelines of existing institute awards and framing guidelines for new awards
415.9	Finalization of number of seats for admission to M.Sc./M.Tech. and Ph.D. degree programmes at IARI, New Delhi and at PG outreach institutions for the Academic Session 2021-22
415.10	Any other item with the permission of the Chair

***Agenda Item No. 415.1: Confirmation of the Proceedings of the 414<sup>th</sup> meeting of the Academic Council held on 11.2.2021***

The Chairman called for the comments, if any, from the members of the Academic Council on the proceedings of the 414<sup>th</sup> meeting. Since no comment was there, the proceedings of the previous meeting was confirmed by the house.

***Agenda Item No. 415.2: Report on action taken on the proceedings of the 414<sup>th</sup> meeting of the Academic Council held on 11.2.2021***

Dean and Joint Director (Education) presented the action taken report which was approved by the house.

***Agenda Item No. 415.3 Consideration of the proceedings of the meeting of the Standing Committee on Faculty and Discipline held on 06.03.2021 and 17.07.2021***

The Academic Council discussed the recommendations of the Standing Committee and approved the following:

**Meeting held on 06.03.2021**

**415.3.1: Induction** of the following 31 Scientists into PG Faculty in their respective disciplines at IARI, New Delhi (18), IARI PG outreach Programme at IIHR-Bengaluru (4), NIASM-Baramati (6) and NIBSM-Raipur (3) as they met the qualifications/eligibility criteria as per the prescribed guidelines.

S. No.	Name of the Scientist & Designation	Name of the Discipline
	<b>IARI, New Delhi</b>	
1	Dr. Gulab Singh Yadav, Scientist (Senior Scale)	Agronomy
2	Mr. Rishi Raj, Scientist (Senior Scale)	-do-
3	Dr. Dibakar Mahanta, Senior Scientist	-do-



4	Dr. Anuja A.R., Scientist	Agricultural Economics
5	Dr. Raju R., Scientist	-do-
6	Dr. Dilip Kushwaha, Scientist	Agricultural Engineering(FMPE)
7	Er. Utpal Ekka, Scientist	-do-
8	Dr. Ajeet Singh, Scientist	Biochemistry
9	Dr. Sunil Kumar, Principal Scientist	Bioinformatics
10	Dr. K.P. Mohapatra, Principal Scientist, NBPGR	Environmental Sciences
11	Dr. Jang Bahadur Singh, Senior Scientist	Genetics and Plant Breeding
12	Dr. Chandan Kapoor, Scientist	-do-
13	Dr. Manjeet Kumar, Scientist	-do-
14	Dr. Joshitha Vijayan, Scientist	Molecular Biology and Biotechnology
15	Dr. Mahesh Rao, Scientist	-do-
16	Dr. Subhash Chander, Scientist	Plant Genetic Resources
17	Dr. Vijayakumar H.P., Senior Scientist	Seed Science and Technology
18	Dr. Prasenjit Ray, Scientist(SS)	Soil Science
<b>IARI PG outreach Programme at IIHR, Bengaluru</b>		
1	Dr. Raghu, B.R., Scientist	Genetics and Plant Breeding
2	Ms. Poornima K N, Scientist	Molecular Biology and Biotechnology
3	Dr. Vijay Rakesh Reddy, S., Scientist	Post Harvest Technology
4	Dr. M. Thangam, Principal Scientist	Vegetable Science
<b>IARI PG Outreach Programme at NIASM, Baramati</b>		
1	Dr. Paritosh Kumar, Scientist	Environmental Science
2	Mr. N. Karthikeyan, Scientist	Microbiology
3	Dr. Gurumurthy S., Scientist	Plant Physiology
4	Dr. KhaptePratap Singh Suresh, Scientist	Vegetable Science
5	Dr. Neeraj Kumar, Scientist	Other faculty
6	Dr.ChavanSangram Bhanudas, Scientist	-do-
<b>IARI PG Outreach Programme at NIBSM, Raipur</b>		
1	Dr. Binod Kumar Choudhary, Senior Scientist	Other faculty
2	Dr. Mamta Choudhary, Senior Scientist	-do-
3	Dr. Soumya Dash, Scientist	-do-

**415.3.2: Recognition** of the following 11 faculty members of IARI as Research guides for M.Sc. guidance in their respective disciplines as they meet the prescribed requirements/eligibility criteria for becoming the research guides:

S. No.	Name of the Scientist & Designation	Name of the Discipline
1	Dr. Jyoti Ranjan Mishra, Principal Scientist	Agricultural Extension
2	Dr. Kaustav Aditya, Scientist	Agricultural Statistics

3	Dr. U.B. Angadi, Principal Scientist	Bioinformatics
4	Dr.Kumaranag K.M., Scientist	Entomology
5	Dr. Prativa Anand, Scientist	Floriculture and Landscape Architecture
6	Dr. Vanlalruati, Scientist	-do-
7	Dr. Deepak Singh Bisht, Scientist	Molecular Biology & Biotechnology
8	Dr. Amit Kumar Singh, Sr. Scientist	Plant Genetic Resources
9	Dr. Kuldeep Tripathi, Scientist	-do-
10	Dr. Nagamani Sandra, Scientist	Seed Science and Technology
11	Dr. Indu Chopra, Scientist (SS)	Soil Science

**415.3.3** The Academic Council approved the revised research paper requirement guidelines for both faculty induction and for research guide:

- For the Faculty induction:** Three full length peer reviewed research papers published during the last five years with senior/ sole authorship or as corresponding author and with NAAS score of 6.0 and above to be considered.
- For Research Guide:** Three full length peer reviewed research papers published during the last five years with senior/ sole authorship or as corresponding author and with NAAS score of 6.0 and above to be considered.

### **Meeting held on 17.07.2021**

**415.3.4 Induction** of following 4 Scientists into PG Faculty in their respective disciplines at IARI, New Delhi as they met the qualifications/eligibility criteria as per the prescribed guidelines.

S. No.	Name & Designation	Name of the Discipline
1.	Dr.Vijay Kumar Prajapati, Scientist	Water Science and Technology
2.	Dr. Archana Anokhe, Scientist	Entomology
3.	Dr. Raj Kumar Gautam, Principal Scientist	Plant Genetic Resources
4.	Dr.Chandan Kumar Deb, Scientist	Computer Application

**415.3.5 Recognition** of the following 06 faculty members of IARI, New Delhi (5) and IIHR, Bengaluru(1) as Research guides for M.Sc. guidance in their respective disciplines as they meet the prescribed requirements for becoming the research guides:

S. No.	Name & Designation	Name of the Discipline
<b>IARI, New Delhi</b>		
1.	Mr. Achchhelal Yadav, Scientist	Agricultural Physics
2.	Dr.Sangita Bansal, Principal Scientist	Plant Genetic Resources
3.	Dr.Seema Sangwan, Scientist (SS)	Microbiology
4.	Dr.Abir Dey, Scientist	Soil Science
5.	Dr.Gograj Singh Jat, Scientist (SS)	Vegetable Science
<b>IARI PG outreach Programme at IIHR, Bengaluru</b>		
6.*	Dr.Ponnam Naresh, Scientist,IIHR	Vegetable Science



\*eligible for guidance of Ph.D. students

**415.3.6 Recognition of Dr. Arun Kumar T.V. and Dr. Sangeeta Chopra Scientists from Agricultural Engineering discipline as dual faculty in Postharvest Engineering & Technology for guidance and teaching of on roll students.**

**415.3.7** The Academic Council approved the recommendation of the Standing Committee that **Dr. Arun Kumar Tripathi**, Director General, National Institute of Solar Energy (NISE), Government of India, as Adjunct Faculty in the discipline of Agricultural Engineering.

***Agenda Item No. 415.4 Consideration of the recommendations of the meeting of the Standing Committee on Scholarships, Financial Assistance & Academic Progress held on 12.04.2021***

The Academic Council ratified the decision of Chairman, Academic Council on disbursement of Scholarship/Fellowship as per the following recommendation of Standing Committee.

During the Academic Session 2020-21, a total number of 259 candidates were admitted to Ph.D. degree programme under different Schemes at IARI and IARI PG Outreach Institutes. On the basis of the application/undertaking/proforma submitted by the students, forwarded by the concerned Professors and duly verified by the PGS-II Section, the Standing Committee made the following recommendations:

**415.4.1** The rate and tenure of Fellowship as per the ICAR i.e., Rs. 31,000 for the First two years and Rs. 35000 for the third year, Contingency of Rs. 10000/p.a. and maximum duration of fellowship is only for three years as per the terms and conditions of ICAR SRFs.

**415.4.2** As per P.G. School Calendar para 15.3.3 and 15.3.5, the scholarships shall be awarded initially for a period of one academic year from the date of joining the Post Graduate School or the commencement of the academic year, whichever is later. The payment of Scholarship/Fellowship shall be reviewed at the end of 2<sup>nd</sup> Semester and only those students will be permitted to continue getting fellowship who maintain the OGPA of 6.50 out of 10.00 at the end of 2<sup>nd</sup> Semester (*Commencement of the Academic Year 2020-21 is 28.12.2020*).

**415.4.3** 141 students enrolled at IARI, New Delhi/CIAE Bhopal/IIHR Bengaluru who are awarded/eligible for ICAR-JRF @Rs.31000/-per month for first two years and @ Rs.35,000/- per month + Rs.10,000/- contingency grant for third year will get their Fellowship from ICAR.

S. No.	ROLL NO	NAME OF THE STUDENT	DISCIPLINE	DATE ENROL
1	11669	Ajmal S	Agricultural Economics	28/12/2020
2	11670	Aditi Agrawal	--do--	28/12/2020
3	11671	S Rohith	--do--	28/12/2020
4	11672	Jagadeesh M S	--do--	28/12/2020
5	11673	Thrilok Belli B M	--do--	28/12/2020
6	11674	Padigapati Venkata Naga Sindhuja	--do--	28/12/2020
7	11675	Patil Rajvardhan Kiran	Agricultural Engineering	28/12/2020
8	11676	Rahul Kumar	--do--	28/12/2020
9	11679	Sanghani Vikas Narayanbhai	--do--	28/12/2020

10	11680	Ramkishor Kurmi	--do--	28/12/2020
11	11684	Manojit Chowdhury	--do--	28/12/2020
12	11688	Prakashbhai Bijalbhai Ahir	--do--	28/12/2020
13	11689	Ajay Narayanrao Satpute	--do--	28/12/2020
14	11690	Amit Kumar	--do--	28/12/2020
15	11692	Satish Manda	--do--	28/12/2020
16	11694	Sushmita Saini	Agricultural Extension	28/12/2020
17	11695	Praveen Kumar	--do--	28/12/2020
18	11696	Sai Priyanka Pagadala	--do--	28/12/2020
19	11697	Th.D Grace Chiru	--do--	28/12/2020
20	11698	Sudip Kumar Gorai	--do--	28/12/2020
21	11699	Preeti Yadav	--do--	28/12/2020
22	11700	Sonali Mallick	--do--	28/12/2020
23	11701	Sk Wasaful Quader	--do--	28/12/2020
24	11702	Vishwanatha B P	--do--	28/12/2020
25	11703	Tridiv Ghosh	Agricultural Physics	28/12/2020
26	11709	Lokeshwari M	--do--	28/12/2020
27	11710	Sandip Garai	--do--	28/12/2020
28	11718	Kiranmoy Patra	Agronomy	28/12/2020
29	11719	Sasmita Tripathy	--do--	28/12/2020
30	11720	Sandeep Kumar	--do--	28/12/2020
31	11721	Alekhyia Gunturi	--do--	28/12/2020
32	11722	Kadapasreenivasareddy	--do--	28/12/2020
33	11723	Ajmul Hasan	--do--	28/12/2020
34	11724	Rakesh Dawar	--do--	28/12/2020
35	11725	Sunil Kumar	--do--	28/12/2020
36	11726	Shyam Karan	--do--	28/12/2020
37	11728	Bixapathi Banoth	--do--	28/12/2020
38	11729	Faris P	--do--	28/12/2020
39	11730	Smruti Ranjan Padhan	--do--	28/12/2020
40	11731	Chandrika Das	Biochemistry	28/12/2020
41	11733	Shreya Mandal	--do--	28/12/2020
42	11754	Vadivel C	Entomology	28/12/2020
43	11755	Rakesh Kumar Behera	--do--	28/12/2020
44	11756	Kishore Chandra Sahoo	--do--	28/12/2020
45	11757	Hemant Kumar	--do--	28/12/2020
46	11758	Gundreddy Raja Reddy	--do--	28/12/2020
47	11759	K Chandra Kumara	--do--	28/12/2020
48	11760	Mugundhan N	--do--	28/12/2020
49	11761	Machanuru Raviteja	Environmental Sciences	28/12/2020
50	11763	Sibananda Darjee	--do--	28/12/2020
51	11768	Vaishali C	Floriculture and Landscape Architecture	28/12/2020
52	11769	Vidyashree S	--do--	28/12/2020
53	11770	Girish P M	--do--	28/12/2020
54	11779	Vishal Balasaheb Mhetre	Fruit Science	28/12/2020
55	11780	Chaithra T S	--do--	28/12/2020
56	11781	Amulya S	--do--	28/12/2020
57	11782	Anagha P K	--do--	28/12/2020
58	11783	Kripa Shankar	--do--	28/12/2020
59	11784	Chandana M R	--do--	28/12/2020
60	11785	Mude Ramya Sree	--do--	28/12/2020
61	11786	Chukkamettu Anusha	--do--	28/12/2020
62	11791	Ramesh	Genetics and Plant Breeding	28/12/2020
63	11792	Govinda Rai Sarma	--do--	28/12/2020
64	11793	Nitesh Kushwaha	--do--	28/12/2020
65	11794	Shivaprasad K M	--do--	28/12/2020
66	11796	Danakumara T	--do--	28/12/2020
67	11797	Vinay Rojaria	--do--	28/12/2020
68	11798	Harshitha B S	--do--	28/12/2020



69	11799	Karthik Kumar M	--do--	28/12/2020
70	11800	Amaresh	--do--	28/12/2020
71	11801	Sugumar S	--do--	28/12/2020
72	11802	Adithya P Balakrishnan	--do--	28/12/2020
73	11803	Amitava Roy	--do--	28/12/2020
74	11805	Pulak Debbarma	--do--	28/12/2020
75	11806	Saikat Chowdhury	--do--	28/12/2020
76	11807	Udita Pushpad	Microbiology	28/12/2020
77	11808	Annayya	--do--	28/12/2020
78	11809	Dipankar Chowdhury	--do--	28/12/2020
79	11811	Elakkya M	--do--	28/12/2020
80	11815	Bipin Bihari Hembrom	--do--	28/12/2020
81	11816	Samar Deb	Molecular Biology and Biotechnology	28/12/2020
82	11817	Mareyam	--do--	28/12/2020
83	11818	Jeet Roy	--do--	28/12/2020
84	11820	Vibha Kamati	--do--	28/12/2020
85	11823	Anuj Kumar	--do--	28/12/2020
86	11824	Renu Kumari	--do--	28/12/2020
87	11825	Santhoshkumar Ek	Nematology	28/12/2020
88	11829	Siddhant Ranjan Padhi	Plant Genetic Resources	28/12/2020
89	11830	G J Abhishek	--do--	28/12/2020
90	11831	Rithesh B N	--do--	28/12/2020
91	11834	Nitika Kalia	--do--	28/12/2020
92	11835	Sreenayana B	Plant Pathology	28/12/2020
93	11836	Shanmugaraj C	--do--	28/12/2020
94	11837	Akshay Kumar H M	--do--	28/12/2020
95	11838	Vijay Shree Gahlot	--do--	28/12/2020
96	11839	Sathiyaseelan K	--do--	28/12/2020
97	11840	Abdul Qadir	--do--	28/12/2020
98	11841	Haritha Mohan M	--do--	28/12/2020
99	11842	Yeluru Mohan Babu	--do--	28/12/2020
100	11843	Halima Khatoon	--do--	28/12/2020
101	11844	Dharmappa Dhanasing Chavan	--do--	28/12/2020
102	11845	Vinod Chouhan	--do--	28/12/2020
103	11846	Sudeepta Pattanayak	--do--	28/12/2020
104	11847	Divya Bharathi	Plant Physiology	28/12/2020
105	11848	Samrat Das	--do--	28/12/2020
106	11849	G.Andonissamy Daniel	--do--	28/12/2020
107	11851	Taria Sukumar	--do--	28/12/2020
108	11717	A Anil Kumar	Post Harvest Technology	28/12/2020
109	11852	Shatakshi Mishra	--do--	28/12/2020
110	11860	Shahil Kumar	Seed Science and Technology	28/12/2020
111	11861	Chaithanya G	--do--	28/12/2020
112	11864	Vislavath Ramvilas Pashwan	--do--	28/12/2020
113	11865	Deepak Rao	--do--	28/12/2020
114	11867	Rishbh Kumar Didawat	Soil Science	28/12/2020
115	11868	Amit Kumar Dash	--do--	28/12/2020
116	11869	Soura Shuvra Gupta	--do--	28/12/2020
117	11870	Surya Prakash Yadav	--do--	28/12/2020
118	11871	Kritagya Gangwar	--do--	28/12/2020
119	11872	Praveen Kumar	--do--	28/12/2020
120	11873	Prem Kumar B	--do--	28/12/2020
121	11874	Tirunagari Rupesh	--do--	28/12/2020
122	11875	Plabani Roy	--do--	28/12/2020
123	11876	Shilpa	--do--	28/12/2020
124	11877	Deepak Kumar Meena	--do--	28/12/2020
125	11879	Asheesh Kumar	--do--	28/12/2020
126	11880	Sourav Das	--do--	28/12/2020
127	11881	Sushmitha L C	Vegetable Science	28/12/2020



128	11882	Koku K. Tara	--do--	28/12/2020
129	11883	Anamika Chandel	--do--	28/12/2020
130	11884	Bhargav Kiran	--do--	28/12/2020
131	11886	Pradeepkumara N	--do--	28/12/2020
132	11887	Kakali Das	--do--	28/12/2020
133	11889	Abhilash Kavalgi	--do--	28/12/2020
134	11890	Supriya Mandal	--do--	28/12/2020
135	11891	Pooja Belwal	--do--	28/12/2020
136	11895	Ankit	Water Science and Technology	28/12/2020
137	11677	EDDE MOUNIKA, CIAE BHOPAL	Agricultural Engineering	28/12/2020
138	11693	PANGAM HERAMB, CIAE BHOPAL	--do--	28/12/2020
139	11778	CHANDANA S, IIHR BENGALURU	Floriculture and Landscape Architecture	28/12/2020
140	11788	SINCHANA JAIN N R, IIHR BENGALURU	Fruit Science	28/12/2020
141	11893	KOWSALYA K B, IIHR BENGALURU	Vegetable Science	28/12/2020

**415.4.4** Award of Institute's Sr. Scholarship @ Rs.31,000/- per month for first two years and @Rs.35000/- per month for third year + Rs.10,000/- contingent grant per Annum to 69 candidates admitted at IARI, New Delhi as per the list given below:

S. No.	NAME OF THE STUDENT	ROLL NO.	DISCIPLINE	DATE of ENROLMENT
1.	Debabrata Ghoshal	11661	Agricultural Chemicals	28/12/2020
2.	Harshangkumar Govindbhai Talaviya	11662	-do-	28/12/2020
3.	Shreosi Biswas	11663	-do-	28/12/2020
4.	Partha Chandra Mondal	11664	-do-	28/12/2020
5.	Rajni Godara	11665	-do-	28/12/2020
6.	Shila Neel	11666	-do-	28/12/2020
7.	Garima Sethi	11667	-do-	28/12/2020
8.	Pallavi Singh	11668	-do-	28/12/2020
9.	Jagjeet Singh	11681	Agricultural Engineering	28/12/2020
10.	Pradeep Kumar	11682	-do-	28/12/2020
11.	Harshit Kumar Chauhan	11683	-do-	28/12/2020
12.	Mude Arjun Naik	11685	-do-	28/12/2020
13.	Suraj Goswami	11691	-do-	28/12/2020
14.	Shreya Gupta	11704	Agricultural Physics	28/12/2020
15.	Aatralarasi S	11705	-do-	28/12/2020
16.	Nandita Mandal	11706	-do-	28/12/2020
17.	Selvaprakash R	11707	-do-	28/12/2020
18.	Pritam Saha	11727	Agronomy	28/12/2020
19.	Sohel Rahaman	11732	Biochemistry	28/12/2020
20.	Minakshi Dutta	11734	-do-	28/12/2020
21.	Rosalin Laishram	11735	-do-	28/12/2020
22.	Nandini G A	11736	-do-	28/12/2020
23.	Anjali Ranjan	11737	-do-	28/12/2020
24.	Brijesh Lekhak	11738	-do-	28/12/2020
25.	Anandwardhan	11762	Environmental Sciences	28/12/2020
26.	Ram Krishna Dubey	11764	-do-	28/12/2020
27.	Mathiyarasi	11765	-do-	28/12/2020
28.	Lukeshwari Shyam	11766	-do-	28/12/2020
29.	Pankaj Kumar Patel	11767	-do-	28/12/2020

30.	SaipriyaPanigrahi	11771	Floriculture and Landscape Architecture	28/12/2020
31.	Shantesh Ramesh Kamath	11772	-do-	28/12/2020
32.	Sindhu K	11773	-do-	28/12/2020
33.	Deachen Dolma	11774	-do-	28/12/2020
34.	Sadia Perween	11804	Genetics and Plant Breeding	28/12/2020
35.	RavinaBeniwal	11909	-do-	28/12/2020
36.	Amrita Thomas	11910	-do-	28/12/2020
37.	Mohit Sharma	11927	-do-	23/2/2021
38.	Shreya Virmani	11810	Microbiology	28/12/2020
39.	Devashish Pathak	11812	-do-	28/12/2020
40.	Sudheer K	11813	-do-	28/12/2020
41.	Nivedha Rm	11814	-do-	28/12/2020
42.	Priya	11821	Molecular Biology and Biotechnology	28/12/2020
43.	NitasanaRajkumari	11822	-do-	28/12/2020
44.	Priyanka Kumari	11928	-do-	18/02/2021
45.	Patel BhumikabenManilal	11826	Nematology	28/12/2020
46.	PasupuletiSnehalatha	11827	-do-	28/12/2020
47.	Jithoop D	11828	-do-	28/12/2020
48.	Chethan Kumar K B	11832	Plant Genetic Resources	28/12/2020
49.	Pooja Verma	11833	-do-	28/12/2020
50.	Pavithra Ks	11850	Plant Physiology	28/12/2020
51.	Menaka M	11853	Post Harvest Technology	28/12/2020
52.	Misha Poddar	11854	-do-	28/12/2020
53.	Vinod B R	11855	-do-	28/12/2020
54.	Lekshmi S G	11856	-do-	28/12/2020
55.	Sukanya Mam	11922	-do-	28/12/2020
56.	Gouthami Shiva Swamy	11926	-do-	05/01/2021
57.	MonalishaSahoo	11862	Seed Science and Technology	28/12/2020
58.	Yamanappa	11863	-do-	28/12/2020
59.	Narender Pal	11866	-do-	28/12/2020
60.	Dewali Roy	11878	-do-	28/12/2020
61.	Rakshitha K N	11885	Vegetable Science	28/12/2020
62.	Yogananda M	11888	-do-	28/12/2020
63.	SairamArpula	11896	Water Science and Technology	28/12/2020
64.	Gokulraj S	11897	-do-	28/12/2020
65.	Shivani Sanjay Buddekar	11898	-do-	28/12/2020
66.	Suryanshu Yadav	11899	-do-	28/12/2020
67.	GaddamSidhartha	11900	-do-	28/12/2020
68.	Vishnu Prasad	11901	-do-	28/12/2020
69.	B Soujanya	11902	-do-	28/12/2020

**415.4.5** Award of Institute's Sr. Scholarship @ Rs.31,000/- per month + Rs.10,000/- contingent grant for first two years and @ Rs.35,000/- per month + Rs.10,000/- for third year to the following 02 students admitted at CIAE, Bhopal under IARI PG Outreach Programme

S.No.	NAME OF THE STUDENT	ROLL NO	DISCIPLINE	DATE OF ENROL.
1.	Praween Kumar Nishad	11678	Agricultural Engineering	28/12/2020
2.	Anni Kumar Singh	11687	--do--	28/12/2020

**415.4.6** Award of Institute's Sr. Scholarship @ Rs.31,000/- per month + Rs.10,000/- contingent grant for first two years and @ Rs.35,000/- per month + Rs.10,000/- for third year to the following 09 students admitted at IIHR, Bengaluru under IARI PG Outreach Programme



S.No.	NAME OF THE STUDENT	ROLL NO	DISCIPLINE	DATE OF ENROL.
1.	Labdhi Dilip Dedhia	11777	Floriculture and Landscape Architecture	28/12/2020
2.	Poojitha S R	11929	-do-	21/02/2021
3.	NikhilaVaagdeviAnumala	11930	-do-	18/02/2021
4.	Rakesh Jangid	11931	Fruit Science	20/02/2021
5.	Ajay Kumar	11932	-do-	19/02/2021
6.	Chandini M	11857	Post Harvest Technology	28/12/2020
7.	Pavankumar M	11858	-do-	05/02/2021
8.	SudeshnaKharga	11894	Vegetable Science	28/12/2020
9.	Meghana D	11933	-do-	18/02/2021

**415.4.7** Award of Institute's Sr. Scholarship @ Rs. 3,000/- per month + Rs. 10,000/- per annum as contingent grant to the following 6 (5 IARI + 1 IIHR) students who were admitted under Faculty Up-gradation Scheme/ICAR-Inservice Scheme/ Inservice Candidate of Open scheme.

S. No.	NAME OF THE STUDENT	ROLL NO	DISCIPLINE	DATE OF ENROL.
1.	Satish Kumar, IARI KATRAIN (DEPTT T.)	11911	Microbiology	21/01/2021
2.	Utkarsh Kumar, VPKAS ALMORA (ICAR-IN SERVICE)	11905	Agricultural Engineering	28/12/2020
3.	Paresh Baldeorao Chaukhande, CPRI SHIMLA, (ICAR-IN SERVICE)	11920	Vegetable Science	29/12/2020
4.	Gujjala Narayana Swamy, ANGRAU, GUNTUR, FUS	11919	Vegetable Science, IIHR Bengaluru	24/12/2020
5.	Monika Singh, ICAR-CISH, LUCKNOW, (OPEN SCHEME In-Service)	11753	Computer Application	01/01/2021
6.	Karnena Koteswara Rao, ICAR-RCER, PATNA, (ICAR-IN SERVICE)	11915	Soil Science	28/12/2020

**415.4.8** Award of Contingent grant only @ Rs.10,000/- per annum to the following six (6 IARI) Departmental Technical Candidates working at the same station.

S. No.	NAME OF THE STUDENT	ROLL NO	DISCIPLINE	DATE OF ENROL.
1.	Sunita Yadav, IARI New Delhi (DEPTT S.)	11916	Soil Science	29/01/2021
2.	Kamlesh Kumar Lakhena, IARI New Delhi (DEPTT T.)	11906	Agronomy	28/12/2020
3.	Ashok Kumar, IARI New Delhi (DEPTT T.)	11923	--do--	28/12/2020
4.	Ainmisha, IARI New Delhi (DEPTT T.)	11912	Plant Pathology	03/01/2021
5.	Binder Singh, IARI New Delhi (DEPTT T.)	11917	Soil Science	03/01/2021
6.	Rameshwar Dayal Meena, IARI New Delhi (DEPTT T.)	11918	--do--	28/12/2020

**415.4.9** Following 20 students who were admitted in the discipline of Agricultural Statistics, Bioinformatics and Computer Application will get their Institute Sr. Scholarship from IASRI, New Delhi.

S.NO.	NAME OF THE STUDENT	ROLL NO.	DISCIPLINE	DATE OF ENROL.
1.	G Avinash	11711	Agricultural Statistics	28/12/2020
2.	Bijoy Chanda	11712	-do-	28/12/2020
3.	Nehatai Wamanrao Agashe	11713	-do-	28/12/2020
4.	Moumita Baishya	11714	-do-	28/12/2020
5.	Kamal Sharma	11715	-do-	28/12/2020
6.	Rishabh Singh Shyam	11716	-do-	28/12/2020
7.	Sharanbasappa	11739	Bioinformatics	28/12/2020
8.	Parinita Das	11740	-do-	28/12/2020
9.	Mailaralinga	11741	-do-	28/12/2020
10.	Mamatha Y S	11742	-do-	28/12/2020
11.	Naina Kumari	11743	-do-	28/12/2020
12.	Princy	11744	-do-	28/12/2020
13.	Nimai Charan Mahanandia	11745	-do-	28/12/2020
14.	Anupama Roy	11746	-do-	28/12/2020
15.	Tamal Kundu	11747	Computer Application	28/12/2020
16.	Mohit Kumar	11748	-do-	28/12/2020
17.	Sowndarya C A	11749	-do-	28/12/2020
18.	Lalit Birla	11750	-do-	28/12/2020
19.	Shalini Kumari	11751	-do-	28/12/2020
20.	Vt Shalini	11752	-do-	28/12/2020

**415.4.10** The Standing Committee **did not recommend** award of Institute's Sr. Scholarship to the following six In-service students as they have already availed the benefit of Scholarship during their last admission at IARI for the same programme and left the course incomplete. Further, the Standing Committee was also of the view that necessary recovery on account of Surety Bond, Fellowship, etc. as per rules may also be made from these students, if due. Further, to avoid second time award of fellowship, a suitable undertaking to the effect that the students has not availed the benefit of Scholarship for the same programme earlier from or through IARI/ICAR, may be obtained.

S.N O.	NAME OF THE STUDENT	ROLL NO.	DISCIPLINE	DATE OF ENROL.
1.	Borkar Narayan Totaram, ICAR-NRRI ODISHA, OPEN SCHEME, In-Service	11686	Agricultural Engineering	28/12/2020
2.	Lal Chand, ICAR-CIAH BIKANER, OPEN SCHEME In-Service	11787	Fruit Science	28/12/2020
3.	Bhargavi, H. A., IGRI JHANSHI, (ICAR-IN SERVICE	11908	Genetics and Plant Breeding	28/12/2020
4.	Abhishek Jangir NBSS LUP), (ICAR-IN SERVICE	11913	Soil Science	05/01/2021
5.	Jogendra Singh, IARI NEW DELHI, (DEPTT S)	11921	Vegetable Science	29/12/2020
6.	Nand Lal Meena, NBPGR NEW DELHI, (DEPTT S)	11907	Biochemistry	08/01/2021

**415.4.11** Award of IARI Jr. Scholarship to M.Sc./M.Tech. students admitted during 2020-21 academic session was considered. During the Academic Session 2020-21, a total number of 239 candidates were admitted to M.Sc./M.Tech. degree programme under different Schemes at IARI and IARI PG Outreach Institutes. On the basis of



application/undertaking/proforma submitted by the students, forwarded by the concerned Professors and duly verified by the PGS-II Section, the Standing Committee made the following recommendations.

**415.4.12** As per P.G. School Calendar para 15.3.3 and 15.3.5, the scholarships shall be awarded initially for a period of one academic year from the date of joining the Post Graduate School or the commencement of the academic year, whichever is later. The payment of Scholarship/Fellowship shall be reviewed at the end of 2<sup>nd</sup> Semester and only those students will be permitted to continue getting fellowship who maintain the OGPA of 6.50 out of 10.00 at the end of 2<sup>nd</sup> Semester (*Commencement of the Academic Year 2020-21 is 28.12.2020*).

**415.4.13** 167 students enrolled at IARI, New Delhi/IARI Assam/IARI Jharkhand/IIAB Ranchi/NIASM Baramati/NIBSM Raipur who are eligible for ICAR-PG Scholarship@ Rs.12640/- per month + Rs. 6,000/- will get their Fellowship from ICAR.

S. NO.	NAME OF THE STUDENT	ROLL NO	DISCIPLINE	DATE ENROL	INSTITUTE
1	Soumyajit Ghoshal	21381	Agricultural Chemicals	28/12/2020	IARI, NEW DELHI
2	Stanishkar T S	21391	Agricultural Economics	28/12/2020	-do-
3	Sunil Naik	21390	-do-	28/12/2020	-do-
4	Ragini P Jambagi	21389	-do-	28/12/2020	-do-
5	Pavithra	21388	-do-	28/12/2020	-do-
6	Likhitha.S	21387	-do-	28/12/2020	-do-
7	Santosh Kumar Ray	21403	Agricultural Engineering	28/12/2020	-do-
8	Resham Chawla	21402	-do-	28/12/2020	-do-
9	Gauri Umeshrao Bhagole	21401	-do-	28/12/2020	-do-
10	Akshay Kumar	21400	-do-	28/12/2020	-do-
11	Pooja Sakthi Rama S	21399	-do-	28/12/2020	-do-
12	Kupendra Babu R	21396	-do-	28/12/2020	-do-
13	Karishma Kumari	21394	-do-	28/12/2020	-do-
14	Juhi Ranjan	21392	-do-	28/12/2020	-do-
15	Shreekant	21410	Agricultural Extension	28/12/2020	-do-
16	Ananda K R	21408	-do-	28/12/2020	-do-
17	Ankit Pal	21407	-do-	28/12/2020	-do-
18	Bhaskar Ghosh	21406	-do-	28/12/2020	-do-
19	Alok Dube	21405	-do-	28/12/2020	-do-
20	Veesam Haripriya	21404	-do-	28/12/2020	-do-
21	Sudipta Basu	21411	Agricultural Physics	28/12/2020	-do-
22	Pathi Devendra Kumar	21423	Agricultural Statistics	28/12/2020	-do-
23	Anita Sarkar	21421	-do-	28/12/2020	-do-
24	Ankit Kumar Singh	21417	-do-	28/12/2020	-do-
25	Bappa Saha	21416	-do-	28/12/2020	-do-
26	Manjunatha M A	21429	Agronomy	28/12/2020	-do-
27	Pranab Ranjan Sahu	21428	-do-	28/12/2020	-do-
28	Tarun Sharma	21427	-do-	28/12/2020	-do-
29	Rakesh Prajapati	21426	-do-	28/12/2020	-do-
30	Ayan Sarkar	21425	-do-	28/12/2020	-do-



31	Vipin Kumar	21424	-do-	28/12/2020	-do-
32	Harish Dhal	21433	Biochemistry	28/12/2020	-do-
33	Durga Lakshmi	21432	-do-	28/12/2020	-do-
34	Pradyumn Dasharath Ghatate	21431	-do-	28/12/2020	-do-
35	Tejveer Singh	21430	-do-	28/12/2020	-do-
36	Soutrik Mukherjee	21438	Bioinformatics	28/12/2020	-do-
37	Sauvik Chatterjee	21444	Computer Application	28/12/2020	-do-
38	Jarpla Mounika	21454	Entomology	28/12/2020	-do-
39	Reshma R	21453	-do-	28/12/2020	-do-
40	Chandana G B	21452	-do-	28/12/2020	-do-
41	Vavilapalli Rajesh	21451	-do-	28/12/2020	-do-
42	Neelakanta Raja Rushi	21450	-do-	28/12/2020	-do-
43	Karthik Reddy M	21449	-do-	28/12/2020	-do-
44	Thesnim P	21448	-do-	28/12/2020	-do-
45	Bharath M N	21459	Environmental Sciences	28/12/2020	-do-
46	Azhar Mehmood	21455	-do-	28/12/2020	-do-
47	Naveen Kumar Myadam	21466	Floriculture and Landscape Architecture	28/12/2020	-do-
48	Vamsi Yarra	21465	-do-	28/12/2020	-do-
49	Eram Arzoo	21464	-do-	28/12/2020	-do-
50	Khushboo Farooq	21463	-do-	28/12/2020	-do-
51	Nivya K R	21462	-do-	28/12/2020	-do-
52	Akshay	21472	Fruit Science	05/01/2021	-do-
53	Vasudev.N	21471	-do-	28/12/2020	-do-
54	Gulshan Kumar	21470	-do-	28/12/2020	-do-
55	Vittal Hatkari	21469	-do-	28/12/2020	-do-
56	Amina Shukoor	21468	-do-	28/12/2020	-do-
57	Kalieswari K	21467	-do-	28/12/2020	-do-
58	Abhirup Mazumder	21480	Genetics and Plant Breeding	28/12/2020	-do-
59	Ankit Dawar	21479	-do-	28/12/2020	-do-
60	Lovely Arya	21478	-do-	28/12/2020	-do-
61	Mayank Kumar Sinha	21477	-do-	28/12/2020	-do-
62	Amiruddinali Husensab Bijjur	21476	-do-	28/12/2020	-do-
63	Premakumar	21475	-do-	28/12/2020	-do-
64	Swarnadip Ghosh	21474	-do-	28/12/2020	-do-
65	Vadla Chandrika	21473	-do-	28/12/2020	-do-
66	Brunda B N	21487	Microbiology	28/12/2020	-do-
67	Koj Haniya	21486	-do-	28/12/2020	-do-
68	Manoj S H	21484	-do-	28/12/2020	-do-
69	Roopam Kumawat	21483	-do-	28/12/2020	-do-
70	Haritha G	21482	-do-	28/12/2020	-do-
71	Yaadesh S	21481	-do-	28/12/2020	-do-
72	Ramesh R	21495	Molecular Biology and Biotechnology	28/12/2020	-do-
73	Nuzat Banu	21494	-do-	28/12/2020	-do-
74	Manish Dev Pratap	21493	-do-	28/12/2020	-do-

75	Yogesh Kumar S	21492	-do-	28/12/2020	-do-
76	Pyla Bhuvaneswari	21491	-do-	28/12/2020	-do-
77	Rishika K S	21490	-do-	28/12/2020	-do-
78	Adil Rahim Magray	21489	-do-	28/12/2020	-do-
79	Sagnik Chanda	21488	-do-	28/12/2020	-do-
80	Naveenkumar K R	21499	Nematology	28/12/2020	-do-
81	Amulya K N	21498	-do-	28/12/2020	-do-
82	Aabid Hussain Sheikh	21497	-do-	28/12/2020	-do-
83	Monika	21496	-do-	28/12/2020	-do-
84	Latief Bashir	21501	Plant Genetic Resources	28/12/2020	-do-
85	Amjada S Khan	21514	Plant Pathology	28/12/2020	-do-
86	Chemy Doker	21513	-do-	28/12/2020	-do-
87	Ram Mohan	21512	-do-	28/12/2020	-do-
88	Dudekula Hamida	21510	-do-	28/12/2020	-do-
89	Nishith Reddy Yaratha	21509	-do-	28/12/2020	-do-
90	Dornadula Venkata Dinesh	21508	-do-	28/12/2020	-do-
91	Velmurugan S	21507	-do-	28/12/2020	-do-
92	Prashant Patidar	21506	-do-	28/12/2020	-do-
93	Pavithra K	21520	Plant Physiology	28/12/2020	-do-
94	Gopal Masanta	21519	-do-	28/12/2020	-do-
95	Purbali Mukherjee	21518	-do-	28/12/2020	-do-
96	Baiarilang Chyne	21517	-do-	28/12/2020	-do-
97	Mouneesh Kumar M	21515	-do-	28/12/2020	-do-
98	Rahul Kumar Thakur	21527	Post Harvest Technology	28/12/2020	-do-
99	Shubhangi Venkatchari Arvelli	21526	-do-	28/12/2020	-do-
100	Abarna S	21525	-do-	28/12/2020	-do-
101	Neethu K	21522	-do-	28/12/2020	-do-
102	Rajan Mahendra	21521	-do-	28/12/2020	-do-
103	Barla Madhu Sudhan	21534	Seed Science and Technology	28/12/2020	-do-
104	Srikant	21533	Seed Science And Technology	28/12/2020	-do-
105	Gaurav	21532	-do-	28/12/2020	-do-
106	Rajan Vishal	21531	-do-	28/12/2020	-do-
107	Poomani S	21530	-do-	28/12/2020	-do-
108	Hariprasad S K	21529	-do-	28/12/2020	-do-
109	Abhik Roy	21528	-do-	28/12/2020	-do-
110	Manindra Barman	21540	Soil Science	28/12/2020	-do-
111	Prince Kumar	21538	-do-	28/12/2020	-do-
112	Bikramjit Mandal	21537	-do-	28/12/2020	-do-
113	Priyanka Patel	21536	-do-	28/12/2020	-do-
114	Ann Theresa Jose	21535	-do-	28/12/2020	-do-
115	Shreyas Aradhya C S	21545	Vegetable Science	28/12/2020	-do-
116	Ganesh H K	21544	-do-	28/12/2020	-do-
117	Manjunath K S	21543	-do-	28/12/2020	-do-
118	Neha Kumari Mandal	21542	-do-	28/12/2020	-do-
119	Mallikarjun Basayya Hiremath	21541	-do-	28/12/2020	-do-



120	Bhawna Verma	21546	Water Science and Technology	28/12/2020	-do-
121	M E Krishna Babu	50063	Agronomy	28/12/2020	<b>IARI, ASSAM</b>
122	Mrinal Sen	50062	-do-	28/12/2020	-do-
123	V Om Subham Raju	50061	-do-	28/12/2020	-do-
124	Meda.Alekya	50066	Genetics and Plant Breeding	28/12/2020	-do-
125	Deepak M P	50065	-do-	28/12/2020	-do-
126	Haragopal Dutta	50064	-do-	28/12/2020	-do-
127	Goutam Parida	50069	Soil Science	28/12/2020	-do-
128	Saloni Tripathy	50068	-do-	28/12/2020	-do-
129	Mayurakshi Chanda	50067	-do-	28/12/2020	-do-
130	Poornima H P	50072	Vegetable Science	28/12/2020	-do-
131	Mallikarjuna K N	50071	-do-	28/12/2020	-do-
132	Sikha Manoharan	50070	-do-	28/12/2020	-do-
133	Thogata Nagaraju	60064	Agricultural Extension	28/12/2020	<b>IARI, JHARKHAND</b>
134	Rajat Kumar Nath	60062	-do-	28/12/2020	-do-
135	Abhijit Mandal	60066	Agronomy	28/12/2020	-do-
136	Soumyadarshi Muduli	60065	-do-	28/12/2020	-do-
137	Rayudu Sai Padmini	60068	Entomology	28/12/2020	-do-
138	Pooja Kumari	60067	-do-	28/12/2020	-do-
139	Amar Ba	60073	Fruit Science	28/12/2020	-do-
140	Vasanth Vinayak Vara Prasad N	60072	-do-	28/12/2020	-do-
141	Abeer Ali	60071	-do-	28/12/2020	-do-
142	Shweta Pandhari Sathawane	60079	Genetics and Plant Breeding	28/12/2020	-do-
143	Abhijeet Mudhale	60078	-do-	28/12/2020	-do-
144	Suraj Mishra	60077	-do-	28/12/2020	-do-
145	Abhishek E	60076	-do-	28/12/2020	-do-
146	Shivaraj Ramapur	60075	-do-	28/12/2020	-do-
147	Vinodh Kumar P N	60074	-do-	28/12/2020	-do-
148	Saniya T K	60081	Microbiology	28/12/2020	-do-
149	S Syam	60080	-do-	28/12/2020	-do-
150	Chandu Anagani	60083	Plant Pathology	28/12/2020	-do-
151	Komal	60082	-do-	28/12/2020	-do-
152	Abshiba	60088	Soil Science	28/12/2020	-do-
153	Deepasree A	60087	-do-	28/12/2020	-do-
154	Adarsha Divyadarshan	60086	-do-	28/12/2020	-do-
155	Aravindh Chinnaiyan	60092	Vegetable Science	28/12/2020	-do-
156	Rachana K S	60091	-do-	28/12/2020	-do-
157	Manoj B P	60090	-do-	28/12/2020	-do-
158	Dharmendra Kumar	70002	Agricultural Engineering	28/12/2020	<b>NIASM, BARAMATI</b>
159	Poulomi Debnath	80002	Agronomy	28/12/2020	<b>NIBSM, RAIPUR</b>
160	Rohan Dalal	80001	-do-	28/12/2020	-do-
161	Priyanshu Pawar	80004	Entomology	28/12/2020	-do-
162	Pravin Panda	80003	-do-	28/12/2020	-do-
163	Deepankar Tiwari	80005	Genetics and Plant Breeding	28/12/2020	-do-

164	Swagata Thakur	80009	Plant Pathology	28/12/2020	-do-
165	Bellary Nunna Hari Vijaya Teja	90004	Genetics and Plant Breeding	28/12/2020	<b>IIAB, RANCHI</b>
166	Shubham Sachan	90003	-do-	28/12/2020	-do-
167	Mahak Anwar	90002	-do-	28/12/2020	-do-

**415.4.14** Award of Institute's Jr. Scholarship @ Rs.7,560/- per month + Rs.6,000/- contingent grant per Annum to 57 candidates admitted at IARI, New Delhi including the students who have been placed under outreach programme at IARI Assam/ IARI Jharkhand/ NIASM Baramati/ NIBSM Raipur/ IIAB Ranchi.

**LIST OF STUDENTS ENROLLED AT IARI NEW DELHI/IARI ASSAM/IARI JHARKHAND/IIAB RANCHI/NIASM BARAMATI/NIBSM RAIPUR IN M.SC. PROGRAMME IN THE ACADEMIC YEAR 2020-2021 ELIGIBLE FOR INSTITUTE SCHOLARSHIP @ Rs. 7560/- P.M. WITH CONTINGENCY @ Rs. 6000/-P.A.**

S. No.	NAME OF THE STUDENT	ROLL NO	DISCIPLINE	DATE_ENROL
1.	Joydeep Karan	21382	Agricultural Chemicals	28/12/2020
2.	Dharini A K	21383	-do-	28/12/2020
3.	Brendon Lalchawimawia	21384	-do-	28/12/2020
4.	JeetramChoudhary	21385	-do-	28/12/2020
5.	Atanu Sarkar	21386	-do-	28/12/2020
6.	Yashaswini S.N	21393	Agricultural Engineering	28/12/2020
7.	RohitAnand	21395	-do-	28/12/2020
8.	ShailendraToppo	21397	-do-	28/12/2020
9.	Uday Kiran M	21398	-do-	28/12/2020
10.	Shaibal Biswas	21409	Agricultural Extension	28/12/2020
11.	BhavyaTr	21412	Agricultural Physics	28/12/2020
12.	AbhilashaKumari	21413	-do-	28/12/2020
13.	Debjyoti Ray	21414	-do-	28/12/2020
14.	Deepti Joshi	21415	-do-	28/12/2020
15.	Unnita Chakraborty	21434	Biochemistry	28/12/2020
16.	Apoorva M S	21456	Environmental Sciences	28/12/2020
17.	Anushka Anil	21457	-do-	28/12/2020
18.	Yadaraboyana Sandeep Kumar	21458	-do-	28/12/2020
19.	Rishabh Srivastava	21460	-do-	28/12/2020
20.	Gulshan	21461	-do-	28/12/2020
21.	Jahid Hassan	21485	Microbiology	28/12/2020
22.	Anamika	21500	Nematology	28/12/2020
23.	Thendral U S	21502	Plant Genetic Resources	28/12/2020
24.	RinkyResma Panda	21503	-do-	28/12/2020
25.	Shashank H G	21504	-do-	28/12/2020
26.	Sridhar A	21505	-do-	28/12/2020
27.	AartiSharadchandraGauns	21511	Plant Pathology	28/12/2020
28.	Dineshkumar G	21516	Plant Physiology	28/12/2020
29.	Rohith R Hegde	21551	-do-	28/12/2020
30.	PrasoonGunjan	21523	Post Harvest Technology	28/12/2020
31.	Brijesh Kumar Yadav	21561	-do-	19/02/2021
32.	Ankiredypalli Jaya Kishore Kumar Reddy	21539	Soil Science	28/12/2020
33.	Dheeraj	21553	Vegetable Science	28/12/2020
34.	SumitJangra	21547	Water Science And Technology	28/12/2020
35.	Arul Selvam K A	21548	-do-	28/12/2020



36.	Chinnali Das	50073	Agronomy	28/12/2020
37.	Abhishek Paul	60061	Agricultural Engineering	28/12/2020
38.	SayakSaha	60063	Agricultural Extension	28/12/2020
39.	Surendhar P	60069	Environmental Sciences	28/12/2020
40.	Ankit Kumar Verma	60070	-do-	28/12/2020
41.	PriyabrataSahu	60084	Seed Science And Technology	28/12/2020
42.	BhavaniKumari	60085	-do-	28/12/2020
43.	SaikatBera	60089	Soil Science	28/12/2020
44.	RajarshiSanyal	90001	Biochemistry	28/12/2020
45.	Yashaswini J	90005	Genetics And Plant Breeding	28/12/2020
46.	SampatiraoDilip	90006	Molecular Biology And Biotechnology	28/12/2020
47.	MalempatiSriharsha	90007	-do-	28/12/2020
48.	Olivia Nianglunhoih	90008	-do-	28/12/2020
49.	PragatiSudhakarGajbhar	90009	-do-	28/12/2020
50.	GoutamGuruprasad Jena	70001	Agricultural Engineering	28/12/2020
51.	Siddesh	70003	Environmental Sciences	28/12/2020
52.	Sadashiva G N	70004	-do-	28/12/2020
53.	Tamilselvan A	70006	Plant Physiology	28/12/2020
54.	Sagar P	70007	Plant Physiology	28/12/2020
55.	Merugu Shashank Goud	80006	Microbiology	19/02/2021
56.	AnikBasak	80007	Molecular Biology And Biotechnology	28/12/2020
57.	LerissaSweetyDsilva	80008	-do-	28/12/2020

**415.4.15** Award of Contingent grant only @ Rs.6,000/- per annum to the following two (IARI) Departmental Technical Candidates working at the same station.

S. No.	NAME OF THE STUDENT	ROLL NO	DISCIPLINE	DATE OF ENROL.
1.	Mukesh Kumar Yadav	21549	Agronomy	03/01/2021
2.	Ram BharosMeena	21552	Soil Science	05/01/2021

**415.4.16** Award of Institute's Jr. Scholarship @ Rs.7,560/- per month + Rs.6,000/- contingent grant per Annum to Following 13 students who were admitted in the discipline of Agricultural Statistics, Bioinformatics and Computer Application will get their Institute Jr. Scholarship from IASRI, New Delhi.

S.NO.	NAME OF THE STUDENT	ROLL NO	DISCIPLINE	DATE OF ENROL.
1.	Ghanshyam Patidar	21418	Agricultural Statistics	28/12/2020
2.	Gunjan	21419	-do-	28/12/2020
3.	Rabsanjani Pramanik	21420	-do-	28/12/2020
4.	Santosh Shivaling Chougala	21422	-do-	28/12/2020
5.	Chandini B C	21436	Bioinformatics	28/12/2020
6.	Madhusudhan Cm	21556	-do-	19/02/2021
7.	Kabilan S	21557	-do-	19/02/2021
8.	Vanaja V	21441	Computer Application	28/12/2020
9.	Pavana B	21442	-do-	28/12/2020
10.	Vivek Dinkar Jadhao	21443	-do-	28/12/2020
11.	Sakshi Rawat	21558	-do-	18/02/2021
12.	Akash	21559	-do-	19/02/2021
13.	Tanvi Kumari	21560	-do-	19/02/2021



***Agenda Item No. 415.5.: Consideration of observation of National Agricultural Education Accreditation Board (NAEAB) of ICAR on granting accreditation to IARI, New Delhi***

The Academic Council was apprised that based on the LoI, IEA, Statement of Compliance and Self Study Report submitted by the University and subsequent report of Peer Review Team, the National Agricultural Education Accreditation Board of ICAR in its XXVII meeting held on 24 February, 2021 approved accreditation of ICAR- Indian Agricultural Research Institute for a period of five years i.e. from 16.03.2020 to 15.03.2025. The University has received overall score of **3.43** equivalent to Grade 'A'.

**Accreditation has been granted with the following conditions:-**

1. The University is required to address the observations of the Board in a time bound manner. As per Board decision, a Mid-term review will be conducted.
2. Board further decided that student intake in the programme and strength of Faculty/technical/supporting staff as listed in Self Study Reports and undertaking given by Registrar during Peer Review, if any, must be maintained by the University/College/Programme throughout the accreditation period.
3. University should annually upload intake of students in all accredited programmes and faculty positions on its website and convey the copy of same to NAEAB before starting of admissions.

The following Degree Programmes were **not approved** as these are not listed in BSMA (ICAR), which is pre-requisite qualification for accreditation:-

- |   |   |                            |
|---|---|----------------------------|
| • Environmental Sciences  | - | M.Sc. (Ag.)                |
|   | - | Ph.D.                      |
| • Post Harvest Technology   | - | M.Sc. (Ag.) PHT Hort. Crop |
| • (PHT; Horticultural Crops; Post Harvest Engineering and Technology) | - | M.Tech. PHT                |
|   | - | Ph.D. in PHT Hort Crop     |
|   | - | Ph.D. in PH-Eng.Tech       |
| • Water Science and Technology  | - | M.Sc. (Ag.)                |
|   | - | Ph.D.                      |

***Agenda Item No. 415.6: Considerations of degree nomenclature of M.Sc. and Ph.D. of PHT discipline.***

The Academic Council discussed the recommendation of the committee constituted under the Chairmanship of Head, Agricultural Engineering and approved the (i) proposed degree nomenclature of M.Sc. Agriculture (Postharvest Technology) and Ph.D. (Postharvest Technology) changed as M.Sc. (Horticulture) Postharvest Management and Ph.D. (Horticulture) Postharvest Management and, (ii) discontinuation of M.Tech. and Ph.D. degree in Postharvest Engineering & Technology.

***Agenda Item No. 415.7 Consideration of the proceedings of the meeting of the Standing Committee on Course Curricula and Academic Affairs held on 17.07.2021 to discuss three non-accredited programmes***

The Academic Council discussed the recommendation of the Standing Committee on three non-accredited programmes in detail and approved the (i) merger of sub-discipline 'Postharvest Technology of Horticultural Crops' with the sub-discipline of Postharvest Management' under the

discipline of Horticultural Science, and (ii) discontinuation of sub-discipline 'Postharvest Engineering & Technology'.

Academic Council was of the opinion that a request could be sent to the Council for retaining the ongoing degree programmes in the discipline of Water Science and Technology and Environmental Sciences.

***Agenda Item No. 415.8: Consideration of the recommendations of the Committee constituted for revision of guidelines of existing institute awards and framing guidelines for new awards***

**415.8.1** The Academic Council after detailed deliberation approved the recommendations of the Committee constituted under the Chairmanship of Dean and Joint Director(Edn.) on the Guidelines, Proforma and allocation of marks for the following three new awards **(Appendix-I)**.

1. Best Woman Scientist Award
2. Dr. H.K. Jain Memorial Young Scientist Award
3. NABARD Young Scientist Award

The Academic Council also decided that (i) three years cooling period for a previous awardee(IARI awards) to apply for any other IARI award, and (ii) an applicant can be eligible to apply for only one award of IARI announced for that particular year.

**415.8.2:** The Academic Council discussed the recommendation of the Committee on the proposal of NABARD for Institution of **NABARD Gold Medal Award** at IARI, New Delhi. The Academic Council decided that the IARI Best Student of the year awardee in M.Sc. and Ph.D. will also be given NABARD Gold Medal award with a cash prize of Rs.25000 to each. The Academic Council also opined that the said Medals may be named as Prof. V.L. Chopra-NABARD Gold Medal, subject to approval from NABARD.

**415.8.3** On the issue of revision of guidelines for the existing awards of IARI, the Academic Council decided that the changes may suitably be incorporated on the line of the above three new awards.

***Agenda Item No. 415.9: Finalization of number of seats for admission to M.Sc./M.Tech. and Ph.D. degree programmes at IARI, New Delhi and at PG outreach institutions for the Academic Session 2021-22***

The Academic Council finalised the number of seats for M.Sc./M.Tech. and Ph.D. programmes in various disciplines at IARI and PG outreach Institutions for the Academic Session 2021-22.

**M.Sc./M.Tech. and Ph.D. Programme:** The seat requirement will be sent to the Education Division of ICAR as they conduct the All India Entrance Examination 2021 for admission of 100% seats at ICAR-DUs.

**Discipline and category wise Seat positions for M.Sc./M.Tech. Programmes at IARI, New Delhi, IARI-Assam and IARI-Jharkhand, NIASM, Baramati, NIBSM, Raipur and IIAB, Ranchi.**



**IARI, NEW DELHI****A - IARI, NEW DELHI**

S. No.	Discipline	GEN	EWS	OBC	SC	ST	PH	Total
1.	AGRICULTURAL CHEMICALS	3	0	2	1	0	1	6
2.	AGRICULTURAL ECONOMICS	3	0	2	0	1	0	6
3.	AGRICULTURAL ENGG. (Processing & Food Engineering)	1	1	1	1	0	0	4
4.	AGRICULTURAL ENGG. (Farm Machinery & Power Engineering)	1	1	1	1	1	0	5
5.	AGRICULTURAL ENGG. (Soil & Water Conservation Engineering)	2	0	2	1	0	1	5
6.	AGRICULTURAL EXTENSION	2	1	2	1	0	1	6
7.	AGRICULTURAL PHYSICS	2	1	1	0	1	0	5
8.	AGRICULTURAL STATISTICS	3	1	2	2	0	1	8
9.	AGRONOMY	3	1	2	1	1	0	8
10.	BIOCHEMISTRY	2	1	1	1	1	0	6
11.	BIOINFORMATICS	2	1	2	1	0	0	6
12.	COMPUTER APPLICATION	2	0	2	2	1	1	7
13.	ENTOMOLOGY	3	1	2	1	1	1	8
14.	ENVIRONMENTAL SCIENCES	4	0	2	1	0	0	7
15.	FLORICULTURE AND LANDSCAPING ARCHITECTURE	3	0	2	1	1	1	7
16.	FRUIT SCIENCE	2	0	2	1	1	0	6
17.	GENETICS AND PLANT BREEDING	3	1	2	1	1	0	8
18.	MICROBIOLOGY	3	1	2	1	0	0	7
19.	MOLECULAR BIOLOGY AND BIOTECHNOLOGY	4	1	3	1	0	0	9
20.	NEMATOLOGY	2	1	1	1	0	0	5
21.	PLANT GENETIC RESOURCES	3	1	1	1	1	0	7
22.	PLANT PATHOLOGY	3	1	2	1	0	1	7
23.	PLANT PHYSIOLOGY	3	0	2	1	1	0	7
24.	POST HARVEST TECH. (PHT of Horticultural Crops)/PHT MANAGEMENT	2	0	2	0	0	0	4
25.	POST HARVEST TECH. (PostHarvest Engineering & Technology)	1	0	0	0	0	0	1
26.	SEED SCIENCE AND TECHNOLOGY	2	1	1	1	0	0	5
27.	SOIL SCIENCE	3	1	2	1	0	1	7
28.	VEGETABLE SCIENCE	3	0	2	2	1	0	8
29.	WATER SCIENCE AND TECHNOLOGY	2	1	1	0	1	0	5
Total-A		72	18	49	27	14	9	180

**B – IARI-ASSAM (M.Sc. 2021-22)**

S. No.	Discipline	GEN	EWS	OBC	SC	ST	PH	Total
1.	AGRONOMY	1	1	1	1	0	0	4
2.	GENETICS AND PLANT BREEDING	1	0	1	0	1	1	3
3.	SOIL SCIENCE	1	0	0	1	0	0	2
4.	VEGETABLE SCIENCE	2	0	1	0	0	0	3
Total-B		5	1	3	2	1	1	12



**C – IARI-JHARKHAND (M.Sc./M.Tech. 2021-22)**

S. No.	Discipline	GEN	EWS	OBC	SC	ST	PH	Total
1.	AGRICULTURAL ENGINEERING (Soil & Water Conservation Engineering)	1	0	0	0	0	0	1
2.	AGRICULTURAL EXTENSION	1	0	1	0	0	0	2
3.	AGRONOMY	1	1	1	0	1	0	4
4.	ENTOMOLOGY	1	0	0	1	0	0	2
5.	ENVIRONMENTAL SCIENCES	1	0	1	0	1	0	3
6.	FRUIT SCIENCE	1	0	1	0	0	1	2
7.	GENETICS AND PLANT BREEDING	1	0	1	1	0	0	3
8.	MICROBIOLOGY	1	1	0	0	0	0	2
9.	PLANT PATHOLOGY	1	0	1	1	0	0	3
10.	SEED SCIENCE AND TECHNOLOGY	1	0	1	0	0	0	2
11.	SOIL SCIENCE	1	0	1	0	0	0	2
12.	VEGETABLE SCIENCE	1	1	0	1	0	0	3
	Total-C	12	3	8	4	2	1	29
	Grand Total=A+B+C	89	22	60	33	17	11	221

**D – NIASM, BARAMATI (M.Sc./M.Tech. 2021-22)**

S. No.	Discipline	GEN	EWS	OBC	SC	ST	PH	Total
1.	AGRICULTURAL ENGINEERING (Soil & Water Conservation Engineering)	1	1	1	0	0	0	3
2.	ENVIRONMENTAL SCIENCES	1	0	1	1	0	0	3
3.	PLANT PHYSIOLOGY	1	0	1	1	1	1	4
	Total-D	3	1	3	2	1	1	10

**E – NIBSM, RAIPUR (M.Sc. 2021-22)**

S. No.	Discipline	GEN	EWS	OBC	SC	ST	PH	Total
1.	AGRONOMY	1	0	0	1	0	0	2
2.	ENTOMOLOGY	1	1	1	0	1	0	4
3.	GENETICS AND PLANT BREEDING	1	0	1	0	0	0	2
4.	MICROBIOLOGY	1	0	1	0	0	0	2
5.	MOLECULAR BIOLOGY AND BIOTECHNOLOGY	2	1	0	1	0	1	4
6.	PLANT PATHOLOGY	1	0	1	0	0	0	2
	Total-E	7	2	4	2	1	1	16

**F – IIAB, RANCHI (M.Sc. 2021-22)**

S. No.	Discipline	GEN	EWS	OBC	SC	ST	PH	Total
1.	BIOCHEMISTRY	0	0	0	0	0	0	0
2.	GENETICS AND PLANT BREEDING	1	0	1	1	1	1	4
3.	MOLECULAR BIOLOGY AND BIOTECHNOLOGY	2	1	2	1	0	0	6
	Total-F	3	1	3	2	1	1	10

**Discipline and category wise Seat positions for Ph.D. Programmes at IARI, New Delhi, IARI PG outreach programme at CIAE and IIHR.**



**A - IARI, NEW DELHI**

S. No.	Discipline	GEN	EWS	OBC	SC	ST	PH	Total
1.	AGRICULTURAL CHEMICALS	4	1	3	1	0	0	9
2.	AGRICULTURAL ECONOMICS	3	1	2	1	1	0	8
3.	AGRICULTURAL ENGG. (Processing & Food Engg.)	2	1	0	2	0	0	5
4.	AGRICULTURAL ENGG. (Farm Machinery & Power Engg)	3	0	2	1	1	1	7
5.	AGRICULTURAL ENGG. (Soil & Water Conservation Engg.)	2	0	2	1	0	0	5
6.	AGRICULTURAL EXTENSION	4	1	3	2	0	1	10
7.	AGRICULTURAL PHYSICS	2	1	2	1	0	0	6
8.	AGRICULTURAL STATISTICS	3	1	3	1	1	1	9
9.	AGRONOMY	5	2	3	2	1	1	13
10.	BIOCHEMISTRY	4	1	2	1	1	0	9
11.	BIOINFORMATICS	2	0	2	1	1	0	6
12.	COMPUTER APPLICATION	3	1	2	1	1	1	8
13.	ENTOMOLOGY	4	1	3	1	1	1	10
14.	ENVIRONMENTAL SCIENCES	2	1	2	1	1	0	7
15.	FLORICULTURE AND LANDSCAPING ARCHITECTURE	2	1	2	1	1	0	7
16.	FRUIT SCIENCE	4	1	3	2	0	0	10
17.	GENETICS AND PLANT BREEDING	7	1	4	3	1	1	16
18.	MICROBIOLOGY	4	1	2	1	1	1	9
19.	MOLECULAR BIOLOGY AND BIOTECHNOLOGY	5	1	3	2	1	1	12
20.	NEMATOLOGY	3	1	2	1	0	0	7
21.	PLANT GENETIC RESOURCES	4	0	2	1	1	0	8
22.	PLANT PATHOLOGY	6	1	4	2	1	1	14
23.	PLANT PHYSIOLOGY	3	1	2	1	0	0	7
24.	POSTHARVEST TECH. (PHT of Horticultural Crops)/POSTHARVEST MANAGEMENT	2	1	2	0	1	0	6
25.	SEED SCIENCE AND TECHNOLOGY	4	1	3	2	1	1	11
26.	SOIL SCIENCE	6	1	4	2	1	1	14
27.	VEGETABLE SCIENCE	5	1	3	2	1	1	12
28.	WATER SCIENCE AND TECHNOLOGY	2	1	1	1	0	0	5
<b>Total-A</b>		<b>100</b>	<b>25</b>	<b>68</b>	<b>38</b>	<b>19</b>	<b>13</b>	<b>250</b>

**B – CIAE, BHOPAL**

S. No.	Discipline	GEN	EWS	OBC	SC	ST	PH	Total
1.	AGRICULTURAL ENGG. (Processing & Food Engg.)	1	0	0	1	0	0	2
2.	AGRICULTURAL ENGG. (Farm Machinery & Power Engg.)	1	0	2	0	1	0	4
3.	AGRICULTURAL ENGG. (Soil & Water Conservation Engg.)	1	1	1	1	0	1	4
<b>Total-B</b>		<b>3</b>	<b>1</b>	<b>3</b>	<b>2</b>	<b>1</b>	<b>1</b>	<b>10</b>

**C – IIHR, BENGALURU**

S. No.	Discipline	GEN	EWS	OBC	SC	ST	PH	Total
1.	FLORICULTURE AND LANDSCAPING ARCHITECTURE	1	1	1	1	0	0	4
2.	FRUIT SCIENCE	1	1	1	0	1	0	4
3.	POST HARVEST TECH. (PHT of Horticultural Crops)/POSTHARVEST MANAGEMENT	2	0	1	1	0	1	4
4.	VEGETABLE SCIENCE	3	0	1	0	0	0	4
<b>Total-C</b>		<b>7</b>	<b>2</b>	<b>4</b>	<b>2</b>	<b>1</b>	<b>1</b>	<b>16</b>
<b>Grand Total= A+B+C</b>		<b>110</b>	<b>28</b>	<b>75</b>	<b>42</b>	<b>21</b>	<b>15</b>	<b>276</b>

In addition to the seats finalized for open stream, seats for admission to M.Sc./M.Tech. & Ph.D. programmes under Different Schemes are detailed below:

Faculty Up-gradation Scheme	-	10 seats for Ph.D.
ICAR-In-Service Nominee Scheme	-	10 seats for Ph.D.
Departmental (Scientific)	-	10 seats for Ph.D.
Departmental (Technical)	-	10 seats (5 seats each for M.Sc./M.Tech.& Ph.D.)
Foreign Students	-	30 seats for M.Sc./M.Tech.& Ph.D.
J & K migrants	-	10 seats (5 seats each for M.Sc./M.Tech. & Ph.D.)
Children/widows of Security Forces	-	5 seats for M.Sc./M.Tech. & Ph.D.

***Agenda Item No.415.10: Any other item with the permission of the Chair***

- 415.10.1** As envisaged in the NEP 2020, the Academic Council decided to initiate Diploma and PG Diploma Courses at IARI, in some of the areas like (i) Organic Farming; (ii) Good Agriculture Practices for Basmati rice cultivation, etc. The Academic Council authorized the Chairman to constitute a committee to come up with suitable suggestion/recommendation.
- 415.10.2** In the existing procedure of the selection of Professors for different teaching disciplines, the Academic Council revised the assessment criteria of 80 % weightage to achievements in teaching, research & extension and 20 % weightage to interview to 70% and 30 %, respectively. The existing five year tenure shall remain unchanged.

The meeting ended with the vote of thanks to the Chair.

  
(Pushendra Kumar)  
Member-Secretary

  
(A.K. Singh)  
Chairperson

  
(Rashmi Aggarwal)  
Vice Chairperson

## Guidelines governing “Best Woman Scientist Award”

### 1. Name of the Award

The name of the award shall be ‘Best Woman Scientist Award’ for outstanding agricultural scientist in the field of Agricultural Sciences covering all the disciplines

### 2. Sources of Funds

Rs. 15,00,000/- Revenue receipt head of IARI for the year 2020-21 (code No.501/114199)

### 3. Nature of the Award

The award will carry a sum of Rs. 50,000 (Fifty thousand rupees only) and a Certificate for the outstanding contributions in any of the branches of Agricultural Sciences.

### 4. Objective of the Award

To motivate the Agricultural Women Scientists/Faculty from the NARES by recognizing their outstanding contributions in agricultural research, education and extension in India; leadership role in Institution building.

The award shall be given for fundamental or applied research leading to results of practical value with original contributions in research, education and extension.

### 5. Periodicity of the Award

The periodicity of the award shall be biennium, commencing from the year 2021-22.

### 6. Eligibility for the Award

Applicant should be an active Scientist, age limit 62 years and should have outstanding contributions to agricultural research, education and extension in any field of agricultural sciences while working in India.

### 7. Administration of the Award

The right to designate the general fields of endeavor in which the award shall be made will lie with IARI.

The Institute shall have the sole right of selection of recipients of the award and of the formulation of Rules and Eligibility governing such selection from time to time.

### 8. Screening Committee

The Dean & Joint Director (Edn.) will constitute a Screening Committee consisting of 5 (five) members concerning the major areas in the respective year for scrutinizing and scoring the applications. The quorum of the Screening Committee for finalizing the recommendation shall be at least 4 members including Chair & Member-Secretary.

### 9. Judging Committee

There will be a Judging Committee consisting of at least 5 (five) members. The Chairperson of the Academic Council will nominate the Chairperson for the Judging Committee and its members relevant to the subject area in the respective year. Dean and Joint Director (Edn.), IARI will be the Member-Secretary of the Committee. The quorum of the Judging Committee for finalizing the recommendation shall be at least 4 members including Chairperson & Member- Secretary.

If any member of the Judging Committee himself/herself is to be considered for the award, he/she shall cease to be a member of the committee and replaced by a Scientist/member nominated by the Chairperson, Academic Council in his/her place.

The Judging Committee shall recommend the name of the recipient for the award in accordance with procedure laid down here in after for approval of the Director, IARI.

The Award shall be withheld by the Judging Committee if in their opinion no sufficiently meritorious candidate is forthcoming in that year.

The award shall be given to only one person at one time and will not be shared.

#### **10. Procedure for selection of recipient**

Applications are invited from the women scientists from all branches of Agricultural Sciences for the above award duly forwarded through concerned authorities. Duly filled application as per the prescribed format accompanied with detailed statement of the work and attainments of the candidate along with supporting documents should be submitted on or before the prescribed date.

The Judging Committee shall recommend the name of the recipient for the award from the eligible and shortlisted applicants who secured a minimum of 75% marks as per score card.

Only after the acceptance of the Recommendations of the Judging Committee by the Academic Council, the award shall be announced.

#### **11. Presentation of the Award**

The award shall be conferred during the Convocation of the Institute.

The expenditure relating to the arrangements for the Award and the TA/DA to be paid to the Awardee will be as per the ICAR rules and be met out from the interest accrued from the deposit.

**Note:** Three years cooling period for a previous awardee(IARI awards) is essential to apply for any other IARI award. An applicant is eligible to apply for only one award of IARI announced for that particular year.





**Post Graduate School  
Indian Agricultural Research Institute  
New Delhi**



**Proforma for 'Best Women Scientist Award'**

Photograph

Name of the Institute Forwarding application: \_\_\_\_\_

Field/Discipline: \_\_\_\_\_

1. Name of the Candidate: \_\_\_\_\_  
(First) (Middle) (Surname)

2. Designation:

3. Address:

4. Contacts: **Office:**  
Tel.: \_\_\_\_\_ Fax: \_\_\_\_\_  
E-mail: \_\_\_\_\_  
**Res.:**  
Tel.: \_\_\_\_\_ Fax: \_\_\_\_\_  
E-mail: \_\_\_\_\_

5. Date of birth: \_\_\_\_\_  
(Please provide the proof) (Day) (Month) (Year)

**6. (a) Academic qualifications**

Degree/Diploma	Year	Major field	University/ Institution	Division/OGPA Distinction
Graduation				
Masters				
Ph.D.				
Any other degree/diploma				
Post-Doctoral Experience				

**(b) Training in India and/or abroad (In the area relevant to the award)**

Training title	Institution/Country	Sponsored by	Duration	Subject

**7. Employment record**

Designation	Pay scale	Nature of work	Institute (Organization)	Period
-------------	-----------	----------------	--------------------------	--------

	(Rs.)			(From - To)

## 8. Achievements

### (a) Most significant achievements in Research and extension

Sl.	Item*	Details of significant achievements including social impact/adaptation*	Developer/ Co-developer
1.	Product/Patent/ Variety/Prototype developed		
2.	New Concept / Methodology/ Process/ Model developed		
3.	Copyright/software/database/trademark/ app		
4.	Patents granted with details of Patent No.		

*\*Documentary evidence should be enclosed for the above claims*

### (b) Teaching achievements

S.No.	Item	Detail	Year
1.	Courses taught and number of classes taken in each course		
2.	M.Sc./M.Tech./Ph.D. Students Guided as Chairperson		
3.	Development of e-course/training module/New Course introduced or Course(s) revised		
4.	Success of students in academics (in terms of their recognition for Awards)		
5.	Organization of training /Summer or Winter school/ CAFT for a duration of minimum 10 days as Course Coordinator/Course Director		

Documentary evidence should be provided

### (c) Please state the most significant achievements (*Not more than 300 words*)

### 9. (a) List 30 most important & highest NAAS rated publications in chronological order made in the major discipline (attach first page of all these reprints)

S.No.	Names	Year of	Title	Journal,	NAAS	Number of	Indicate if
-------	-------	---------	-------	----------	------	-----------	-------------

	of authors	publication	of paper	Volume, issue & page Nos.	Journal ID and NAAS Score 2021	citations based on ISI Science Citation Index	Corresponding author
1							
2							
3							
4							
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**9 (b) Other publications:**

S. No.	Item	Detail
1	Authored books with ISBN number (min. 200 pages)	
2	Edited books with ISBN number (min. 200 pages)	
3	Policy paper	
4	Scientific review papers in peer reviewed journal	
5	Book chapter	
6	Popular article	

**9 (c) Externally funded projects handled as PI**

S.No.	Name of the project	Funding agency	Budget	Duration
1				
2				
3				
4				
5				

*Documentary evidence should be provided*

#### **9 (d) Leadership role in institution building**

S. No.	Category	Details
1	Chairperson/member of International/National Level Committees	
2	Member BoM/IMC, RAC, QRT, or equivalent	
3	Administrative positions (Head of the institution/university; Dean/Joint Director/Director (Research); Head of the Division)	
4	Institute level Committees	
5	Creation of new infrastructure/Lab/facility (above 50 Lakhs)	
6	Symposia/seminar/workshop/conference as organizing secretary/convenor	

*Documentary evidence should be provided*

#### **10. Awards and Recognitions**

S. No.	Name of the Award/recognitions	Year	National/ International	Awarding Academy/Institution/ Professional Society/Government agency
1				
2				
3				

*Documentary evidence should be provided*

**11. Please mention if this work has been submitted/ recognized for any other award.**

**12. Any other information**

This is certified that all the information furnished by me is correct to the best of my knowledge and belief.

**Place:**

**Date:**

**Name:**

**(Signature of the applicant)**

*"Certified that the information given by the candidate in this application has been verified and fully authenticated and that there is no disciplinary action or proceedings pending or contemplated against the candidate.*



**Recommendation of the Head of the Institution**

**(Signature)  
& Seal**

*Enclosures:*

1. Application in original, duly forwarded and complete in all respect (2 hard copies and a soft copy)
2. Reprints (first page) of the 30 most important papers listed at Sl. No. 9(a) of application
3. Documentary proof for the claims made in respect of Awards/recognition, technology, product, patent, externally funded projects handled etc.

### Allocation of marks (Best Women Scientist Award)

Sl. No.	Criteria	Maximum Marks	Weightage
1	<b>Research achievements:</b> (i) Products/ variety/Technology (ii) New Concept / Methodology/ Process/ Model developed/Novel Omics data (iii) Patents granted (iv) Copyright/software/database/app	25	
2	Teaching achievements	15	
3	Publications	25	
5	External funded projects handled as PI	10	
6	Leadership role in institution building	15	
7	Awards/Recognitions	10	
	<b>Total Marks</b>	<b>100</b>	
			<b>80%</b>
	Weightage for Judging Committee		<b>20%</b>

#### Research achievements (Maximum 25 Marks):

- (i) Developer of commercialized product or technology/Gazette Notified plant variety (CVRC/SVRC) (5 marks each); Genetic stock registered (1 Mark each); new record of pathogen/pest/microbe/bio-agent along with accession numbers (2 Marks each).
- (ii) New Concept / Methodology/ Process/ Model developed/Novel omics data. All claims in this category should be supported by research publications in peer reviewed journals with citations  $\geq 10$  (excluding self-citations) (3 Marks each)
- (iii) Copyright/software/database/app (3 marks each)
- (iv) Patents granted with details of Patent No. (5 marks for each patent).

Developer shall be awarded 100% marks, Co-developer shall be awarded 75% marks.

Documentary evidence should be enclosed for all claims.

#### Teaching achievements (Maximum 15 Marks):

- (i) Courses taught and number of classes taken in each course (Maximum 5 marks): *Full marks, if taken at least 30 classes in a year, for a minimum of 5 years.*
- (ii) M.Sc. /M.Tech/ Ph.D. Students (Full time) Guided as Chairperson (Maximum 4 marks): *Give thesis titles. 1 marks for each M.Sc./M.Tech. and 2.0 marks for each Ph.D. student guided as Chairperson.*
- (iii) Development of e-course/training module/New Course introduced or Course(s) revised (one mark each; Maximum 2 marks)
- (iv) Success of students in academics (in terms of their recognition for Awards) (Maximum 2 marks): *Institute level Medals, ICAR/ Institutional Awards, etc. (1 mark each).*
- (v) Organization of training /Summer or Winter school/ CAFT for a duration of minimum 10 days as Course Coordinator/Course Director (2 marks each).

#### Publications (Maximum 25 marks)

- (i) For 30 most important publications in the relevant discipline of the applicant: Cumulative NAAS Score  $\times 0.033$  (Maximum 20 Marks).
- (ii) First / corresponding author will get full marks in a publication and rest of the authors 75% marks.
- (iii) Other publications (Maximum 5 Marks): Authored book with ISBN number (min. 200 pages): 2 marks each; Edited book with ISBN number (min. 200 pages): 1 mark each ; Policy paper: 1 mark each; 0.5 mark each for scientific review paper in a peer reviewed journal, Book chapter/Popular article: 0.25 Mark each.

**Externally funded projects including consultancy/contract research handled as PI (Maximum 10 marks)**

- (i) Projects costing <10 Lakhs: 1 Marks each
- (ii) Projects costing 10-30 Lakhs: 2 Marks each
- (iii) Projects costing >30 Lakhs: 3 Marks each

**Leadership role in institution building (Maximum 15 marks)**

- (i) Chairperson/member of International/National Level Committees (Chairperson: 2 marks each; member: 1 mark each)
- (ii) Member BoM/IMC, RAC, QRT, or equivalent (One mark each)
- (iii) Administrative positions (Head of the institution/university: 3 marks for each completed year; Dean/Joint Director/Director (Research): 2 mark for each completed year; Head of the Division: One mark for each completed year)
- (iv) Institute level Committees (Chairperson: 2 marks each; Member: 1 mark each)
- (v) Creation of new infrastructure/Lab/facility (above 50 Lakhs) (2 marks each)
- (vi) Symposia/seminar/workshop/conference as organizing secretary/convenor (National: 1 mark each; International: 2 marks each)

**Awards/Recognitions (Maximum 10 marks)**

- (i) Awards by ICAR, CSIR, DST, DBT, NRDC, National Science Academies, etc. (full marks to Individual; 50% marks to the Associates of the Team Award) (2.5 marks each).
- (ii) Fellowship of National Science Academies (5 marks each).
- (iii) Associateship/Young Scientist awards of National Science Academies (2 Marks each)
- (iv) Post-Doctoral fellowship for a period of minimum 6 months (2 marks each)
- (v) National and International level Professional Society and Academy Awards/ Recognition (not covered above) (1 mark each).

## **Guidelines governing “Dr. H.K. Jain Memorial Young Scientist Award”**

### **1. Name of the Award**

The name of the award shall be ‘**Dr. H.K. Jain Memorial Young Scientist Award**’ which is instituted in the field of Agricultural Sciences covering the disciplines related to basic and applied sciences to commemorate the memory of late Dr. H.K. Jain, former Director of Indian Agricultural Research Institute, New Delhi.

### **2. Donor of the Award**

Rs. 15,00,000/- donated by Mrs. Neera Jain, Daughter of late Dr. H.K. Jain.

### **3. Nature of the Award**

The award will carry a sum of Rs. 50,000 (Fifty thousand rupees only) and a Certificate for the outstanding contributions in any of the branches of Agricultural Sciences.

### **4. Objective of the Award**

To motivate the young Agricultural Scientists/ Faculty from the NARES by recognizing their outstanding contributions to agricultural research, education and extension in India.

The award shall be given for either fundamental or applied research including inventions, discoveries, etc. leading to results of practical value with original contributions in research, education and extension pertaining to the concerned discipline covering basic and applied sciences.

### **5. Periodicity of the Award**

The periodicity of the award shall be annual, commencing from the year 2021-22.

### **6. Eligibility for the Award**

Applicant should be an active Scientist/Faculty, age limit 40 years and should have outstanding contributions to agricultural research, education and extension in any field of basic and applied sciences, while working in India.

The award shall be made for notable or original research in both fundamental and applied areas in a particular subject. Claims should be as evidenced by published research papers, patents or any other publications demonstrating outstanding research work, inventions or discoveries, original contributions in upliftment of education and extension activities in the field of Agriculture (Crop sciences)/Horticulture.

However, contributions or achievements of applicants which have received any other Institutional/ National/ International award, shall not be considered for this Award.

### **7. Administration of the Award**

IARI shall retain the right to designate the general fields of endeavor in which the award shall be made.

The Institute shall have the sole right of selection of recipients of the award and of the formulation of Rules and Eligibility governing such selection from time to time.

### **8. Screening Committee**

The Dean & Joint Director (Edn.) will constitute a Screening Committee consisting of 5 (five) members concerning the major areas in the concerning year for scrutinizing and scoring the applications. The quorum of the Screening Committee for finalizing the recommendation shall be at least 4 members including Chair & Member-Secretary.

### **9. Judging Committee**

There will be a Judging Committee consisting of at least 5 (five) members. The Chairperson of the Academic Council will nominate the Chairperson for the Judging Committee and its members concerning the subject



area in the concerned year. Dean and Joint Director (Edn.), IARI will be the Member-Secretary of the Committee. The quorum of the Judging Committee, for finalizing the recommendation shall be at least 4 members including Chairperson & Member-Secretary.

If any member of the Judging Committee himself/ herself is to be considered for the award, he/she shall cease to be a member of the committee and replaced by a Scientist/ member nominated by the Chairperson, Academic Council in his/ her place.

The Judging Committee shall recommend the name of the recipient for the award in accordance with procedure laid down hereinafter for approval of the Director, IARI.

The Award shall be withheld by the Judging Committee if in their opinion no sufficiently meritorious candidate is forthcoming in that year.

The award shall be given to only one person at one time and will not be shared.

#### **10. Procedures for selection of recipient**

Applications are invited from scientists in the field of Agriculture (Crop sciences)/Horticulture for the above award duly forwarded through competent authorities. Duly filled applications as per the prescribed format accompanied with detailed statement of the work and attainments of the candidate along with supporting documents should be submitted on or before the prescribed date.

The Judging Committee shall recommend the name of the recipient for the award from the eligible and shortlisted applicants who secured a minimum of 75% marks as per score card.

Only after the acceptance of the Recommendations of the Judging Committee by the Academic Council, the award shall be announced.

#### **11. Presentation of the Award**

The award shall be conferred during the Convocation of the Institute.

The expenditure related to the arrangements for the Award and the TA/DA to be paid to the Awardee will be as per the ICAR rules and be met out from the interest accrued from the donated seed money.

**Note:** Three years cooling period for a previous awardee(IARI awards) is essential to apply for any other IARI award. An applicant is eligible to apply for only one award of IARI announced for that particular year.



**Post Graduate School  
Indian Agricultural Research Institute  
New Delhi**



**Proforma for Dr. H. K. Jain Memorial Young Scientist Award**

Photograph

Name of the Institute Forwarding application: \_\_\_\_\_

Field/Discipline: \_\_\_\_\_

1. Name of the Candidate: \_\_\_\_\_  
(First) (Middle) (Surname)

2. Designation:

3. Address:

4. Contacts: **Office:**  
Tel.: \_\_\_\_\_ Fax: \_\_\_\_\_  
E-mail: \_\_\_\_\_  
**Res.:**  
Tel.: \_\_\_\_\_ Fax: \_\_\_\_\_  
E-mail: \_\_\_\_\_

5. Date of birth: \_\_\_\_\_  
(Please provide the proof) (Day) (Month) (Year)

**6. (a) Academic qualifications**

Degree/Diploma	Year	Major field	University/ Institution	Division/ Distinction
Graduation				
Masters				
Ph.D.				
Any other Degree/Diploma				
Post-Doctoral Experience				

**(b) Training in India and/or abroad (In the area relevant to the award)**

Training title	Institution/Country	Sponsored by	Duration	Subject

**7. Employment record**

Designation	Pay scale	Nature of work	Institute (Organization)	Period
-------------	-----------	----------------	--------------------------	--------

	(Rs.)			(From - To)

## 8. Achievements

### (a) Most significant achievements in Research and Extension

Sl. No.	Item*	Details of the significant achievements including social impact/adaptation*	Developer/ Co-developer
1	Product/Patent/ Variety		
2	New Concept / Methodology/ Process/ Model developed/Novel Omics data generated		
3	Copyright/software/database/app		
4	Patents granted with details of Patent No.		

*\*Documentary evidence should be enclosed for the above claims*

### (b) Most significant achievements in Teaching

Sl.No.	Item	Detail	Year
1.	Courses taught and number of classes taken in each course		
2.	M.Sc./M.Tech./Ph.D. Students Guided as Chairperson		
3.	Development of e-course/training module/New Course introduced or Course(s) revised		
4.	Success of students in academics (in terms of their recognition for Awards)		
5.	Organization of training /Summer or Winter school/ CAFT for a duration of minimum 10 days as Course Coordinator/Course Director		

### (c) Please state the most Significant achievements (*Not more than 300 words*)

--

### 9. (a) List 20 most important & highest NAAS rated publications in chronological order made in the major discipline (attach first page of these reprints)

Sl. No.	Name of author(s)	Year of publication	Title of the paper	Journal, Volume, issue & page Nos.	NAAS Journal ID and NAAS Score	Number of citations based on ISI Science Citation Index	Indicate if Corresponding author
1							

2							
3							
4							
5							
6							
7							
8							
9							
10							
11							
12							
13							
14							
15							
16							
17							
18							
19							
20							

**9 (b) Other publications:**

S. No.	Item	Detail
1	Authored books with ISBN number (min. 200 pages)	
2	Edited books with ISBN number (min. 200 pages)	
3	Policy paper	
4	Scientific review papers in peer reviewed journal	
5	Book chapter	
6	Popular article	

**9 (c) Externally funded projects handled as PI**

S.No.	Name of the project	Funding agency	Budget	Duration

Documentary evidence should be provided

**10. Awards and recognitions received**

Sl. No.	Name of the Award/ Recognition	Year	National/ International	Awarding Academy/ Institution/ Professional Society/Government agency
1				
2				



3				
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**11. Please mention if this work has been submitted/ recognized for any other award.**

**12. Any other information**

This is certified that all the information furnished by me is correct to the best of my knowledge and belief.

**Place:** **Date:** **Name:** **(Signature of the applicant)**

*“Certified that the information given by the candidate in this application has been verified and fully authenticated and that there is no disciplinary action or proceedings pending or contemplated against the candidate.*

**Recommendation of the Head of the Institution**

**(Signature)  
& Seal**

***Enclosures:***

1. Application in original, duly forwarded and complete in all respect (2 hard copies and one soft copy)
2. Reprints (first page) of the 20 most important papers listed at Sl. No. 9(a) of application
3. Documentary proof for the claims made in respect of Awards/recognitions, technology, product, patent, externally funded projects handled, etc.

**Allocation of marks (Dr. H.K. Jain Memorial Young Scientist Award)**

Sl. No.	Criteria	Maximum Marks	Weightage
1	<b>Research achievements:</b> (i) Products/ variety/Technology (ii) New Concept / Methodology/ Process/ Model developed/Novel Omics data generated (iii) Patents granted (iv) Copyright/software/database/app	20	
3	Teaching achievements	20	
4	Research Publications	35	
5	Other publications	10	
6	Awards/Recognitions	5	
7	External funded projects handled as PI	10	
	<b>Total Marks</b>	<b>100</b>	
	<b>Weightage for Judging Committee</b>		<b>80%</b>
			<b>20%</b>

**Research achievements (Maximum 20 Marks):**

- (i) Developer of a commercialized product or technology/Gazette Notified plant variety (CVRC/SVRC) (5 marks each); Genetic stock registered (1 Mark each); new record of pathogen/pest/microbe/bio-agent along with accession numbers (2 Marks each).
  - (ii) New Concept / Methodology/ Process/ Model developed/Novel omics data. All claims in this category should be supported by research publications in peer reviewed journals with citations  $\geq 10$  (excluding self-citations) (3 Marks each)
  - (iii) Copyright/software/database/app (3 marks each)
  - (iv) Patents granted with details of Patent No. (5 marks for each patent).
- Developer shall be awarded 100% marks, Co-developer shall be awarded 75% marks.  
Documentary evidence should be enclosed for all claims.

**Teaching achievements (Maximum 20 Marks):**

- (i) Courses taught and number of classes taken in each course (Maximum 5 marks): Full marks, if taken at least 30 classes in a year, for a minimum of 5 years.
- (ii) M.Sc. /M.Tech./ Ph.D. Students (Full time) Guided as Chairperson (Maximum 6 marks): Give thesis titles. 2 marks for each M.Sc./M.Tech. and 4.0 marks for each Ph.D. student guided as Chairperson.
- (iii) Development of e-course/training module/New Course introduced or Course(s) revised (one mark each; Maximum 3 marks)
- (iv) Success of students in academics (in terms of their recognition for Awards) (Maximum 3 marks): Institute level Medals, ICAR/ Institutional Awards, etc. (1 mark each).
- (v) Organization of training /Summer or Winter school/ CAFT for a duration of minimum 10 days as Course Coordinator/Course Director (3 marks each).

**Research Publications (Maximum 35 marks)**

- (i) For 20 most important publications in the relevant discipline of the applicant: Cumulative NAAS Score  $\times 0.0875$
- (ii) First / corresponding author will get full marks in a publication and rest of the authors 75% marks.

**Other publications (Maximum 10 marks)**

- (i) Authored book with ISBN number (min. 200 pages): 2 marks each; Edited book with ISBN number (min. 200 pages): 1 mark each ; Policy paper: 1 mark each; 0.5 mark each for scientific review paper in a peer reviewed journal, Book chapter/Popular article: 0.25 Mark each

**Awards/Recognitions (Maximum 5 marks)**

- (i) Awards by ICAR, CSIR, DST, DBT, NRDC, National Science Academies, etc. (full marks to Individual; 50% marks to the Associates of the Team Award) (2.5 marks each).
- (ii) Fellowship of the National Science Academies (5 marks each).
- (iii) Associateship/Young Scientist awards of the National Science Academies (2 Marks each)
- (iv) Post-Doctoral fellowship for a period of minimum 6 months (2 marks each)
- (v) National and International level Professional Society and Academy Awards/ Recognition (not covered above) (1 mark each).

**Externally funded projects including consultancy/contract research handled as PI (Maximum 10 marks)**

- (i) Projects costing <10 Lakhs: 1 Marks each
- (ii) Projects costing 10-30 Lakhs: 2 Marks each
- (iii) Projects costing >30 Lakhs: 3 Marks each

## **Guidelines governing “NABARD Scientist of the Year Award”**

### **1. Name of the Award**

The name of the award shall be ‘NABARD Scientist of the Year Award’ which is instituted for the field of Outstanding Work on Rural Credit related issues.

### **2. Donor of the Award**

Rs. 20,00,000/- endowment amount from NABARD.

### **3. Nature of the Award**

The award will carry a sum of Rs. 50,000 (fifty thousand rupees only) and a Certificate for the outstanding contributions in any of the branches of Agricultural Sciences impacting the above issue.

### **4. Objective of the Award**

To motivate the young Agricultural Scientists by recognizing their outstanding contributions in the field of rural credit/ related issues in India.

This will help in pro-poor and pro-farmer policy formulation and move towards achieving the goal of ‘inclusive and sustainable development through credit.’

### **5. Periodicity of the Award**

The periodicity of the award shall be annual, commencing from the year 2021-22.

### **6. Eligibility for the Award**

Applicant should be an active scientist, age limit 40 years and should have outstanding research contributions in the area of rural credit related issues while working in India.

However, contributions or achievements which have already received any other award shall not be eligible for consideration of this Award.

### **7. Administration of the Award**

The right to designate the general fields of endeavor in which the award shall be made will lie with IARI.

The Institute shall have the sole right of selection of recipients of the award and of the formulation of Rules and Eligibility governing such selection from time to time.

### **8. Screening Committee**

The Dean & Joint Director (Edn.) will constitute a Screening Committee consisting of 5 (five) members concerning the major areas to the concerning year for scrutinizing and scoring the applications. The quorum of the Screening Committee, for finalizing the recommendation shall be at least 4 members including Chair & Member-Secretary.

### **9. Judging Committee**

There will be a Judging Committee consisting of at least 5 (five) members. The Chairperson of the Academic Council will nominate the Chairperson for the Judging Committee and its members concerning the subject area in the concerned year. Dean and Joint Director (Edn.), IARI will be the Member-Secretary of the Committee. The quorum of the Judging Committee, for finalizing the recommendation shall be at least 4 members including Chairperson & Member- Secretary.

If any member of the Judging Committee himself/herself is to be considered for the award, he/she shall cease to be a member of the committee and replaced by a Scientist/Member nominated by the Chairperson, Academic Council in his/her place.



The Judging Committee shall recommend the name of the recipient for the award in accordance with procedure laid down hereinafter for approval of the Director, IARI.

The award may be withheld in any year, if no candidate is found suitable, in the opinion of the judging committee, in that year.

The award shall be given to only one person at one time and will not be shared.

#### **10. Procedures for selection of recipient**

Applications are invited from scientists of all branches of Agricultural Sciences for the above award duly forwarded through competent authorities. Duly filled applications as per prescribed form accompanied with detailed statement of the work and attainments of the candidate along with supporting documents should be submitted on or before the prescribed date.

The Judging Committee shall recommend the name of the recipient for the award from the eligible and shortlisted applicants who secured a minimum of 75% marks as per score card.

The Award shall be withheld by the Judging Committee if in their opinion no sufficiently meritorious candidate is forthcoming in that year.

Only after the acceptance of the Recommendations of the Judging Committee by the Academic Council, the award shall be announced.

#### **11. Presentation of the Award**

The award shall be conferred during the Convocation of the Institute.

The expenditure relating to the arrangements for the Award and the TA/DA to be paid to the Awardee will be as per the ICAR rules and be met out from the interest accrued from the donated seed money.

**Note:** Three years cooling period for a previous awardee(IARI awards) is essential to apply for any other IARI award. An applicant is eligible to apply for only one award of IARI announced for that particular year.



**Post Graduate School  
Indian Agricultural Research Institute  
New Delhi**



**Proforma for NABARD Scientist of the Year Award**

Name of the Institute Forwarding application: \_\_\_\_\_

Photograph

Field/Discipline: \_\_\_\_\_

1. Name of the Candidate: \_\_\_\_\_  
(First) (Middle) (Surname)

2. Designation: \_\_\_\_\_

3. Address: \_\_\_\_\_

4. Contacts: **Office:**  
Tel.: \_\_\_\_\_ Fax: \_\_\_\_\_  
E-mail: \_\_\_\_\_  
**Res.:**  
Tel.: \_\_\_\_\_ Fax: \_\_\_\_\_  
E-mail: \_\_\_\_\_

5. Date of birth: \_\_\_\_\_  
(Please provide the proof) (Day) (Month) (Year)

**6. (a) Academic qualifications**

Degree/Diploma	Year	Major field	University/ Institution	Division/ Distinction
Graduation				
Masters				
Ph.D.				
Any other degree/diploma				
Post-Doctoral Experience				

**(b) Training in India and/or abroad (In the area relevant to the award)**

Training title	Institution/Country	Sponsored by	Duration	Subject

**7. Employment record**

Designation	Pay scale (Rs.)	Nature of work	Institute (Organization)	Period (From - To)


## 8. Achievements

### (a) Most significant achievements in Research and extension

Sl. No.	Item*	Details of the significant achievements including social impact/adaptation*	Developer/ Co-developer
1	Product/Patent/ Variety		
2	New Concept / Methodology/ Process/ Model developed		
3	Copyright/software/database/trademark/ app		
4	Patents granted with details of Patent No.		

*\*Documentary evidence should be enclosed for the above claims*

### (b) Most significant achievements in Teaching

S.No.	Item	Detail	Year
1	Courses taught and number of classes taken in each course		
2	M.Sc./M.Tech./Ph.D. Students Guided as Chairperson		
3	Development of e-course/training module/New Course introduced or Course(s) revised		
4	Success of students in academics (in terms of their recognition for Awards)		
5	Organization of training /Summer or Winter school/ CAFT for a duration of minimum 10 days as Course Coordinator/Course Director		

### (c) Please state the most Significant achievements (*Not more than 300 words*)

--

### 9 (a) List 20 most important & highest NAAS rated publications in chronological order made in the major discipline (attach first page of these reprints)

S.No.	Name of authors	Year of publication	Title of paper	Journal, Volume, issue & page Nos.	NAAS Journal ID and NAAS Score	Number of citations based on ISI Science Citation Index	Indicate if Corresponding author
1							
2							

3							
4							
5							
6							
7							
8							
9							
10							
11							
12							
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17							
18							
19							
20							

**9 (b) Other publications:**

<b>S. No.</b>	<b>Item</b>	<b>Detail</b>
1	Authored books with ISBN number (min. 200 pages)	
2	Edited books with ISBN number (min. 200 pages)	
3	Policy paper	
4	Scientific review papers in peer reviewed journal	
5	Book chapter	
6	Popular article	

**9 (c) Externally funded projects handled as PI**

<b>S.No.</b>	<b>Name of the project</b>	<b>Funding agency</b>	<b>Budget</b>	<b>Duration</b>

*Documentary evidence should be provided*

**10. Awards and Recognitions**

<b>S. No.</b>	<b>Name of the Award/recognitions</b>	<b>Year</b>	<b>National/ International</b>	<b>Awarding Academy/Institution/ Professional Society/Government agency</b>
1				
2				
3				



**11. Please mention if this work has been submitted/ recognized for any other award.**

**12. Any other information**

This is certified that all the information furnished by me is correct to the best of my knowledge and belief.

**Place:** **Date:** **Name:** **(Signature of the applicant)**

*“Certified that the information given by the candidate in this application has been verified and fully authenticated and that there is no disciplinary action or proceedings pending or contemplated against the candidate.*

**Recommendation of the Head of the Institution**

**(Signature)  
& Seal**

*Enclosures:*

1. Application in original, duly forwarded and complete in all respect (2 hard copies and one soft copy)
2. Reprints (first page) of the 20 most important papers listed at Sl. No. 9(a) of application
3. Documentary proof for the claims made in respect of Awards/recognitions, technology, product, patent, externally funded projects handled, etc.

### Allocation of marks (NABARD Scientist of the Year Award)

Sl. No.	Criteria	Maximum Marks	Weightage
1	<b>Research achievements:</b> (i) Products/Technology (ii) New Concept / Methodology/ Process/ Model developed (iii) Patents/Copyright/software/database/app	20	
3	Teaching achievements	20	
4	Research Publications	35	
5	Other publications	10	
6	Awards/Recognition	05	
7	External funded projects handled as PI	10	
	<b>Total Marks</b>	<b>100</b>	
			<b>80%</b>
	Weightage for Judging Committee		<b>20%</b>

#### Research achievements (Maximum 20 Marks):

- (i) Technology/products/New Concept / Methodology/ Process/ Model developed. All claims in this category should be supported by documentary proof or research publications in peer reviewed journals with citations  $\geq 10$  (excluding self-citations) (5 Marks each)
  - (ii) Copyright/software/database/app (4 marks each)
  - (iii) Patents granted with details of Patent No. (5 marks for each patent).
- Developer shall be awarded 100% marks, Co-developer shall be awarded 75% marks.  
Documentary evidence should be enclosed for all claims.

#### Teaching achievements (Maximum 20 Marks):

- (i) Courses taught and number of classes taken in each course (Maximum 5 marks): *Full marks, if taken at least 30 classes in a year, for a minimum of 5 years.*
- (ii) M.Sc. /M.Tech/ Ph.D. Students (Full time) Guided as Chairperson (Maximum 6 marks): *Give thesis titles. 2 marks for each M.Sc./M.Tech. and 4.0 marks for each Ph.D. student guided as Chairperson.*
- (iii) Development of e-course/training module/New Course introduced or Course(s) revised (one mark each; Maximum 3 marks)
- (iv) Success of students in academics (in terms of their recognition for Awards) (Maximum 3 marks): *Institute level Medals, ICAR/ Institutional Awards, etc. (1 mark each).*
- (v) Organization of training /Summer or Winter school/ CAFT for a duration of minimum 10 days as Course Coordinator/Course Director (3 marks each).

#### Research Publications (Maximum 35 marks)

- (i) For 20 most important publications in the relevant discipline of the applicant: Cumulative NAAS Score  $\times 0.0875$
- (ii) First / corresponding author will get full marks in a publication and rest of the authors 75% marks.

#### Other publications (Maximum 10 marks)

- (i) Authored book with ISBN number (min. 200 pages): 2 marks each; Edited book with ISBN number (min. 200 pages): 1 mark each ; Policy paper: 1 mark each; 0.5 mark each for scientific review paper in a peer reviewed journal, Book chapter/Popular article: 0.25 Mark each

#### Awards/Recognitions (Maximum 05 marks)

- (i) Awards by ICAR, CSIR, DST, DBT, NRDC, National Science Academies, etc. (full marks to Individual; 50% marks to the Associates of the Team Award) (2.5 marks each).
- (ii) Fellowship of National Science Academies (5 marks each).

- (iii) Associateship/Young Scientist awards of National Science Academies (2 Marks each)
- (iv) Post-Doctoral fellowship for a period of minimum 6 months (2 marks each)
- (v) National and International level Professional Society and Academy Awards/ Recognition (not covered above) (1 mark each).

**Externally funded projects including consultancy/contract research handled as PI (Maximum 10 marks)**

- (i) Projects costing <10 Lakhs: 2 Marks each
- (ii) Projects costing 10-30 Lakhs: 3 Marks each
- (iii) Projects costing >30 Lakhs: 5 Marks each





**POST GRADUATE SCHOOL**  
**INDIAN AGRICULTURAL RESEARCH INSTITUTE**  
**NEW DELHI-110012**


No. ICAR-IARI/Dte-PGS-I/1-2/2022-AC(417)

October 6, 2022

**ENDORSEMENT**

A copy of the proceedings of the 417<sup>th</sup> meeting of the Academic Council held on 27<sup>th</sup> August, 2022 is forwarded herewith for information and necessary action. Comments, if any, may please be sent to the PG School within 15 days from the date of issue of the Proceedings.

1. All the members of the Academic Council (By name \_\_\_\_\_)
2. PS to Director General, ICAR, Krishi Bhawan, New Delhi-110001
3. PS to Deputy Director General (Edn.), ICAR, KAB-II, Pusa, New Delhi-110012
4. Master of Halls of Residences, P.G. Hostels
5. Sr. Admn. Officer, IMC (For members of Board of Management)
6. PS to Director/PS to Dean & Joint Director (Edn.), IARI/PS to Registrar/PS to Comptroller
7. Technical Assistants, P G School (IT Cell/Stats. Cell)
8. Assistant Administrative Officer, Post Graduate School-II
9. Concerned Dealing Assistants, PGS-I

|  
  
(Pushpendra Kumar)  
Sr Registrar

**PROCEEDINGS OF THE 417<sup>th</sup> MEETING OF THE ACADEMIC COUNCIL (Online Mode) HELD ON AUGUST 27, 2022 AT 10.30 AM AT IARI, NEW DELHI - 110012**

The following members attended online meeting:

1. Dr. A.K. Singh, Director, IARI	Chairman
2. Dr. (Ms.) Rashmi Aggarwal, Dean & JD (Edn.) (Additional Charge)	Vice Chairperson
3. Dr. R.C. Agrawal, Deputy Director General (Edn.), ICAR	Member
4. Prof.B. D. Singh, Professor Emeritus, BHU, Varanasi	Member
5. Dr. C. Devakumar, Former ADG, ICAR	Member
6. Dr. V.V. Sadamate, Former Advisor, Agriculture (Planning Commission)	Member
7. Dr. V.S. Tomar, Former Vice-Chancellor, JNKVV, Jabalpur	Member
8. Dr. B.S. Tomar, JD (Extn.) and Head, Veg. Science (Additional Charge)	Member
9. Dr. C. Viswanathan, Joint Director (Res.) (Additional Charge) and Professor, Plant Physiology	Member
10. Dr. Rajender Parsad, Director, IASRI	Member
11. Dr. Ajit Kumar Shasany, Director, NIPB	Member
12. Dr. Ashok Kumar, Director, NBPGR (Additional Charge)	Member
13. Dr. C.R. Mehta, Director, CIAE, Bhopal	Member
14. Dr. P.K. Ghosh, Director, NIBSM, Raipur	Member
15. Dr. Arunava Pattanayak, Director, IIAB, Ranchi	Member
16. Dr. Jagadish Rane, Director, NIASM, Baramati (Additional Charge)	Member
17. Dr. Debi Sharma, Director, IIHR, Bengaluru (Additional Charge)	Member
18. Dr. Man Singh, Project Director, WTC (Additional Charge) and Professor, WST	Member
19. Dr. K.M. Manjaiah, Associate Dean, PG School	Member
20. Dr. (Ms.) Neera Singh, Professor, Agricultural Chemicals	Member
21. Dr. (Ms.) Alka Singh, Professor, Agricultural Economics	Member
22. Dr. D.K. Singh, Professor, Agricultural Engineering	Member
23. Dr. R.N. Padaria, Professor, Agricultural Extension	Member
24. Dr. (Ms.) P. Krishnan, Professor, Agricultural Physics	Member
25. Dr. (Ms.) Cini Varghese, Professor, Agricultural Statistics	Member
26. Dr. T.K. Das, Professor, Agronomy	Member
27. Dr. Anil Dahuja, Professor, Biochemistry	Member
28. Dr. Anil Rai, Professor, Bioinformatics	Member
29. Dr. (Ms.) Alka Arora, Professor, Computer Application	Member
30. Dr. (Ms.) Debjani Dey, Professor, Entomolgy	Member
31. Dr. D.K. Sharma, Professor, Environmental Science	Member
32. Dr. K.P. Singh, Professor, Floriculture and Landscaping	Member
33. Dr. Manish Srivastav, Professor, Fruit Science	Member
34. Dr. Vinod, Professor, Genetics and Plant Breeding	Member
35. Dr. Sunil Pabbi, Professor, Microbiology	Member
36. Dr. Debasis Pattanayak, Professor, MBB	Member
37. Dr. M.R. Khan, Professor, Nematology	Member
38. Dr. (Ms.) Veena Gupta, Professor, PGR	Member
39. Dr. Robin Gogoi, Professor, Plant Pathology	Member
40. Dr. (Ms.) Monika Atul Joshi, Professor, SST	Member
41. Dr. S.P. Datta, Professor, SS&AC	Member
42. Dr. R.K. Yadav, Professor, Vegetable Science	Member
43. Dr. Anil Sirohi, Mater of Halls of Residences (MOHR)	Member
44. Shri. D.D. Verma, Sr. Comptroller	Member
45. Dr. Mahendra Kumar Verma, Principal Scientist, Fruit Science and Faculty Representative to the Academic Council	Member

46. Dr. Praveen Kumar Singh, Principal Scientist, Vegetable Science and Faculty Representative to the Academic Council	Member
47. Mr. Deep Chand, Incharge, IARI Library Services	Member
48. Mr. Shohaib Sheikh Ayub Chauhan, President PGSSU	Member
49. Mr. Sujay B.K., Students' Representative to the AC	Member
50. Mr. Pushpendra Kumar, Sr. Registrar	Member Secretary

Dr. Ram Asrey, Professor, Post Harvest Management could not attend the meeting.

Dr. (Ms.) Rashmi Aggarwal, Dean and Joint Director (Edn.) extended a formal welcome to Dr. A.K. Singh, Director, IARI and Chairman, Academic Council. Thereafter, Dr. A.K. Singh, Chairman of Academic Council warmly welcomed the outside members of the Academic Council and all the members present in the meeting. The Chairman also welcomed the new members of the Academic Council attending the meeting for the first time:

#### **New members**

1. Dr. C. Viswanathan, Joint Director (Res.) and Professor, Plant Physiology
2. Dr. Jagadish Rane, Director (Additional Charge), NIASM, Baramati
3. Dr. Sunil Pabbi, Professor, Microbiology
4. Dr. Dinesh Kumar Sharma, Professor, Environmental Science
5. Shri. D. D. Verma, Sr. Comptroller

The Chairman also placed on record the valuable contributions of the following outgoing members of the Academic Council in strengthening the PG education at IARI:

1. Dr. H. Pathak, Director, NIASM, Baramati
2. Dr. Indra Mani, Joint Director (Res.)
3. Dr. Soora Naresh Kumar, Professor, Environmental Science
4. Dr. Madan Pal Singh, Professor, Plant Physiology
5. Dr. Radha Prasanna, Professor, Microbiology
6. Shri. V.R. Srinivasan, Comptroller

The following officials attended as Special Invitees:

1. Dr. Rajbir Yadav, Head, Genetics.
2. Dr. Vishal Nath, OSD and PG Coordinator, IARI, Jharkhand.
3. Dr. Khem Bahadur Pun, Former Principal Scientist and Nodal Officer, IARI Assam

Thereafter, the following agenda items were taken up for consideration:

<b>Agenda Item No.</b>	<b>Description of Agenda Items</b>
<b>417.1</b>	Confirmation of the proceedings of 416 <sup>th</sup> meeting of the Academic Council held on 10.02.2022 (online mode)
<b>417.2</b>	Action Taken Report on the proceedings of 416 <sup>th</sup> meeting of the Academic Council held on 10.02.2022 (online mode)
<b>417.3</b>	Consideration of the recommendations of the Standing Committee on Scholarship, Financial Assistance & Academic Progress made in its meeting held on 06.05.2022
<b>417.4</b>	Consideration of the recommendations of the Standing Committee on Faculty & Discipline made in its meetings held on 12.05.2022 and 17.05.2022
<b>417.5</b>	Consideration of BSMA approved Courses and Syllabi recommended by the Standing Committee on Courses and Curricula for implementation from 2022-23 academic session

<b>417.6</b>	Consideration of Introduction of UG Programme, Diploma and Certificate courses, initiation of Sandwich PhD programme, Self-financing scheme for Indian, foreign and non-Resident Indian students and International faculty
<b>417.7</b>	Consideration of revision in guidelines on Charge of Professorship as decided in HoDs meeting held on 07.05.2022
<b>417.8</b>	Consideration of Guidelines for Divisional Gold Medal Award proposal for Master and Doctoral students
<b>417.9</b>	Considerations of model MoU with SAUs, IRRI and other institutions
<b>417.10</b>	Finalization of number of seats for admission to B.Sc./B.Tech. M.Sc./M.Tech. and Ph.D. degree programmes at IARI, New Delhi and at outreach Institutions for the academic session 2022-23
<b>417.11</b>	Consideration of revision in guidelines of Institute Awards viz., (i) Best Women Scientist Award, (ii) NABARD Researcher of the Year Award, (iii) Dr. H.K. Jain Memorial Young Scientist Award and (iv) Dr. A.B. Joshi Memorial Award
<b>417.12</b>	Consideration of change of degree nomenclature of Agricultural Extension to Agricultural Extension Education as per the BSMA Recommendation

***Agenda Item No. 417.1: Confirmation of the proceedings of the 416<sup>th</sup> meeting of the Academic Council held on 10.02.2022(Online Mode)***

The Chairman called for the comments, if any, from the members of the Academic Council on the proceedings of the 416<sup>th</sup> meeting. Since no comment was there, the proceedings of the previous meeting was confirmed by the house.

***Agenda Item No. 417.2: Report on action taken on the proceedings of the 416<sup>th</sup> meeting of the Academic Council held on 10.02.2022 (Online Mode)***

Dean and Joint Director(Education) presented the action taken report which was approved by the house.

***Agenda Item No. 417.3 Consideration of the proceedings of the meeting of the Standing Committee on Scholarships, Financial Assistance & Academic Progress made in its Meeting held on 06.05.2022***

The Academic Council ratified the decision of Chairman, Academic Council on disbursement of Scholarship/Fellowship as per the following recommendation of Standing Committee.

**417.3.1** During the Academic Session 2021-22, a total number of 285 candidates were admitted to Ph.D. degree programme under different Schemes at IARI and IARI PG Outreach Institutes. Five (5) students discontinued the programme and hence removed from the rolls of the P.G. School. The applications/undertakings/proforma of all the students (Ph.D. and M.Sc./M.Tech.) completed in all respects, forwarded by the Professors/Director of concerned Institutes and also checked and verified by the PGS-II Section.

1. The rate and tenure of Fellowship as per the ICAR i.e., Rs. 31,000 for the first two years and Rs. 35000 for the third year, contingency of Rs. 10000/p.a. and maximum duration of fellowship is only for three years as per the terms and conditions of ICAR SRFs.
2. As per P.G. School Calendar para 15.3.3 and 15.3.5, the scholarships shall be awarded initially for a period of one academic year from the date of joining the Post Graduate School or the commencement of the academic year, whichever is later. The payment of



Scholarship/Fellowship shall be reviewed at the end of 2<sup>nd</sup> Semester and only those students will be permitted to continue getting fellowship who maintain the OGPA of 6.50 out of 10.00 at the end of 2<sup>nd</sup> Semester (*Commencement of the Academic Year 2021-22 is 03.01.2022*).

3. **148 students enrolled at IARI, New Delhi, CIAE Bhopal and IIHR Bengaluru who are awarded/eligible for ICAR-JRF/SRF @ Rs.31000/-per month for first two years and @ Rs.35,000/- per month for third year + Rs.10,000/- as Contingent grant per annum will get their Fellowship from ICAR.**

<b>LIST OF STUDENTS ENROLLED AT IARI, NEW DELHI IN Ph.D. PROGRAMME DURING THE ACADEMIC SESSION 2021-2022 &amp; ELIGIBLE FOR ICAR-JRF @ Rs. 31000/- P.M. WITH CONTINGENCY @ Rs. 10000/-P.A.</b>				
<b>S. No.</b>	<b>ROLL NO</b>	<b>NAME OF THE STUDENT</b>	<b>DISCIPLINE</b>	<b>DATE_ENROL</b>
1.	11941	ARYAKRISHNAN J U	AGRICULTURAL ECONOMICS	31/12/2021
2.	11942	SOUMYA CHEELA	-do-	31/12/2021
3.	11943	PAVANA B A	-do-	31/12/2021
4.	11944	DIPANSHI AGARWAL	-do-	31/12/2021
5.	11945	RAJ RATAN PANDAY	-do-	31/12/2021
6.	11948	SEEMA ARYA	-do-	31/12/2021
7.	11949	BHASKAR DADASO CHOUGALE	AGRICULTURAL ENGINEERING (PFE)	31/12/2021
8.	11950	PARVATHY NAYANA N	-do-	31/12/2021
9.	11951	MONPARA MILAN CHANDULAL	-do-	31/12/2021
10.	11952	RAMYA C S	-do-	31/12/2021
11.	11954	SHWETA F MANIK	-do-	31/12/2021
12.	11955	SOUMYA KRISHNAN V	AGRICULTURAL ENGINEERING ((FMPE)	31/12/2021
13.	11958	VIKRAM NETAM	-do-	31/12/2021
14.	11960	MAYANGLAMBAM AARBINDRO SINGH	-do-	31/12/2021
15.	11966	RUPESH KUMAR	AGRICULTURAL ENGINEERING (SWCE)	31/12/2021
16.	11969	MANABRAJ MANNA	-do-	31/12/2021
17.	11970	DARA ROOHA BLESSY	-do-	24/01/2022
18.	11971	ADARSHA GOPALAKRISHNA BHAT	-do-	31/12/2021
19.	11974	UMASHANKER	-do-	31/12/2021
20.	11975	KOTHA SHRAVANI REDDY	-do-	31/12/2021
21.	11976	SWEETY MUKHERJEE	-do-	31/12/2021
22.	11977	AMANDEEP RANJAN	-do-	31/12/2021
23.	11978	ADUPA SHANMUKA	-do-	31/12/2021
24.	11979	SAURABH TIWARI	-do-	31/12/2021
25.	11981	GUDLA MANICHANDANA	-do-	31/12/2021
26.	11982	CHHANDA CHARANA MAHANANDA	-do-	31/12/2021
27.	11983	SEEMA KUJUR	-do-	31/12/2021
28.	11984	SETTIPALLI SRAVANI	-do-	31/12/2021
29.	11985	TARUN KUMAR	AGRICULTURAL PHYSICS	31/12/2021
30.	11991	TAMILSELVI C	AGRICULTURAL STATISTICS	31/12/2021
31.	11992	B.MANJUNATHA	-do-	31/12/2021
32.	11997	MANOJ VARMA	-do-	31/12/2021
33.	11999	HARISH NAYAK G H	-do-	31/12/2021
34.	12000	PRIYANKA SAHA	AGRONOMY	31/12/2021
35.	12001	SRIKANTH REDDY KALWALA	-do-	31/12/2021
36.	12002	SACHIN SINGH	-do-	31/12/2021
37.	12003	AKSHAY GLOTRA	-do-	31/12/2021

38.	12004	KAJAL ARORA	-do-	31/12/2021
39.	12005	SANKETH G D	-do-	31/12/2021
40.	12006	SWETALEENA MAHANA	-do-	31/12/2021
41.	12007	GANESH PATEL	-do-	31/12/2021
42.	12008	MANEESHA	-do-	31/12/2021
43.	12009	ANAMIKA BARMAN	-do-	31/12/2021
44.	12010	DEEPAK KUMAR MEENA	-do-	31/12/2021
45.	12011	SHITAL KUMAR	-do-	31/12/2021
46.	12012	SHASHANK PATEL	-do-	31/12/2021
47.	12013	DEEPANYETA GOSWAMI	BIOCHEMISTRY	31/12/2021
48.	12014	DEBDUT MANNA	-do-	31/12/2021
49.	12020	ARPITHA S R	-do-	31/12/2021
50.	12021	ASIF ALI V.K.	BIOINFORMATICS	31/12/2021
51.	12022	LAL DHARI PATEL	-do-	31/12/2021
52.	12024	SNEHASIS MALLIK	-do-	31/12/2021
53.	12026	SUBHASISH SARKAR	COMPUTER APPLICATION	31/12/2021
54.	12027	HARSH SACHAN	-do-	31/12/2021
55.	12028	PRATIKSHA SUBBA	-do-	31/12/2021
56.	12032	CHAITANYA	ENTOMOLOGY	31/12/2021
57.	12033	RUDRA GOUDA	-do-	31/12/2021
58.	12034	RAKESH V	-do-	31/12/2021
59.	12035	KALYANAM SAI ISHWARYA LAKSHMI	-do-	31/12/2021
60.	12036	MAHENDRA K R	-do-	31/12/2021
61.	12037	NANDHINI D.	-do-	31/12/2021
62.	12039	SHASHIKALA M	-do-	31/12/2021
63.	12041	AARTHI HELEN P	-do-	31/12/2021
64.	12049	PANCHAL SANGMESH	FLORICULTURE AND LANDSCAPING	31/12/2021
65.	12050	DEVARAI LAVA KUMAR	-do-	31/12/2021
66.	12054	CHANDANA SHIVASWAMY	-do-	31/12/2021
67.	12056	LALDUHSANGA	-do-	31/12/2021
68.	12192	SULOCHANA K.H	VEGETABLE SCIENCE	31/12/2021
69.	12193	GOWTHAMI	-do-	31/12/2021
70.	12195	PASUPULA KARISHMA	-do-	31/12/2021
71.	12060	MUKESH SHIVRAN	FRUIT SCIENCE	31/12/2021
72.	12061	BHUPENDRA SAGORE	-do-	31/12/2021
73.	12063	SHIKHA JAIN	-do-	31/12/2021
74.	12064	SHIKHA SAINI	-do-	31/12/2021
75.	12065	AJAY KUMAR	-do-	31/12/2021
76.	12066	PARTH JANARDHAN JADHAV	-do-	31/12/2021
77.	12069	RAVI VENKANNA BABU MADDELA	-do-	31/12/2021
78.	12071	SONAM MEENA	-do-	31/12/2021
79.	12072	MEGHA M	-do-	31/12/2021
80.	12074	SHASHIDHAR BR	GENETICS AND PLANT BREEDING	31/12/2021
81.	12075	REVANTH RAGUL A	-do-	31/12/2021
82.	12076	KYADA AMITKUMAR DILIPBHAI	-do-	31/12/2021
83.	12077	JAYANTH KALLUGUDI	-do-	31/12/2021
84.	12078	ARVINTH S	-do-	31/12/2021
85.	12079	UTTARAYAN DASGUPTA	-do-	31/12/2021
86.	12080	ONTEDDU RESHMA	-do-	31/12/2021
87.	12081	BOTTA THANDAVA GANESH	-do-	31/12/2021
88.	12082	SHRIDHAR RAGI	-do-	31/12/2021
89.	12083	AAVULA NAVEEN	-do-	31/12/2021
90.	12084	SUBHASH BIJARANIA	-do-	31/12/2021
91.	12086	BEERA BHAVYA	-do-	31/12/2021

92.	12087	PAVAN KUMAR NAIK N	-do-	31/12/2021
93.	12088	SAHANA POLICE PATIL	-do-	31/12/2021
94.	12089	BHASKAR CHANDRA SAHOO	-do-	31/12/2021
95.	12091	PRIYA M	MICROBIOLOGY	31/12/2021
96.	12092	SONAM PRIYADARSHANI	-do-	31/12/2021
97.	12093	SAGAR S P	-do-	31/12/2021
98.	12094	VIJAYSRI D	-do-	31/12/2021
99.	12097	NYSANTH NS	-do-	31/12/2021
100.	12098	KHUARTI DEBBARMA	-do-	31/12/2021
101.	12099	ASHFAK SIRAJMAHAMMAD MUJAWAR	MOLECULAR BIOLOGY AND BIOTECHNOLOGY	31/12/2021
102.	12100	MACHINDRA SUDHIR NIRGUDE	-do-	31/12/2021
103.	12101	REKHA MAHATO	-do-	31/12/2021
104.	12102	MEENA S	-do-	31/12/2021
105.	12103	MAHI BAANIYA	-do-	31/12/2021
106.	12108	ANINDITA BARUA	-do-	31/12/2021
107.	12109	KUMAR NUPUR HRISHIKESHAN	-do-	31/12/2021
108.	12110	LALSON WESLY J	NEMATOLOGY	31/12/2021
109.	12124	MEHULEE SARKAR	PLANT PATHOLOGY	31/12/2021
110.	12125	NIVETHA M	-do-	31/12/2021
111.	12126	MD FIROZ MONDAL	-do-	31/12/2021
112.	12127	BOGGALA VAJRAMMA	-do-	31/12/2021
113.	12128	SHAIVYA SINGH	-do-	31/12/2021
114.	12129	BABU B	-do-	31/12/2021
115.	12130	RAHUL PATIDAR	-do-	31/12/2021
116.	12131	ELANGO VAN M	-do-	31/12/2021
117.	12134	NATASHA KASHYAP	-do-	31/12/2021
118.	12136	KARIYAPPA R CHOUDAKER	-do-	31/12/2021
119.	12138	SINTO ANTOO	PLANT PHYSIOLOGY	31/12/2021
120.	12139	NIDHI CHATURVEDI	-do-	31/12/2021
121.	12140	SK RABIUL ALAM	-do-	31/12/2021
122.	12141	RAMESH R	-do-	31/12/2021
123.	12142	ANIMIREDDY CHINA MALAKONDAIAH	-do-	31/12/2021
124.	12143	ASHA SASTYA	-do-	31/12/2021
125.	12144	SOLAIYAAN M	-do-	31/12/2021
126.	12155	PAYAL MATHUR	SEED SCIENCE AND TECHNOLOGY	31/12/2021
127.	12156	VIKRAM V PATIL	-do-	31/12/2021
128.	12157	MALLANNA	-do-	31/12/2021
129.	12162	BHANU VERMA	-do-	31/12/2021
130.	12166	RAVI SAINI	SOIL SCIENCE	31/12/2021
131.	12168	ARHAM TATER	-do-	31/12/2021
132.	12169	SAPTAPARNEE DEY	-do-	31/12/2021
133.	12170	SHARAT KOTHARI	-do-	31/12/2021
134.	12171	ANSHUMAN PATEL	-do-	31/12/2021
135.	12172	DEBRUP GHOSH	-do-	31/12/2021
136.	12173	PRABHAKAR PRASAD BARNWAL	-do-	31/12/2021
137.	12174	CHINMAYEE BEHERA	-do-	31/12/2021
138.	12176	SWARNASHREE BARMAN	-do-	31/12/2021
139.	12177	SIYARAM MEENA	-do-	31/12/2021
140.	12178	MANJU KUMARI	-do-	31/12/2021
141.	12180	GAYATRI BHIMAPPA KUDARI	VEGETABLE SCIENCE	31/12/2021
142.	12181	GEETA P KARIGAR	-do-	31/12/2021
143.	12182	VARUN B H	-do-	31/12/2021
144.	12183	SIDDESH S	-do-	31/12/2021
145.	12184	NISHANT	-do-	31/12/2021
146.	12185	NEHA SHARMA	-do-	31/12/2021

147	12186	SAROJ KUMAR SAHU	-do-	31/12/2021
148	12191	RAMYA S	-do-	31/12/2021

4. Award of Institute's Sr. Scholarship @ Rs.31,000/- per month for first two years and @Rs.35000/- per month for third year + Rs.10,000/- contingent grant per annum to 93 candidates admitted at IARI, New Delhi as per the list given below:

LIST OF STUDENTS ENROLLED AT IARI, NEW DELHI IN Ph.D. PROGRAMME DURING THE ACADEMIC SESSION 2021-22 & ELIGIBLE FOR INSTITUTE SCHOLARSHIP @ Rs. 31000/- p.m. WITH CONTINGENCY @ Rs. 10000/-p.a for first two years and @ Rs.35,000/- per month + Rs.10,000/-for third year				
S. No.	ROLL NO.	NAME OF THE STUDENT	DISCIPLINE	DATE_ENROL.
1.	11935	ANIRBAN SIL	AGRICULTURAL CHEMICALS	31/12/2021
2.	11936	SHYAM KUMAR GUPTA	-do-	31/12/2021
3.	11937	RENU	-do-	31/12/2021
4.	11938	SUMIT SHEKHAR	-do-	31/12/2021
5.	11939	RANJEET KUMAR	-do-	31/12/2021
6.	11940	BISWAJIT HORIJAN	-do-	31/12/2021
7.	11946	ARUN D	AGRICULTURAL ECONOMICS	31/12/2021
8.	11947	HARITHA K	-do-	31/12/2021
9.	11956	ARUNA T N	AGRICULTURAL ENGINEERING (Farm Machinery & Power Engineering)	31/12/2021
10.	11957	PRAJWAL R	-do-	31/12/2021
11.	11961	SARIKONDA LEELA JYOTHI	-do-	31/12/2021
12.	12207	TUSHAR DHAR	-do-	11/01/2022
13.	11967	RONGALI MAHESH	AGRICULTURAL ENGINEERING (Soil & Water Conservation Engineering)	31/12/2021
14.	11968	CHAVDA DHAVALKUMAR RANCHHODBHAI	-do-	31/12/2021
15.	11980	FATHEEN ABRAR P N	AGRICULTURAL EXTENSION	31/12/2021
16.	11986	SAILJA RASTOGI	AGRICULTURAL PHYSICS	31/12/2021
17.	11987	ABHRADIP SARKAR	-do-	31/12/2021
18.	11988	BIBHUTI BHUSAN SETHI	-do-	31/12/2021
19.	11989	AKSHITA TOMAR	-do-	31/12/2021
20.	11990	SUGAVANESHWARAN	-do-	31/12/2021
21.	12015	SUSHMITHA J	BIOCHEMISTRY	31/12/2021
22.	12016	TAMIL SELVAN S	-do-	31/12/2021
23.	12017	KANGKAN PANDIT	-do-	31/12/2021
24.	12018	GAMPA MALLESH	-do-	31/12/2021
25.	12019	DURGESHWARI PRABHAKAR GADPAYALE	-do-	31/12/2021
26.	12038	B V JAYANTH	ENTOMOLOGY	31/12/2021
27.	12040	BISWAMITRA REANG	-do-	31/12/2021
28.	12042	BABETLANG KHARSHIING	ENVIRONMENTAL SCIENCE	31/12/2021
29.	12043	POOJA L R	-do-	31/12/2021
30.	12044	SHEMEEM SHAH P	-do-	31/12/2021
31.	12045	ANUSHA B S	-do-	31/12/2021
32.	12046	MAYANK TIWARI	-do-	31/12/2021
33.	12047	KOKILA	-do-	31/12/2021
34.	12048	VIPUL KUMAR	-do-	31/12/2021



35.	12051	EDIGA AMALA	FLORICULTURE AND LANDSCAPING	31/12/2021
36.	12052	SHREEKANT	-do-	31/12/2021
37.	12053	CHAITRA K	-do-	31/12/2021
38.	12055	KURABALAKOTA MADHAVI	-do-	31/12/2021
39.	12067	ADITYA DNYANESHWAR INGOLE	FRUIT SCIENCE	31/12/2021
40.	12068	POONAM MAURYA	-do-	31/12/2021
41.	12085	NIRMALARUBAN R	GENETICS AND PLANT BREEDING	31/12/2021
42.	12095	ARAVINDHARAJAN S T M	MICROBIOLOGY	31/12/2021
43.	12096	KAVYA T	-do-	31/12/2021
44.	12104	ALVAKONDA SHEENA SABATINA	MOLECULAR BIOLOGY AND BIOTECHNOLOGY	31/12/2021
45.	12105	SOWMYAPRIYA R	MOLECULAR BIOLOGY AND BIOTECHNOLOGY	31/12/2021
46.	12106	SHAHINA PERWEEN	-do-	31/12/2021
47.	12217	YASWANT KUMAR PANKAJ	-do-	11/01/2022
48.	12111	VENKADESH G	NEMATOLOGY	31/12/2021
49.	12112	SWATHI KARTHIKA K S	-do-	31/12/2021
50.	12113	KATAKAM RUPINI KRISHNA	-do-	31/12/2021
51.	12114	MALLIKARJUN GURRAM	-do-	31/12/2021
52.	12115	MANSI	-do-	31/12/2021
53.	12116	KSHITIZ	-do-	31/12/2021
54.	12117	SANDIP KUMAR PANIGRAHI	PLANT GENETIC RESOURCES	31/12/2021
55.	12118	MITHRAA T	-do-	31/12/2021
56.	12119	MALLIKARJUN BIRADAR	-do-	31/12/2021
57.	12120	NAGARAJ NAIK D	-do-	31/12/2021
58.	12121	SIVAKUMAR A	-do-	31/12/2021
59.	12122	PRAVEEN GUMACHANAMARDI	-do-	31/12/2021
60.	12123	KRISHNAMOORTHY A	-do-	31/12/2021
61.	12132	SANDEEP KUMAR PANI	PLANT PATHOLOGY	31/12/2021
62.	12133	SAMRAT PAUL	-do-	31/12/2021
63.	12135	PEACE PANMEI	-do-	31/12/2021
64.	12137	DEEP NARAYAN MISHRA	-do-	31/12/2021
65.	12145	SAJEEL AHAMAD	POST HARVEST MANAGEMENT	31/12/2021
66.	12146	T S HANUMESH GOWDA	-do-	31/12/2021
67.	12147	KEERTHANA DAS	-do-	31/12/2021
68.	12148	SINDHU P M	-do-	31/12/2021
69.	12149	THIPPESWAMY B	-do-	31/12/2021
70.	12150	GANESH KUMAR CHOUPDAR	-do-	31/12/2021
71.	12158	ROHIT CHANDI	SEED SCIENCE AND TECHNOLOGY	31/12/2021
72.	12159	ANBALAGAN A	-do-	31/12/2021
73.	12160	SUSHMA M K	-do-	31/12/2021
74.	12161	HEENA KOUSER H M	-do-	31/12/2021
75.	12163	MILU HERBERT	-do-	31/12/2021

76.	12164	SUSHMITHA C H	-do-	31/12/2021
77.	12165	ANGOTH GOUTHAMI	-do-	31/12/2021
78.	12175	KALYANI VISHWAS PATIL	SOIL SCIENCE	31/12/2021
79.	12179	RIAJ RAHAMAN	-do-	31/12/2021
80.	12187	AMIT KUMAR SINGH	VEGETABLE SCIENCE	31/12/2021
81.	12188	RESHAV NAIK	-do-	31/12/2021
82.	12189	PYLA SURESH	-do-	31/12/2021
83.	12190	ANGELA ROLUAHPUII	-do-	31/12/2021
84.	12196	BASARAVENI GOUTHAMI	WATER SCIENCE AND TECHNOLOGY	31/12/2021
85.	12198	ADITYA V MACHNOOR	-do-	31/12/2021
86.	12199	AMARPREET SINGH	-do-	31/12/2021
87.	12200	VIGNESH PALANIVEL	-do-	31/12/2021
88.	12224	SHUBHANGI GORAKHNATH NILE	AGRICULTURAL ENGINEERING (Process & Food Engineering)	17/01/2022
89.	12225	CHANDANA V	BIOINFORMATICS	17/01/2022
90.	12227	SHUBHAM JAGGA	FRUIT SCIENCE	21/03/2022
91.	12228	KANISHK MILIND DIWEKAR	MOLECULAR BIOLOGY AND BIOTECHNOLOGY	21/03/2022
92.	12230	RITAMBHARA	SOIL SCIENCE	21/03/2022
93.	12231	LIKI ETE	WATER SCIENCE AND TECHNOLOGY	21/03/2022

**5 Award of Institute's Sr. Scholarship @ Rs.31,000/- per month for first two years and @ Rs.35,000/- per month for third year + Rs.10,000 Contingent grant per annum to the following 07 students admitted at CIAE, Bhopal under IARI PG Outreach Programme**

S.No.	ROLL NO	NAME OF THE STUDENT	DISCIPLINE	DATE OF ENROL.
1.	11953	AMAN KUMAR	AGRICULTURAL ENGINEERING (PFE)	31/12/2021
2.	11962	ABHISHEK UPADHYAY	-do-	31/12/2021
3.	11963	SRINIDHI G	-do-	31/12/2021
4.	11964	BHUPENDRA GHRITALAHRE	-do-	31/12/2021
5.	11965	RAVI KUMAR SAHU	-do-	31/12/2021
6.	11972	AMIT PRASAD	AGRICULTURAL ENGINEERING (SWCE)	31/12/2021
7.	11973	SURJEET SINGH ADILE	-do-	31/12/2021

**6. Award of Institute's Sr. Scholarship @ Rs.31,000/- per month for first two years and @ Rs.35,000/- per month + Rs.10,000/- Contingent grant per annum to the following 09 students admitted at IIHR, Bengaluru under IARI PG Outreach Programme**

S.No.	ROLL NO	NAME OF THE STUDENT	DISCIPLINE	DATE OF ENROL.
1.	12057	MAYA PRIYA	FLORICULTURE AND LANDSCAPING	31/12/2021
2.	12058	PRIYA BHUSARADDI	-do-	31/12/2021
3.	12059	VEERESH	-do-	31/12/2021
4.	12070	SHIVAM	FRUIT SCIENCE	31/12/2021
5.	12073	KIRAN K N	FRUIT SCIENCE	31/12/2021
6.	12151	ASHWIJA B N	POST HARVEST MANAGEMENT	31/12/2021
7.	12153	BRUNDA N B	-do-	31/12/2021
8.	12194	MAHEBUB	VEGETABLE SCIENCE	31/12/2021
9.	12229	NITHIN GOWDA T K	POST HARVEST MANAGEMENT	21/03/2022

**7. Award of Institute's Sr. Scholarship @ Rs. 3,000/- per month + Rs. 10,000/- per annum as contingent grant to the following 09 IARI students who were admitted under Faculty Up-gradation Scheme/ICAR-Inservice Scheme.**

S. No.	ROLL NO	NAME OF THE STUDENT	DISCIPLINE	DATE OF ENROL.
1.	12205	PERKA SHIVA KUMAR, PJTSAU Hyderabad, FUS	AGRICULTURAL ECONOMICS	13/01/2022
2.	12206	SWAPNAJA KABIRRAO JADHAV, CIAE, Bhopal, ICAR Inservice	AGRICULTURAL ENGINEERING (FMPE)	13/01/2022
3.	12212	SULUGURI RAMESH, PJTSAU Hyderabad, FUS	ENTOMOLOGY	13/01/2022
4.	12213	BHANUMURTHY K C, YSRHU, VR Gudem FUS	FLORICULTURE AND LANDSCAPING	12/01/2022
5.	12214	BINDU PRAVEENA RAVIPATI, ANGRAU, Guntur, FUS	FRUIT SCIENCE	12/01/2022
6.	12215	NONGTHOMBAM DEVACHANDRA, CAU, Pasighat, FUS	FRUIT SCIENCE	13/01/2022
7.	12218	SHWETA KUMARI, IIVR Varanasi, ICAR Inservice	PLANT PATHOLOGY	21/01/2022
8.	12220	SHANTIKUMAR LUKRAM, CAU Imphal, FUS	PLANT PHYSIOLOGY	13/01/2022
9.	12223	POOJA RANI, CCSHAU, Hissar, FUS	SOIL SCIENCE	12/01/2022

**8. Award of Contingent grant only @ Rs.10,000/- per annum to the following 3 Departmental Candidates working at the same station.**

S. No.	ROLL NO	NAME OF THE STUDENT	DISCIPLINE	DATE OF ENROL.
1.	12204	ABRAN SINGH KUSHWAH, IARI, New Delhi, Deptt. Tech.	AGRICULTURAL CHEMICALS	13/01/2022
2.	12209	RAJ KUMAR GOURAV IARI, New Delhi, Deptt. Tech.	AGRONOMY	20/01/2022
3.	12219	RAJ KIRAN, NBPGR, New Delhi, Deptt. S.	PLANT PATHOLOGY	20/01/2022

**9. Following 10 students who were admitted in the disciplines of Agricultural Statistics, Bioinformatics and Computer Application will get their Institute Sr. Scholarship from IASRI.**

S.NO.	ROLL NO.	NAME OF THE STUDENT	DISCIPLINE	DATE OF ENROL.
1.	11993	MUHSINA A	AGRICULTURAL STATISTICS	31/12/2021
2.	11994	ASHUTOSH DALAL	-do-	31/12/2021
3.	11995	KAUSHAL KUMAR YADAV	-do-	31/12/2021
4.	11996	PRAVEENKUMAR	-do-	31/12/2021
5.	11998	VEERSHETTY	-do-	31/12/2021
6.	12023	SHIVADARSHAN SHRISHAIL JIRLI	BIOINFORMATICS	28/12/2020
7.	12025	RAGINI KUSHWAHA	-do-	28/12/2020
8.	12029	BHAVESH KUMAR CHOUBISA	COMPUTER APPLICATION	28/12/2020
9.	12030	SAHANA M R	-do-	28/12/2020
10.	12031	SARAVANAKUMAR R	-do-	28/12/2020

10. The Standing Committee did not recommend award of Institute's Sr. Scholarship to the following In-service student as he has already availed the benefit of Scholarship during his previous admission at IARI for the same programme and left the course incomplete.

S.NO.	ROLL NO.	NAME OF THE STUDENT	DISCIPLINE	DATE OF ENROL.
1.	12107	VIRAJ GANGADHAR KAMBLE, IISR, Indore, ICAR Inservice	MOLECULAR BIOLOGY AND BIOTECHNOLOGY	31/12/2021

11. The Standing Committee was also of the view that necessary recovery on account of Surety Bond, fellowship etc., as per rules may be made from the student, if due. Further, to avoid second time award of fellowship, a suitable undertaking to the effect that the student has not availed the benefit of Scholarship for the same programme earlier from or through IARI/ICAR, may be obtained.

#### 417.3.2 Consideration of award of IARI Jr. Scholarship to M.Sc./ M.Tech. students for the award of IARI Jr. Scholarship.

During the Academic Session 2021-22, a total number of 261 candidates were admitted to M.Sc./M.Tech. degree programme under different Schemes at IARI and IARI PG Outreach Institutes. Seven (7) students discontinued the programme and hence removed from the rolls of the P.G. School. The Standing Committee made the following recommendations.

- As per P.G. School Calendar para 15.3.3 and 15.3.5, the scholarships shall be awarded initially for a period of one academic year from the date of joining the Post Graduate School or the commencement of the academic year, whichever is later. The payment of Scholarship/Fellowship shall be reviewed at the end of 2<sup>nd</sup> Semester and only those students will be permitted to continue getting fellowship who maintain the OGPA of 6.50 out of 10.00 at the end of 2<sup>nd</sup> Semester (*Commencement of the Academic Year 2021-22 is 03.01.2022*).
- 168 students enrolled at IARI, New Delhi, IARI Assam, IARI Jharkhand, IIAB Ranchi, NIASM Baramati and NIBSM Raipur who are eligible for ICAR-PG Scholarship @ Rs.12640/- per month + Rs. 6,000/- will get their fellowship from ICAR.**

LIST OF STUDENTS ENROLLED AT IARINew Delhi, IARI Assam, IARI Jharkhand, IIAB Ranchi, NIASM Baramati and NIBSM Raipur in M.Sc. Programme under ICAR-PG Scholarship in the Academic Year 2021-2022 Eligible for ICAR-PGScholarship @ Rs. 12640/- P.M. with Contingency @ Rs. 6000/- P.A.					
S. NO.	ROLL NO	NAME OF THE STUDENT	DISCIPLINE	DATE_ENROL	INSTITUTE
1	21562	DIPSIKHA MONDAL	AGRICULTURAL CHEMICALS	31/12/2021	IARI, New Delhi-12
2	21568	SHUBHO PAUL	AGRICULTURAL ECONOMICS	31/12/2021	IARI, New Delhi-12
3	21569	ANKIT	-do-	31/12/2021	IARI, New Delhi-12
4	21570	PAVAN KUMAR KUMAWAT	-do-	31/12/2021	IARI, New Delhi-12
5	21571	SNEHA S B	-do-	31/12/2021	IARI, New Delhi-12
6	21572	HITAISHREE M	-do-	31/12/2021	IARI, New Delhi-12
7	21573	SWATI SINGH	-do-	31/12/2021	IARI, New Delhi-12
8	21574	PRABHAT KUMAR OJHA	AGRICULTURAL ENGINEERING (PFE)	31/12/2021	IARI, New Delhi-12
9	21575	MUKESH PATTAIYA	-do-	31/12/2021	IARI, New Delhi-12



10	21576	PIYUSHA MAHENDRA MATONDKAR	-do-	31/12/2021	IARI, New Delhi-12
11	21577	SAURABH KUMAR GUPTA	-do-	31/12/2021	IARI, New Delhi-12
12	21578	SUBRATA MANDAL	-do-	31/12/2021	IARI, New Delhi-12
13	21579	MOHANASELVAN .T	AGRICULTURAL ENGINEERING (FMPE)	31/12/2021	IARI, New Delhi-12
14	21580	RADHA KRISHNAN NA S	-do-	31/12/2021	IARI, New Delhi-12
15	21581	NAVEEN RACHAMALLA	-do-	31/12/2021	IARI, New Delhi-12
16	21582	SOUBHAGYA SEKHAR NAYAK	-do-	31/12/2021	IARI, New Delhi-12
17	21583	SATHISH KUMAR B N	-do-	31/12/2021	IARI, New Delhi-12
18	21584	JADAV KAUSHIK AMRISHBHAI	AGRICULTURAL ENGINEERING (SWCE)	31/12/2021	IARI, New Delhi-12
19	21585	SRIDHANABHARATHI B	-do-	31/12/2021	IARI, New Delhi-12
20	21586	ATHIRA SAJI	-do-	31/12/2021	IARI, New Delhi-12
21	21588	BARNALI SAHA	-do-	31/12/2021	IARI, New Delhi-12
22	21589	PASUPULETI SAHITHI	AGRICULTURAL EXTENSION	31/12/2021	IARI, New Delhi-12
23	21590	ANIRBAN JANA	-do-	31/12/2021	IARI, New Delhi-12
24	21591	MATHI GIRISHMA	-do-	31/12/2021	IARI, New Delhi-12
25	21592	DEVANAND TRIPATHI	-do-	31/12/2021	IARI, New Delhi-12
26	21593	OMPRAKASH N	-do-	31/12/2021	IARI, New Delhi-12
27	21594	NAVEEN KUMAR H N	-do-	31/12/2021	IARI, New Delhi-12
28	21597	SUMAN	AGRICULTURAL PHYSICS	31/12/2021	IARI, New Delhi-12
29	21599	AKARSH SINGH	AGRICULTURAL STATISTICS	31/12/2021	IARI, New Delhi-12
30	21600	SAIKATH DAS	-do-	31/12/2021	IARI, New Delhi-12
31	21601	SURYA PRAKASH TRIPATHI	-do-	31/12/2021	IARI, New Delhi-12
32	21603	SUBHANKAR BISWAS	-do-	31/12/2021	IARI, New Delhi-12
33	21604	BANAVATH SAMUEL NAIK	-do-	31/12/2021	IARI, New Delhi-12
34	21607	SHUBHAM GROVER	AGRONOMY	31/12/2021	IARI, New Delhi-12
35	21608	SHWETANSH	-do-	31/12/2021	IARI, New Delhi-12
36	21609	SOUMYA PRAKASH BHOI	-do-	31/12/2021	IARI, New Delhi-12
37	21610	SOUGATA ROY	-do-	31/12/2021	IARI, New Delhi-12
38	21611	BIPASHA DAS	-do-	31/12/2021	IARI, New Delhi-12
39	21612	SUBRATA BAG	-do-	31/12/2021	IARI, New Delhi-12
40	21614	PRAKASH DHANAVATH	-do-	31/12/2021	IARI, New Delhi-12
41	21615	SHUVARGHYA CHAKRABORTY	BIOCHEMISTRY	31/12/2021	IARI, New Delhi-12
42	21618	SANJAY BEHERA	-do-	31/12/2021	IARI, New Delhi-12
43	21621	ABHIK SARKAR	BIOINFORMATICS	31/12/2021	IARI, New Delhi-12
44	21630	SASIKUMARAN S	COMPUTER APPLICATION	31/12/2021	IARI, New Delhi-12
45	21631	ASMITA DAS	ENTOMOLOGY	31/12/2021	IARI, New Delhi-12

46	21632	JESSA JOSEPH	-do-	31/12/2021	IARI, New Delhi-12
47	21633	DARSHANA BRAHMA	-do-	31/12/2021	IARI, New Delhi-12
48	21634	ELIKA PAVAN VENKATA KUMAR	-do-	31/12/2021	IARI, New Delhi-12
49	21635	EERE VIDYA MADHURI	-do-	31/12/2021	IARI, New Delhi-12
50	21636	JAGADAM SAI RUPALI	-do-	31/12/2021	IARI, New Delhi-12
51	21637	AASHIQ POON V S	-do-	31/12/2021	IARI, New Delhi-12
52	21638	SINGAM SUDISHMA	-do-	31/12/2021	IARI, New Delhi-12
53	21645	SOURAV PANIGRAHI	FLORICULTURE AND LANDSCAPING	31/12/2021	IARI, New Delhi-12
54	21646	MARIYAM FIRDOUS	-do-	31/12/2021	IARI, New Delhi-12
55	21647	NASINA BALAJI	-do-	31/12/2021	IARI, New Delhi-12
56	21648	SANGHITA ROY	-do-	31/12/2021	IARI, New Delhi-12
57	21649	KUSUMA M.V	-do-	31/12/2021	IARI, New Delhi-12
58	21650	VALLARASU	-do-	31/12/2021	IARI, New Delhi-12
59	21651	CHAITHRA	-do-	31/12/2021	IARI, New Delhi-12
60	21652	POOJA	FRUIT SCIENCE	31/12/2021	IARI, New Delhi-12
61	21653	PRABHANJAN BHANUDAS RANE	-do-	31/12/2021	IARI, New Delhi-12
62	21654	LAYA P	-do-	31/12/2021	IARI, New Delhi-12
63	21655	RAUSHAN KUMAR	-do-	31/12/2021	IARI, New Delhi-12
64	21656	HARSHIT KUMAR	-do-	31/12/2021	IARI, New Delhi-12
65	21658	BAJJURI DIVYA	GENETICS AND PLANT BREEDING	31/12/2021	IARI, New Delhi-12
66	21659	KAVYA R	-do-	31/12/2021	IARI, New Delhi-12
67	21660	NAMAN RAJ	-do-	31/12/2021	IARI, New Delhi-12
68	21661	SATYAM	-do-	31/12/2021	IARI, New Delhi-12
69	21662	RAGINI R	-do-	31/12/2021	IARI, New Delhi-12
70	21663	JENIA ROY	-do-	31/12/2021	IARI, New Delhi-12
71	21665	DHARAVATH HATHIRAM	-do-	31/12/2021	IARI, New Delhi-12
72	21667	BARNANA MAITRA	MICROBIOLOGY	31/12/2021	IARI, New Delhi-12
73	21668	YAMINI YADAV	-do-	31/12/2021	IARI, New Delhi-12
74	21669	KARTHIKA K	-do-	31/12/2021	IARI, New Delhi-12
75	21670	SANGRAM GARAI	-do-	31/12/2021	IARI, New Delhi-12
76	21671	PRATIBHA BARIK	-do-	31/12/2021	IARI, New Delhi-12
77	21673	THARUN KUMAR C J	MOLECULAR BIOLOGY AND BIOTECHNOLOGY	31/12/2021	IARI, New Delhi-12
78	21674	ASHUTOSH DILIPRAO THAKARE	-do-	31/12/2021	IARI, New Delhi-12
79	21675	SOUMYA CHAKRABORTY	-do-	31/12/2021	IARI, New Delhi-12
80	21676	BALAJI B	-do-	31/12/2021	IARI, New Delhi-12
81	21677	SANJAY T D	-do-	31/12/2021	IARI, New Delhi-12
82	21678	SONAM BRIJLAL INGLE BRIJLAL INGLE	-do-	31/12/2021	IARI, New Delhi-12
83	21679	SUBHASH A	-do-	31/12/2021	IARI, New Delhi-12
84	21680	BHANU KUMAR TIWARI	-do-	31/12/2021	IARI, New Delhi-12

85	21681	KIRAN MAHAVIR MAGDUM	-do-	31/12/2021	IARI, New Delhi-12
86	21682	VIMALA G	NEMATOLOGY	31/12/2021	IARI, New Delhi-12
87	21683	ADHUNA K P	-do-	31/12/2021	IARI, New Delhi-12
88	21684	VOODIKALA SAI AKHIL	-do-	31/12/2021	IARI, New Delhi-12
89	21689	NETRA KALLEGOUDRA	PLANT PATHOLOGY	31/12/2021	IARI, New Delhi-12
90	21690	MANOJ P N	-do-	31/12/2021	IARI, New Delhi-12
91	21691	ELORA PRIYADARSHINI	-do-	31/12/2021	IARI, New Delhi-12
92	21692	PRATIBHA MURMU	-do-	31/12/2021	IARI, New Delhi-12
93	21693	AMBALAVANAN A	-do-	31/12/2021	IARI, New Delhi-12
94	21694	POULAMI BASAK	-do-	31/12/2021	IARI, New Delhi-12
95	21695	RASHI JAIN	-do-	31/12/2021	IARI, New Delhi-12
96	21696	PRADEEP	PLANT PHYSIOLOGY	31/12/2021	IARI, New Delhi-12
97	21697	KUNKALA RAHUL KARTHIK	-do-	31/12/2021	IARI, New Delhi-12
98	21698	SIVAPRAGASAM	-do-	31/12/2021	IARI, New Delhi-12
99	21699	K.BHARATH CHANDRA	-do-	31/12/2021	IARI, New Delhi-12
100	21700	AMooru HARIKA	-do-	31/12/2021	IARI, New Delhi-12
101	21702	AJAY NINANA	-do-	31/12/2021	IARI, New Delhi-12
102	21707	SANDEEP	SEED SCIENCE AND TECHNOLOGY	31/12/2021	IARI, New Delhi-12
103	21708	TANYA SINGH	-do-	31/12/2021	IARI, New Delhi-12
104	21709	SHREYA PATIL	-do-	31/12/2021	IARI, New Delhi-12
105	21710	TUHINA GHOSH	-do-	31/12/2021	IARI, New Delhi-12
106	21711	YALLAVVA MADAR	-do-	31/12/2021	IARI, New Delhi-12
107	21712	ALAPATI NYMISHA	SOIL SCIENCE	31/12/2021	IARI, New Delhi-12
108	21713	JYOTIRMAY ROY	-do-	31/12/2021	IARI, New Delhi-12
109	21714	CHAKRAPANI SAIKRISHNA KISHORE	-do-	31/12/2021	IARI, New Delhi-12
110	21715	MANISH KUMAR	-do-	31/12/2021	IARI, New Delhi-12
111	21716	THUNGASHAN KIKON	-do-	31/12/2021	IARI, New Delhi-12
112	21718	SWAGATA NANDI	VEGETABLE SCIENCE	31/12/2021	IARI, New Delhi-12
113	21719	ANKITA SAHA	-do-	31/12/2021	IARI, New Delhi-12
114	21720	LUHANA SOHAMKUMAR CHETANDAS	-do-	31/12/2021	IARI, New Delhi-12
115	21721	BANOTH THARUN	-do-	31/12/2021	IARI, New Delhi-12
116	21722	DHARMENDRA KUMAR VERMA	-do-	31/12/2021	IARI, New Delhi-12
117	21723	KISHOR KARSHANBHAI VAROTARIYA	-do-	31/12/2021	IARI, New Delhi-12
118	21724	DHARAVATH RAM BABU	-do-	31/12/2021	IARI, New Delhi-12
119	21725	THUSHAL R Y	-do-	31/12/2021	IARI, New Delhi-12
120	21739	BAGSARIYA NISHANT NITESHBHAI	NEMATOLOGY	15/01/2022	IARI, New Delhi-12

121	50075	ROHITASH DOODWAL	AGRONOMY	31/12/2021	ASSAM (IARI)
122	50076	ABHISHEK PATIDAR	-do-	31/12/2021	ASSAM (IARI)
123	50077	DEVENDRA KUMAR DADHICH	-do-	31/12/2021	ASSAM (IARI)
124	50078	ROOPA M N	GENETICS AND PLANT BREEDING	31/12/2021	ASSAM (IARI)
125	50079	UDAYA BHANU ANGIREKULA	-do-	31/12/2021	ASSAM (IARI)
126	50081	PRATHYAKSHA C S	SOIL SCIENCE	31/12/2021	ASSAM (IARI)
127	50082	BIJAN KUMAR MONDAL	-do-	31/12/2021	ASSAM (IARI)
128	50083	BARNALI MAJUMDER	VEGETABLE SCIENCE	31/12/2021	ASSAM (IARI)
129	50084	NABANITA ROY	-do-	31/12/2021	ASSAM (IARI)
130	60094	AMIT SINHA	AGRICULTURAL EXTENSION	31/12/2021	JHARKHAND (IARI)
131	60095	NUTHAKI VENKATA LEELA KRISHNA CHAITHANYA	-do-	31/12/2021	JHARKHAND (IARI)
132	60096	TANMAY DAS	AGRONOMY	31/12/2021	JHARKHAND (IARI)
133	60097	KAVYA INUGANTI	-do-	31/12/2021	JHARKHAND (IARI)
134	60098	INDRANI SAHA	-do-	31/12/2021	JHARKHAND (IARI)
135	60099	SATYAM RAWAT	-do-	31/12/2021	JHARKHAND (IARI)
136	60100	ARBUD LALA	ENTOMOLOGY	31/12/2021	JHARKHAND (IARI)
137	60101	KIRANKUMAR H	-do-	31/12/2021	JHARKHAND (IARI)
138	60105	MADHUMATHI	FRUIT SCIENCE	31/12/2021	JHARKHAND (IARI)
139	60106	SAIKAT DEY	-do-	31/12/2021	JHARKHAND (IARI)
140	60107	FIROS BASHA T M	GENETICS AND PLANT BREEDING	31/12/2021	JHARKHAND (IARI)
141	60108	SAYAN GOSWAMI	-do-	31/12/2021	JHARKHAND (IARI)
142	60109	BHARGAVA KOTTE	-do-	31/12/2021	JHARKHAND (IARI)
143	60110	RAGHAVENDRA J S	MICROBIOLOGY	31/12/2021	JHARKHAND (IARI)
144	60112	AYESHA SIDDIQA	PLANT PATHOLOGY	31/12/2021	JHARKHAND (IARI)
145	60113	CHERUKU ROSHINI	-do-	31/12/2021	JHARKHAND (IARI)
146	60114	LOKESHA G	-do-	31/12/2021	JHARKHAND (IARI)
147	60115	MUJTAHIDA KHATUN	SEED SCIENCE AND TECHNOLOGY	31/12/2021	JHARKHAND (IARI)
148	60116	SAYAN MAKUR	-do-	31/12/2021	JHARKHAND (IARI)
149	60117	SUBHAJEET SARKAR	SOIL SCIENCE	31/12/2021	JHARKHAND (IARI)
150	60118	SARMISTHA PRIYADARSHINI	-do-	31/12/2021	JHARKHAND (IARI)
151	60119	ANKIT KUMAR SINHA	VEGETABLE SCIENCE	31/12/2021	JHARKHAND (IARI)
152	60120	VASAVI DEVI	-do-	31/12/2021	JHARKHAND (IARI)
153	60121	MEGHANA DEVIREDDY	-do-	31/12/2021	JHARKHAND (IARI)
154	70015	DHARANI E	PLANT PHYSIOLOGY	31/12/2021	NIASM, Baramati
155	80010	DIYAN MANDAL	AGRONOMY	31/12/2021	NIBSM, Raipur
156	80011	SHRUTI SANJITA GIRI	-do-	31/12/2021	NIBSM, Raipur
157	80012	GOURANGA SAW	ENTOMOLOGY	31/12/2021	NIBSM, Raipur
158	80013	SAI MANOJ MARELLA	-do-	31/12/2021	NIBSM, Raipur



159	80014	ARCHITA DAS	-do-	31/12/2021	NIBSM, Raipur
160	80015	MALAWANTHKAR RANI	-do-	31/12/2021	NIBSM, Raipur
161	80016	CHANDANA H S	GENETICS AND PLANT BREEDING	31/12/2021	NIBSM, Raipur
162	80017	CHADUVULA ESHWAR SAI PRASAD	-do-	31/12/2021	NIBSM, Raipur
163	80018	SAYAN BANERJEE	MICROBIOLOGY	31/12/2021	NIBSM, Raipur
164	80025	PRAJJWAL RAI	PLANT PATHOLOGY	31/12/2021	NIBSM, Raipur
165	90011	JAYA KOTHAPELLY	GENETICS AND PLANT BREEDING	31/12/2021	IIAB, Ranchi
166	90012	ADEPU PRIYADARSHINI	-do-	31/12/2021	IIAB, Ranchi
167	90013	MUKESH RAJ	-do-	31/12/2021	IIAB, Ranchi
168	90014	KOPPULA SATYA SAI KUMAR	-do-	31/12/2021	IIAB, Ranchi

**3. Award of Institute's Jr. Scholarship @ Rs.7,560/- per month + Rs.6,000/- contingent grant per annum to 74 candidates admitted at IARI, New Delhi including the students who have been placed under outreach programme at IARI Assam, IARI Jharkhand, NIASM Baramati, NIBSM Raipur and IIAB Ranchi.**

**LIST OF STUDENTS ENROLLED AT IARI NEW DELHI, IARI ASSAM, IARI JHARKHAND, IIAB RANCHI, NIASM BARAMATI, NIBSM RAIPUR IN M.Sc. PROGRAMME IN THE ACADEMIC YEAR 2021-2022 ELIGIBLE FOR INSTITUTE SCHOLARSHIP @ Rs. 7560/- P.M. WITH CONTINGENCY @ Rs. 6000/-P.A.**

S.NO.	ROLL NO	NAME OF THE STUDENT	DISCIPLINE	DATE_ENROL	INSTITUTE
1.	21563	RIYA KUNDU	AGRICULTURAL CHEMICALS	31/12/2021	IARI, New Delhi-12
2.	21564	ASHUTOSH KUMAR SINGH	-do-	31/12/2021	IARI, New Delhi-12
3.	21565	SOURABH SUMAN	-do-	31/12/2021	IARI, New Delhi-12
4.	21566	ARINDAM RAY	-do-	31/12/2021	IARI, New Delhi-12
5.	21567	CHAVALI SAIKUMAR REDDY	-do-	31/12/2021	IARI, New Delhi-12
6.	21734	MALLIKARJUN CHANABASAPPA KALLUR	AGRICULTURAL ECONOMICS	11/01/2022	IARI, New Delhi-12
7.	60093	RAUMINSH KUMAR	AGRICULTURAL ENGINEERING (SWCE)	31/12/2021	JHARKHAND (IARI)
8.	70008	BHAVANI	-do-	31/12/2021	NIASM, Baramati
9.	70009	GANESH PRASAD SAHOO	-do-	31/12/2021	NIASM, Baramati
10.	70010	VISHNU SUDHAGONI	-do-	31/12/2021	NIASM, Baramati
11.	21595	SOURAMITA CHAKRABORTY	AGRICULTURAL PHYSICS	31/12/2021	IARI, New Delhi-12
12.	21596	SASHITOSH BEHERA	-do-	31/12/2021	IARI, New Delhi-12
13.	21598	SHARAN S P	-do-	31/12/2021	IARI, New Delhi-12
14.	21737	PRATAHBIDYA NAYAK	-do-	15/01/2022	IARI, New Delhi-12
15.	21745	CHAPPALI HARENDRA	AGRONOMY	21/03/2022	IARI, New Delhi-12
16.	21735	PRAKASH SONNAD	-do-	11/01/2022	IARI, New Delhi-12
17.	50074	AYEKPAM DOLLINA DEVI	-do-	31/12/2021	ASSAM (IARI)
18.	21616	VIVEK KUMAR	BIOCHEMISTRY	31/12/2021	IARI, New Delhi-12

19.	21620	RAMAVATH PREM KUMAR NAIK	-do-	31/12/2021	IARI, New Delhi-12
20.	21639	DIVYA SINHA	ENVIRONMENTAL SCIENCE	31/12/2021	IARI, New Delhi-12
21.	21640	KEERTHIKUMAR M	-do-	31/12/2021	IARI, New Delhi-12
22.	21641	ABHILASHA CHOUDHARY	-do-	31/12/2021	IARI, New Delhi-12
23.	21642	AVINASH C	-do-	31/12/2021	IARI, New Delhi-12
24.	21643	LOKESH KUMAR MEENA	-do-	31/12/2021	IARI, New Delhi-12
25.	21644	SUCHITRA KUNDURU	-do-	31/12/2021	IARI, New Delhi-12
26.	21749	SHEVAKULA MANASA	-do-	21/03/2022	IARI, New Delhi-12
27.	60102	MUTRA BALAKRISHNA REDDY	-do-	31/12/2021	JHARKHAND (IARI)
28.	60103	SAI KIRAN BURJI	-do-	12/01/2022	JHARKHAND (IARI)
29.	60104	SUBHRANSU SEKHAR BEHERA	-do-	31/12/2021	JHARKHAND (IARI)
30.	70011	ASHOK KUMAR SUBUDHI	-do-	31/12/2021	NIASM, Baramati
31.	70012	CHARISHMA NANDIMANDALAM	-do-	31/12/2021	NIASM, Baramati
32.	70013	PRERNA KUMARI	-do-	31/12/2021	NIASM, Baramati
33.	21664	AMIT KUMAR MAZUMDER	GENETICS AND PLANT BREEDING	31/12/2021	IARI, New Delhi-12
34.	50080	HARISH WALIKAR	-do-	31/12/2021	ASSAM (IARI)
35.	21672	SONAM YANGCHAN	MICROBIOLOGY	31/12/2021	IARI, New Delhi-12
36.	21750	KONDERU NITEESH VARMA	-do-	21/03/2022	IARI, New Delhi-12
37.	60111	NALLAPAREDDY BAVANA REDDY	-do-	31/12/2021	JHARKHAND (IARI)
38.	80019	PRAJWAL S K	-do-	31/12/2021	NIBSM, Raipur
39.	80020	PALLAVI S	MOLECULAR BIOLOGY AND BIOTECHNOLOGY	31/12/2021	NIBSM, Raipur
40.	80021	AJAY KUMAR	-do-	31/12/2021	NIBSM, Raipur
41.	80022	USHA M S	-do-	31/12/2021	NIBSM, Raipur
42.	80023	SHAKESPEAR.S	-do-	31/12/2021	NIBSM, Raipur
43.	90015	SHIVAKUMARASWAMY M	-do-	31/12/2021	IIAB, Ranchi
44.	90016	MUSTAFA N	-do-	31/12/2021	IIAB, Ranchi
45.	90017	SUDHEER BISHNOI	-do-	31/12/2021	IIAB, Ranchi
46.	90018	PRATIK PRASAD SINGH	-do-	31/12/2021	IIAB, Ranchi
47.	90019	SRADHANJALI JENA	-do-	31/12/2021	IIAB, Ranchi
48.	90020	ANKIT RAJ	-do-	21/01/2022	IIAB, Ranchi
49.	21740	KAVITA JAIN	NEMATOTOLOGY	15/01/2022	IARI, New Delhi-12
50.	21685	VIVEK KUMAR	PLANT GENETIC RESOURCES	31/12/2021	IARI, New Delhi-12
51.	21686	JYOTSNA VERMA	-do-	31/12/2021	IARI, New Delhi-12
52.	21687	SAMPA SAHA	-do-	31/12/2021	IARI, New Delhi-12
53.	21741	SHRADHA MAHAWAR	-do-	15/01/2022	IARI, New Delhi-12
54.	21742	KUNAL	-do-	18/01/2022	IARI, New Delhi-12
55.	21751	GUTHI LIKHITHA	-do-	21/03/2022	IARI, New Delhi-12
56.	21752	JITENDRA KUMAR YADAV	-do-	21/03/2022	IARI, New Delhi-12

57.	80026	MANOJ N S	PLANT PATHOLOGY	21/01/2022	NIBSM, Raipur
58.	21701	SUBRATA DEBNATH	PLANT PHYSIOLOGY	31/12/2021	IARI, New Delhi-12
59.	70014	SHRICHARAN S	-do-	31/12/2021	NIASM, Baramati
60.	70016	CHANUMOLU HARI GOPALA KRISHNA	-do-	31/12/2021	NIASM, Baramati
61.	70017	SHANKAR KUMAR	-do-	15/01/2022	NIASM, Baramati
62.	21703	SANTURI MOUNIKA MANISREE	POST HARVEST MANAGEMENT	31/12/2021	IARI, New Delhi-12
63.	21704	RANJANI M	-do-	31/12/2021	IARI, New Delhi-12
64.	21705	AJAY RAMESHBHAI NAROLA	-do-	31/12/2021	IARI, New Delhi-12
65.	21706	VATHSALA. V	-do-	31/12/2021	IARI, New Delhi-12
66.	21743	DEEPAK	SOIL SCIENCE	15/01/2022	IARI, New Delhi-12
67.	21753	HIMANSHU SINGH	-do-	21/03/2022	IARI, New Delhi-12
68.	21736	SPARSH NATHOO	VEGETABLE SCIENCE	11/01/2022	IARI, New Delhi-12
69.	50085	WAHENGAM ZENITH SINGH	-do-	15/01/2022	ASSAM (IARI)
70.	21726	KEERTHANA MAVERIL	WATER SCIENCE AND TECHNOLOGY	31/12/2021	IARI, New Delhi-12
71.	21727	VISHAL SANGWAN	-do-	31/12/2021	IARI, New Delhi-12
72.	21728	NAVEEN KUMAR	-do-	31/12/2021	IARI, New Delhi-12
73.	21729	KRISHNA PATIDAR	-do-	18/01/2022	IARI, New Delhi-12
74.	21744	PAVAN PRABHAKAR PANZADE	-do-	18/01/2022	IARI, New Delhi-12

**4. Award of Institute's Jr. Scholarship @ Rs.7,560/- per month + Rs.6,000/- contingent grant per annum to following 12 students who were admitted in the discipline of Agricultural Statistics, Bioinformatics and Computer Application will get their Institute Jr. Scholarship from IASRI.**

S.NO.	ROLL NO	NAME OF THE STUDENT	DISCIPLINE	DATE OF ENROL.
1	21602	RAKESH CHHALOTRE	AGRICULTURAL STATISTICS	31/12/2021
2	21605	SUBHRADIP ROY	-do-	31/12/2021
3	21606	ASHISH GUPTA	-do-	31/12/2021
4	21622	RAVI	BIOINFORMATICS	31/12/2021
5	21623	DEEKSHA P M	-do-	31/12/2021
6	21624	ABHISHEK ANAND	-do-	31/12/2021
7	21625	SUBHAM GHOSH	-do-	31/12/2021
8	21626	SORNA A M	-do-	31/12/2021
9	21628	ROHIT VANSRAJ	COMPUTER APPLICATION	31/12/2021
10	21738	NASIRHUSSAIN M Y	-do-	15/01/2022
11	21746	BHAVYA SHREE V	-do-	21/03/2022
12	21748	GOURAV MAITRA	-do-	21/03/2022

**417.3.3** The Academic Council approved the continuation of the existing guidelines on the extension of the duration of the IARI Fellowship as per para 15.3.1 and 15.3.2 of PG School Calendar (2010-11).

**417.3.4** On the issue of (i) to increase the duration of Scholarship for Ph.D. programme from 3 years to 4 years and (ii) to enhance the rate of Institute Junior Scholarship (for M.Sc. students) from Rs.7560/- per month to Rs.12640/- per month at par with the ICAR P.G. Scholarship, the Academic Council opined that the matter comes under the purview of ICAR.

***Agenda Item No. 417.4: Consideration of the proceedings of the meeting of the Standing Committee on Faculty and Discipline made in its Meetings held on 12.05.2022 and 17.05.2022***

The Academic Council discussed the recommendations of the Standing Committee and approved the following:

**417.4.1.** Induction of following **16 Scientists** for induction into **PG Faculty** in their respective disciplines at ICAR- **IARI, New Delhi (12)**, IARI PG outreach Programme at ICAR- **IIHR, Bengaluru (3)** and ICAR-NIASM, **Baramati (1)** as they met the qualifications/eligibility criteria as per the prescribed guidelines.

S. No.	Name of the Scientist & Designation	Name of the Discipline
<b>IARI, New Delhi</b>		
1.	Dr. Praveen KV, Scientist (SS)	Agricultural Economics
2.	Dr. Mohd. Harun, Scientist	Agricultural Statistics
3.	Dr. Prabina Kumar Meher, Scientist	Agricultural Statistics
4.	Dr. Prabhu Govindasamy, Scientist (SS)	Agronomy
5.	Dr. Neeraj Budhlakoti, Scientist	Bioinformatics
6.	Dr. (Ms.) Ratna Prabha, Scientist	Bioinformatics
7.	Dr. (Ms.) Bharati Pandey, Scientist	Bioinformatics
8.	Dr. Ashish Khandelwal, Scientist	Environmental Science
9.	Dr. (Ms.) Deeksha Joshi, Pr. Scientist	Plant Pathology
10.	Dr. Soham Ray, Scientist	Plant Physiology
11.	Dr. (Ms.) Bindvi Arora, Scientist	Post Harvest Management
12.	Dr. V. R. Yalamalle, Scientist(SS)	Seed Science and Technology
<b>IARI PG outreach Programme at IIHR, Bengaluru</b>		
1.	Dr. Mahadevaiah, C., Scientist	Genetics and Plant Breeding
2.	Dr. (Ms.) Deepa Samant, Scientist	Fruit Science
3.	Dr. Ayyagari V.V. Koundinya, Scientist	Vegetable Science
<b>IARI PG Outreach Programme at NIASM, Baramati</b>		
1.	Dr. Hanamant M. Halli, Scientist	Environmental Science

**417.4.2.** Recognition of the following 10 faculty members of **IARI** as Research guides for **M.Sc.** guidance in their respective disciplines as they met the prescribed requirements/eligibility criteria for becoming the research guides.

S. No.	Name of the Scientist & Designation	Name of the Discipline
1. *	Dr. Raju, R. Scientist	Agricultural Economics
2.	Dr. Rajkumar Dhakar, Scientist (SS)	Agricultural Physics
3.	Dr. (Ms.) Monika Kundu, Scientist (SS)	Agricultural Physics

4.	Dr. Subhash Babu, Senior Scientist	Agronomy
5.	Dr. (Ms.) Yasin Jeshima K., Scientist(SS)	Bioinformatics
6.	Dr. Ajai Kumar Tiwari, Pr. Scientist	Floriculture and Landscaping
7.	Dr. (Ms.) Babita Singh, Scientist	Floriculture and Landscaping
8.	Dr. (Ms.) Manjusha Verma, Pr. Scientist	Plant Genetic Resources
9.	Dr. (Ms.) Ruchi Bansal, Scientist(SS)	Plant Physiology
10.	Dr. Vijayakumar H.P., Senior Scientist	Seed Science and Technology

\* considering the teaching and guidance experience in his previous institution

**417.4.3. Recognition of the following two faculty members of IIHR Bengaluru as Research guide for PhD guidance in their respective disciplines as they met the prescribed requirements/eligibility criteria for becoming the research guides.**

S. No.	Name & Designation	Name of the Discipline
1.	Dr. S. Sriram, Pr. Scientist	Plant Pathology
2.	Dr. K. V.Ravishankar, Pr. Scientist	Plant Physiology

**417.4.4. Provisional and conditional** recognition of the following 12 Faculty Members as Research guide for Ph.D. guidance i.e., 8 Faculty members of IIHR Bengaluru and 4 Faculty member of CIAE Bhopal as **special case after giving some relaxations due to paucity of Research Guides at these Institutes to run the programme subject to monitoring and evaluation of their performance by the Standing Committee.**

S. No.	Name & Designation	Name of the Discipline	Recommended for Research Guide with relaxation
<b>IARI PG outreach Programme at IIHR, Bengaluru</b>			
1	Dr. (Ms.) Shamina Azeez, Pr. Scientist	Biochemistry	Relaxation of 1 M.Sc. Student Guidance
2	Dr. (Ms.) P.D.Kamala Jayanthi, National Professor	Entomology	Relaxation of 2year teaching experience
3	Dr. Kundan Kishore, Pr. Scientist	Fruit Science	--do--
4	Dr. Basavaprabhu L Patil, Pr. Scientist	MBB	--do--
5	Dr. (Ms.) T.R. Usharani, Senior Scientist	MBB	Relaxation of 1 M.Sc. Student Guidance
6	Dr. (Ms.)G. Sangeetha, Pr. Scientist	Plant Pathology	Relaxation of 2year teaching experience
7	Dr. Shivashankara K.S., Pr. Scientist	Plant Physiology	Relaxation of 1 year teaching experience
8	Dr. (Ms.)Smaranika Mishra, Scientist	Vegetable Science	Relaxation of 5year teaching experience
<b>IARI PG outreach Programme at CIAE, Bhopal</b>			
1.	Dr. Rajwade Yogesh Anand,Scientist	Agricultural Engineering (SWCE)	Relaxation of 2 M. Tech. students guidance



2.	Dr. Sandeep Mandal, Sr. Scientist	Agricultural Engineering (FPE)	--do--
3.	Dr. Narendera Singh Chandel, Sr. Scientist	Agricultural Engineering(FPE)	--do--
4.	Dr. Kate Adinath Eknath, Scientist	Agricultural Engineering (ASPE)	--do--

**417.4.5. Provisional and conditional** recognition of the following **3 Faculty members for NIBSM, Raipur and one each Faculty Members for IIAB, Ranchi and IARI-Jharkhand as Research guide for M.Sc. guidance as special case after giving some relaxations due to paucity of Research Guides at these Institutes to run the programme subject to monitoring and evaluation of their performance by the Standing Committee.**

	<b>IARI PG outreach Programme at NIBSM, Raipur</b>		
1.	Dr. P. Mooventhan, Scientist	Agricultural Extension Education	Relaxation of 3year teaching experience
2.	Dr. Mallikarjuna, J. Scientist (Sr.Scale)	Entomology	--do--
3.	Dr. Shridhar Jandrajupalli Senior Scientist	Entomology	--do--
	<b>IARI PG outreach Programme at IIAB, Ranchi</b>		
1.	Dr. Kishor Uttamrao Tribhuvan, Scientist	Molecular Biology and Biotechnology	--do--
	<b>IIAB, Jharkhand</b>		
1.	Shashi Bhushan Choudhary, Sr. Scientist	Genetics and Plant Breeding	--do--

**417.4.6.** The Academic Council approved the recommendation of the Standing Committee the candidature of **Dr. S.C. Datta**, Former Emeritus Scientist, IARI for recognition as Adjunct Faculty, for a second term in the discipline of Soil Science.

Regarding other proposals from different disciplines, the Academic Council of the opinion that they may be first put up to the Standing Committee.

***Agenda Item No. 417.5: Consideration of BSMA approved Courses and Syllabi recommended by the Standing Committee on Courses and Curricula for implementation from 2022-23 academic session***

The Academic Council discussed the recommendations made by the Standing Committee on the BSMA courses/syllabi for all the teaching disciplines. After detailed discussion the Academic Council approved the following:

- As per BSMA recommendations, Course title, code and credit hour of courses are to be retained.
- For M.Sc./M.Tech. only 500 courses series are applicable.
- For Ph.D. only 600 series courses are applicable.
- For Ph.D. 500 series courses could be opted in supporting/others subjects.

- For Cross listed Courses, the credit hour must be kept same in both/many disciplines.
- New courses may be introduced in addition to BSMA approved recommendations, as per the need of the discipline and NEP provisions.
- The observations and anomalies on the BSMA reports concerning to some of the disciplines of IARI to be sent to DDG (Edn) for consideration.

### Credit Requirements

	Masters' Programme	Doctoral Programme
<b>(i) Course work</b>		
Major courses	<b>20</b>	<b>12</b>
Minor courses	<b>08</b>	<b>06</b>
Supporting courses	<b>06</b>	<b>05</b>
Common courses	<b>05</b>	<b>-</b>
Seminar	<b>01</b>	<b>02</b>
<b>(ii) Thesis Research</b>	<b>30</b>	<b>75</b>
<b>Total</b>	<b>70</b>	<b>100</b>

### Common Courses (Requirement: 05 Credits)

Course Code	Course Title	Credit Hours
*PGS501	Library and Information Services	0+1
*PGS502	Technical Writing and Communications Skills	0+1
*PGS503	Intellectual Property and its management in Agriculture	0+1
*PGS504	Basic Concepts in Laboratory Techniques	0+1
*PGS505	Agricultural Research, Research Ethics and Rural Development Programmes	0+1

The list of courses recommended by BOS of respective Disciplines and approved by the Academic Council are placed at **Appendix –I**

**Agenda Item No. 417.6:** *Consideration of Introduction of UG Programme, Diploma and Certificate courses, initiation of Sandwich PhD programme, Self-financing scheme for Indian, foreign and non-Resident Indian students and International faculty*

The Academic Council discussed the following proposals and recommendations of the Committees and approved them for initiation from 2022-23 academic session.

Sr. No.	Programme	Chairman of the Committee
1	B.Sc. (Hons) Agriculture at IARI, New Delhi, IARI Jharkhand, IARI Assam (60 seats each)	Dr. Rajbir Yadav, Head, Genetics
2	B. Tech. (Agricultural Engineering) at IARI New Delhi (30 seats)	Dr. D.K. Singh, Professor, Agril. Engg.
3	B.Tech. Biotechnology at NIPB, New Delhi and IIAB, Ranchi (30 seats each)	Dr. A.K. Shasany, Director, NIPB

4	B.Sc. (Hons) Community Science at IARI, New Delhi (30 seats)	Dr. R.N. Padaria, Head & Professor, Agril. Extn.
5	Diploma/ Certificate Courses	Dr. Alka Singh, Head and Professor, Agril. Economics
6	Sandwich PhD programme, Self-financing scheme for Indian, foreign and non-Resident Indian students and International faculty	Dr. C. Viswanathan, JD (Res.)

#### **Certificate Courses (Duration: 3 Months)**

1. Greenhouse Hydroponic and Aeroponic Farming (2022-23)
2. Disease and Pest Management (2022-23)
3. GAP for basmati farming (2023-24)
4. Farm Machinery Operation and Management (2023-24)

#### **PG Diploma (Duration: One year)**

1. Soil Testing and Nutrient Management (2022-23)
2. Seed Production, Processing and Quality Control (2022-23)
3. Data Science and Analytics (2022-23)
4. Abiotic Stress Management in Field and Horticultural Crops (2022-23)
5. Fruit Production Practices and Nursery Management (2023-24)
6. Organic Farming (2023-24)
7. Integrated Farming System

The Academic Council suggested that action may be taken through different committees as per the 5<sup>th</sup> Dean's Committee and Minimum requirements prescribed by ICAR for initiating the above new UG programme. The institute should also send a proposal to DDG (Edn.) on budget, fellowship, infrastructure, teaching and non-teaching staff requirement to initiate/support the UG programmes and also to meet the accreditation requirements.

The Academic Council discussed the existing fee structure for UG programme at ICAR-DUs and approved the same for the academic session 2022-23. The Academic Council was of the opinion that the fee should be increased at least by 10% annually for all the UG, PG and PhD programme.

#### **Semester wise Fee Structure for the students admitted to B.Sc./B.Tech. programme**

##### **AT THE TIME OF ADMISSION/ REGISTRATION FOR 1<sup>st</sup> SEMESTER (2022-23)**

i)	Registration Fee	Rs.500/-
ii)	Caution Money (Refundable)	Rs.10000/-
iii)	Tuition Fee for 1 <sup>st</sup> Semester	Rs.4000/-
iv)	Examination fee	Rs.600/-
v)	Hostel Fee	Rs.2000/- (Rs. 6000 for Married Hostel)
vi)	Water & Electricity Charges	Rs.1000/- (As per actual for Married and International Hostel)
vii)	PGS Journal Subscription Fee (Annual)	Rs. 200/-
viii)	P.G. School Calendar Charges (One Time)	Rs.200/-
ix)	PGSS Union Fee (Annual)	Rs.300/-
x)	PGSSU Magazine Fee (Annual)	Rs.100/-
xi)	Students' Sports Fund (Annual)	Rs.200/-
xii)	PGS Student's Welfare Fund (Annual)	Rs. 200/-
xiii)	PGSSU Cultural and Literary Activities Fee (Annual)	Rs.600/-
xiv)	Identity Card Fee (Annual)	Rs.100/-

xv) IARI Alumni Life Membership Fee (One Time) Rs.250/-

**Total Rs. 20,250/-**

**AT THE TIME OF REGISTRATION FOR II<sup>nd</sup> SEMESTER (2022-23)**

- |      |   |  |
|------|---|--|
| i)   | Tuition Fee for II <sup>nd</sup> Semester | Rs. 4000/-   |
| ii)  | Hostel Fee                                | Rs.2000/- (Rs. 6000 for Married Hostel)                                |
| iii) | Water & Electricity Charges               | <u>Rs. 1000/-</u> (As per actual for Married and International Hostel) |

**Total Rs. 7000/-**

The recommendations of the Committee for initiation of Sandwich PhD programme, Self-financing scheme for Indian, foreign and non-Resident Indian students and International faculty is placed at Appendix-II

The recommendation of the Committee for initiation of Certificate and Diploma Courses is placed at Appendix-III

*Agenda Item No. 417.7: Consideration of revision in guidelines on charge of Professorship as decided in HoDs meeting held on 07.05.2022*

The Academic Council approved the revised guidelines for nomination of Principal Scientist as Professor to supervise the teaching and other academic activities of the discipline.

Sl. No.	Existing Criteria	Revised criteria approved by the Academic Council
1	The Principal Scientist should be a faculty member of the PG School in a particular discipline and should have at least <b>10 years teaching experience</b> (i.e. should have taught at least 18 lectures, per year, at least for 5 years) in the relevant discipline.	The Principal Scientist should be a faculty member of the PG School in a particular discipline and should have at least <b>10 years teaching experience</b> (i.e. should have taught at least 18 lectures, per year, at least for 5 years) in the relevant discipline.  For outreach Institution scientists: <b>5 Year teaching experience</b>
2	He/she should have guided at least four M.Sc./M.Tech./Ph.D. in his/her relevant discipline subject to the condition that he/she must have guided one Ph.D. student.	He/she should have guided at least <b>Four M.Sc./M.Tech./Ph.D.</b> students as Chairperson in his/her relevant discipline. Out of 4, Two <b>must be Ph.D. students</b>
3	The Principal Scientist should have published at least seven research papers during the last 10 years of service in reputed journals with NAAS score of 6 and above. Of the seven research papers, at least three papers should be from his/her M.Sc./M.Tech/Ph.D. students' thesis guided as Chairman.	The Principal Scientist should have published at least <b>SEVEN</b> research papers during the last <b>FIVE years</b> of service with NAAS score of 7 and above. Out of <b>SEVEN</b> research papers, at least two papers should be from his/her M.Sc./M.Tech./Ph.D.

		students' thesis guided as Chairperson.
<b>4</b>	<b>Selection Procedure</b>	
	Presentation/interview of short listed candidates before the Judging Committee consisting of Director, JDs and an External Expert	No presentation/interview. Senior most Principal Scientist who meets the above eligibility criteria will be nominated as Professor
<b>5</b>	<b>Assessment criteria</b>	
	70% weightage to achievements in teaching, research and extension and 30% weightage to Interview	NA
<b>6</b>	<b>Tenure of Professorship</b>	
	5 years	Three years and only one term (he/she should have a minimum 2 years' service before his/her superannuation)

***Agenda Item No. 417.8: Consideration of Guidelines for Divisional Gold Medal Award proposal for Master and Doctoral Students***

The Academic Council discussed the proposal received from Mrs. Urmil Aggarwal, San Diego, California, USA/o Late Dr. K. N. Synghal, Associate IARI 1945-1947, Joint Commissioner, Ministry of Food and Agriculture (1979) for instituting an annual Gold Medal Award to a graduating student in the School of Crop Enhancement to honor her late father Dr. Krishan Nath Synghal.

The Academic Council approved the following recommendations of the Committee under the chairmanship of Dean & Joint Director (Edn.) on such proposals:

1. Divisional level Gold Medal awards may be instituted in the memory of a scientist/ alumni of IARI, who has made outstanding contribution in research, teaching and /or extension in his/her field of specialization.
2. For institution of Gold Medal, the proposee (of the Gold Medal) will be required to deposit corpus money of Rs. 10.00 lakh (Ten lakh) with IARI.
3. The awardee will be awarded with a Gold Medal, Certificate and a cash prize of Rs. 10, 000 (Rupees ten thousand).
4. The amount of cash prizes of all Divisional Gold Medal Awards to be instituted henceforth will be kept same (*i.e.*, Rs. 10,000).

The Academic Council approved proposal to institute Divisional Gold Medal in the division of Soil Science and Agricultural Chemistry. The Gold Medal one each for MSc and PhD students will be awarded to the topper of M.Sc. and PhD students in the School of Natural Resource Management based on the marks obtained in IARI Merit Medal presentations. The propose of the Gold Medal Award would be informed accordingly.

***Agenda Item No. 417.9: Considerations of Model MoU with SAUs, IRRI and other institutions***

The Academic Council discussed the model framework of MoU between IARI and State Agricultural Universities and IRRI for collaboration in the area of research, teaching, technology transfer, exchange of students and faculty. After the detailed deliberations, the



Academic Council approved the model MoU for State Agricultural Universities and IRRI(**Appendix-IV**). The Chairman Academic Council was authorised to execute the MoU on case-to-case basis as per the requirement of the institute.

**Agenda Item No. 417.10 Finalization of number of seats for admission to B.Sc./B.Tech., M.Sc./M.Tech. and Ph.D. degree programmes at IARI, New Delhi and at PG outreach institutions for the Academic Session 2022-23**

The Academic Council finalized the number of seats for B.Sc./B.Tech., M.Sc./M.Tech. and Ph.D. programmes in various disciplines at IARI required for the Academic Session 2022-23. The seat requirement will be sent to the Education Division of ICAR as ICAR-NTA conduct the All India Entrance Examination 2022 for admission of 100% seats at ICAR-DUs.

**417.10.1 Discipline –wise Seat positions for B.Sc./B.Tech. Programmes at ICAR-IARI, New Delhi, ICAR-IARI, Assam and ICAR 0-ARI, Jharkhand and ICAR – IIAB, Ranchi**

**IARI-New Delhi**

S. No.	UG	UR+SC+ST	EWS	OBC	Total
1.	B.Sc. (Hons.) Agriculture	38	6	16	60
2.	B.Sc. (Hons.) Community Science	19	3	8	30
3.	B.Tech. Agricultural Engineering	19	3	8	30
4.	B.Tech. Biotechnology	19	3	8	30
Total		60+23+11	15	41	150

**IARI-Assam**

S. No.	UG	UR+SC+ST	EWS	OBC	Total
1.	B.Sc. (Hons.) Agriculture	24+9+5	6	16	60

**IARI-Jharkhand**

S. No.	UG	UR+SC+ST	EWS	OBC	Total
1.	B.Sc. (Hons.) Agriculture	24+9+5	6	16	60

**IIAB-Ranchi**

S. No.	UG	UR+SC+ST	EWS	OBC	Total
1.	B.Tech. Biotechnology	12+5+2	3	8	30

**417.10.2 Discipline –wise Seat positions for M.Sc./M.Tech. Programmes at IARI, New Delhi, IARI-Assam and IARI-Jharkhand, NIASM- Baramati, NIBSM- Raipur and IIAB- Ranchi**

IARI, New Delhi					
S. No.	Discipline	UR+SC+ST	EWS	OBC	Total
1.	AGRICULTURAL CHEMICALS	4	1	2	7
2.	AGRICULTURAL ECONOMICS	3	1	1	5
3.	AGRICULTURAL ENGINEERING	3	0	2	5

IARI, New Delhi					
S. No.	Discipline	UR+SC+ST	EWS	OBC	Total
	(Farm Machinery & Power Engineering)				
4.	AGRICULTURAL ENGINEERING (Process & Food Engineering)	4	0	1	5
5.	AGRICULTURAL ENGINEERING (Soil & Water Conservation Engineering)	3	1	1	5
6.	AGRICULTURAL EXTENSION	5	1	2	8
7.	AGRICULTURAL PHYSICS	4	0	2	6
8.	AGRICULTURAL STATISTICS	6	1	3	10
9.	AGRONOMY	4	1	2	7
10.	BIOCHEMISTRY	4	1	2	7
11.	BIOINFORMATICS	4	0	2	6
12.	COMPUTER APPLICATION	4	1	3	8
13.	ENTOMOLOGY	5	1	2	8
14.	ENVIRONMENTAL SCIENCE	5	1	2	8
15.	FLORICULTURE AND LANDSCAPING	5	1	2	8
16.	FRUIT SCIENCE	4	1	2	7
17.	GENETICS AND PLANT BREEDING	5	1	3	9
18.	MICROBIOLOGY	5	1	2	8
19.	MOLECULAR BIOLOGY AND BIOTECHNOLOGY	7	1	2	10
20.	NEMATOLOGY	5	0	1	6
21.	PLANT GENETIC RESOURCES	5	0	1	6
22.	PLANT PATHOLOGY	6	1	3	10
23.	PLANT PHYSIOLOGY	4	1	2	7
24.	POST HARVEST MANAGEMENT	4	1	1	6
25.	SEED SCIENCE AND TECHNOLOGY	4	1	2	7
26.	SOIL SCIENCE	6	0	2	8
27.	VEGETABLE SCIENCE	5	1	3	9
28.	WATER SCIENCE AND TECHNOLOGY	3	0	1	4
	<b>Total</b>	<b>126</b>	<b>20</b>	<b>54</b>	<b>200</b>

**IARI-ASSAM**

S. No.	Discipline	UR+SC+ST	EWS	OBC	Total
1.	AGRONOMY	2	0	1	3
2.	GENETICS AND PLANT BREEDING	3	0	0	3
3.	SOIL SCIENCE	1	1	1	3
4.	VEGETABLE SCIENCE	2	0	1	3
	<b>Total</b>	<b>8</b>	<b>1</b>	<b>3</b>	<b>12</b>

**IARI-JHARKHAND**

S. No.	Discipline	UR+SC+ST	EWS	OBC	Total
1.	AGRICULTURAL ENGINEERING (Soil & Water Conservation Engineering)	1	0	0	1
2.	ENTOMOLOGY	1	0	1	2
3.	ENVIRONMENTAL SCIENCE	1	1	0	2
4.	FRUIT SCIENCE	2	0	0	2
5.	GENETICS AND PLANT BREEDING	2	1	1	4
6.	MICROBIOLOGY	1	0	1	2

S. No.	Discipline	UR+SC+ST	EWS	OBC	Total
7.	PLANT PATHOLOGY	2	0	0	2
8.	SEED SCIENCE AND TECHNOLOGY	1	0	0	1
9.	SOIL SCIENCE	1	0	1	2
10.	VEGETABLE SCIENCE	1	0	1	2
	<b>Total</b>	<b>13</b>	<b>2</b>	<b>5</b>	<b>20</b>

**NIASM-BARAMATI**

S. No.	Discipline	UR+SC+ST	EWS	OBC	Total
1.	AGRICULTURAL ENGINEERING (Soil & Water Conservation Engineering)	2	0	1	3
2.	ENVIRONMENTAL SCIENCE	1	1	0	2
3.	PLANT PHYSIOLOGY	1	0	1	2
	<b>Total</b>	<b>4</b>	<b>1</b>	<b>2</b>	<b>7</b>

**NIBSM-RAIPUR**

S. No.	Discipline	UR+SC+ST	EWS	OBC	Total
1.	ENTOMOLOGY	1	1	0	2
2.	MOLECULAR BIOLOGY AND BIOTECHNOLOGY	1	0	1	2
3.	PLANT PATHOLOGY	1	0	0	1
	<b>Total</b>	<b>3</b>	<b>1</b>	<b>1</b>	<b>5</b>

**IIAB- RANCHI**

S. No.	Discipline	UR+SC+ST	EWS	OBC	Total
1.	BIOCHEMISTRY	1	0	0	1
2.	GENETICS AND PLANT BREEDING	2	1	1	4
3.	MOLECULAR BIOLOGY AND BIOTECHNOLOGY	3	0	2	5
		6	1	3	10
	<b>Grand Total</b>	<b>160</b>	<b>26</b>	<b>68</b>	<b>254</b>

**417.10.3 Discipline -wise Seat positions for Ph.D. Programmes at IARI, New Delhi, IARI PG outreach programme at CIAE and IIHR**

IARI, New Delhi					
S. No.	Discipline	UR+ SC+ST	EWS	OBC	Total
1.	AGRICULTURAL CHEMICALS	6	1	3	10
2.	AGRICULTURAL ECONOMICS	5	1	2	8
3.	AGRICULTURAL ENGINEERING (Farm Machinery & Power Engineering)	4	1	2	7
4.	AGRICULTURAL ENGINEERING (Process & Food Engineering)	3	1	1	5
5.	AGRICULTURAL ENGINEERING (Soil & Water Conservation Engineering)	3	1	1	5
6.	AGRICULTURAL EXTENSION	7	1	3	11
7.	AGRICULTURAL PHYSICS	4	1	2	7
8.	AGRICULTURAL STATISTICS	6	1	3	10
9.	AGRONOMY	9	1	4	14

IARI, New Delhi					
S. No.	Discipline	UR+ SC+ST	EWS	OBC	Total
10.	BIOCHEMISTRY	6	1	3	10
11.	BIOINFORMATICS	5	1	2	8
12.	COMPUTER APPLICATION	6	1	3	10
13.	ENTOMOLOGY	7	1	3	11
14.	ENVIRONMENTAL SCIENCES	5	1	3	9
15.	FLORICULTURE AND LANDSCAPING	5	1	2	8
16.	FRUIT SCIENCE	6	1	3	10
17.	GENETICS AND PLANT BREEDING	11	1	4	16
18.	MICROBIOLOGY	7	1	3	11
19.	MOLECULAR BIOLOGY AND BIOTECHNOLOGY	9	1	4	14
20.	NEMATOLOGY	5	1	2	8
21.	PLANT GENETIC RESOURCES	6	1	2	9
22.	PLANT PATHOLOGY	10	1	4	15
23.	PLANT PHYSIOLOGY	5	1	2	8
24.	POST HARVEST MANAGEMENT	4	1	2	7
25.	SEED SCIENCE AND TECHNOLOGY	8	1	3	12
26.	SOIL SCIENCE	10	1	4	15
27.	VEGETABLE SCIENCE	8	1	3	12
28.	WATER SCIENCE AND TECHNOLOGY	3	1	1	5
Total		173	28	74	275

**CIAE, Bhopal**

S. No.	Discipline	UR+ SC+ ST	EWS	OBC	Total
1.	AGRICULTURAL ENGINEERING (Farm Machinery & Power Engineering)	3	0	0	3
2.	AGRICULTURAL ENGINEERING (Process & Food Engineering)	1	1	1	3
3.	AGRICULTURAL ENGINEERING (Soil & Water Conservation Engineering)	2	0	1	3
Total		6	1	2	9

**IIHR, Bengaluru**

S. No.	Discipline	UR+ SC+ ST	EWS	OBC	Total
1.	FLORICULTURE AND LANDSCAPING	3	0	1	4
2.	FRUIT SCIENCE	3	0	1	4
3.	POST HARVEST MANAGEMENT	1	0	1	2
4.	VEGETABLE SCIENCE	2	0	1	2
Total		9	1	4	14
Grand Total		188	30	80	298

**417.10.4.** In addition to the seats finalized for open stream, seats for admission to B.Sc./B.Tech, M.Sc. /M.Tech. & Ph.D. programmes under other streams are detailed below:

1. Faculty Up-gradation Scheme -10 seats for Ph.D.
2. ICAR-In-Service Nominee Scheme -10 seats for Ph.D.
3. Departmental (Scientific) -10 seats for Ph.D.
4. Departmental (Technical) -10 seats (5 seats each for M.Sc./M.Tech.& Ph.D.)
5. J & K migrants - 10 seats (5 seats each for M.Sc./M.Tech. & Ph.D.)
6. Children/widows of Security Forces -5 seats for M.Sc./M.Tech. & Ph.D.



7. Self-finance scheme for Indian, foreign national and Non-Resident Indian students in UG, PG and PhD Programme

7(i) Self-finance scheme – UG program (Total seats shall not exceed 40% over and above the intake of the programme). In 2022-23 academic session, 120 will be admitted under self-finance scheme for Indian, foreign, and NRI students put together.

- (a) Self-finance scheme – UG program for Indian Nationals(80 students; tuition fee Rs. 1 lakh per annum)
- (b) Self-finance scheme – UG program for Foreign Nationals & NRIs (40 students; tuition fee 4000US\$ per annum)

7(ii) Self-finance scheme – PG and Ph.D. programme for Foreign Nationals (50 seats in Academic session 2022-23; 25 each in MSc and PhD, respectively) (MSc- tuition fee 5000US\$ and PhD -4000US\$ per annum)

**417.10.5. Due to paucity of hostel facilities, accommodation shall be provided as per the availability and merit.**

*Agenda Item No. 417.11 Consideration of revision in guidelines of Institute awards viz., (i) Best Women Scientist Award, (ii) NABARD Researcher of the Year Award, (iii) Dr. H.K. Jain Memorial Young Scientist Award, and (iv) Dr. A.B. Joshi Memorial Award*


The Academic Council discussed the recommendations of the Committee constituted under the Chairmanship of Dean & Joint Director (Edn.) for revision in guidelines and allocation of marks for screening the applications for the above awards. After detailed deliberations, the Academic Council approved the revised guidelines and allocation of marks as per **Appendix-V**.


*Agenda Item No.417.12 Consideration of change of degree nomenclature of Agricultural Extension to Agricultural Extension Education as per the BSMA Recommendation*

The Academic Council modified existing nomenclature of 'Agricultural Extension' as 'Agricultural Extension Education' to maintain uniformity in the degree nomenclature as per the BSMA recommendation.

The meeting ended with the vote of thanks to the Chair.

  
(PushpendraKumar)  
Member-Secretary

  
(A.K. Singh)  
Chairperson

  
(S.S. Sindhu)  
Vice Chairperson



**DISCIPLINE WISE AND SEMESTER WISE DISTRIBUTION OF  
COURSES AS PER BSMA RECOMMENDATION APPLICABLE FROM  
THE ACADEMIC SESSION 2022-23**

**AGRICULTURAL CHEMICALS**

COURSE CODE	COURSE NAME	CREDIT-L	CREDIT-P
<b>I-SEMESTER</b>			
AC-501	INTRODUCTION TO AGROCHEMICALS	2	0
AC-502	CHEMICAL LABORATORY TECHNIQUES	1	2
AC-503*	BASIC CHEMISTRY	3	1
AC-504*	NATURAL PRODUCT CHEMISTRY	2	1
AC-506*	AGROCHEMICALS FOR INSECT, MITE AND TERMITE MANAGEMENT	2	1
AC-603	ADVANCED ORGANIC CHEMISTRY	2	1
AC-604	PESTICIDE METABOLISM, PERSISTENCE AND DECONTAMINATION	2	1
AC-591	MASTER'S SEMINAR	1	0
AC-691	DOCTORAL SEMINAR I	1	0
<b>II-SEMESTER</b>			
AC-505*	AGROCHEMICAL REGULATION, QUALITY CONTROL AND MANAGEMENT	2	0
AC-507	AGROCHEMICALS FOR DISEASE MANAGEMENT	2	1
AC-508	AGROCHEMICALS FOR WEED AND CROP MANAGEMENT	2	1
AC-509	CHROMATOGRAPHIC AND SPECTROSCOPIC TECHNIQUES	2	1
AC-510*	PESTICIDE RESIDUE CHEMISTRY	2	1
AC-601**	AGROCHEMICAL FORMULATION TECHNOLOGY	2	2
AC-602**	CHEMISTRY OF BIOPESTICIDES	2	1
AC-605	TERM PAPER (SPECIAL TOPICS IN AGROCHEMICALS)	1	0
AC-591	MASTER'S SEMINAR	1	0
AC-692	DOCTORAL SEMINAR II	1	0

\*Core Courses for MSc

\*\*Core Courses for PhD

**AGRICULTURAL ECONOMICS**

COURSE CODE	COURSE NAME	CREDIT-L	CREDIT-P
<b>I-SEMESTER</b>			
AEC-501*	MICRO ECONOMIC THEORY AND APPLICATIONS	3	0
AEC-502*	AGRICULTURAL PRODUCTION ECONOMICS	1	1
AEC-504*	MACRO ECONOMICS AND POLICY	2	0
AEC- 506**	AGRICULTURAL DEVELOPMENT AND POLICY ANALYSIS	2	0
AEC-509*	RESEARCH METHODOLOGY FOR SOCIAL SCIENCES	1	1
AEC-603*	ADVANCED ECONOMETRICS	2	1
AEC-607**	QUANTITATIVE DEVELOPMENT POLICY ANALYSIS	1	1
AEC-608	NATURAL RESOURCE MANAGEMENT	2	1
AEC-660	DOCTORAL SEMINAR	1	0
AEC-661	DOCTORAL SEMINAR	1	0
AEC-605	OPERATIONS RESEARCH	2	1
AEC-699	DOCTORAL RESEARCH	75	
<b>II-SEMESTER</b>			
AEC-503*	AGRICULTURAL MARKETING AND PRICE ANALYSIS	2	1
AEC-505*	ECONOMETRICS	2	1
AEC-507*	AGRICULTURAL FINANCE AND PROJECT MANAGEMENT	2	1
AEC-508*	LINEAR PROGRAMMING	1	1
AEC-511*	INTERNATIONAL ECONOMICS	1	1
AEC-512	INSTITUTIONAL ECONOMICS	1	0
AEC-513*	NATURAL RESOURCE AND ENVIRONMENTAL ECONOMICS	1	1
AEC-514	COMMODITY FUTURE TRADING	2	0
AEC-515*	DEVELOPMENT ECONOMICS	2	0
AEC-516	RURAL MARKETING	2	0
AEC-517	EVOLUTION OF ECONOMIC THOUGHT	1	0
AEC-591	MASTER'S SEMINAR	1	0

\*Indicates Core Courses which are Compulsory for Master Programme by BSMA

\*\* Divisional BoS recommended these courses also as Major course, hence

Total 20 +4 =24 credit hours for major course

**AGRICULTURAL ENGINEERING**

COURSE CODE	COURSE NAME	CREDIT -L	CREDIT -P
<b>I-SEMESTER</b>			
<b>FARM MACHINERY POWER ENGINEERING</b>			
FMPE501*	SOILDYNAMICSIN TILLAGEANDTRACTION	2+1	1
FMPE502*	TESTINGANDEVALUATIONOFAGRICULTURALEQUIPMENT	2+1	2
FMPE503*	ERGONOMICSANDSAFETYINFARMOPERATIONS	2+1	1
FMPE504	DESIGNOFTRACTORSYSTEMS	2+1	1
FMPE505	DESIGNOFFARMMACHINERY-I	2+1	1
FMPE506	DESIGNOFFARMMACHINERY-II	1+1	2
FMPE507*	MANAGEMENT OFFARMPowerANDMACHINERYSYSTEM	2+1	2
FMPE511	PRINCIPLESOFAUTOMATIONANDCONTROL	2+1	1
FMPE512	PRINCIPLESOFHYDRAULICANDPNEUMATICSYSTEMS	2+1	2
FMPE513	APPLIEDINSTRUMENTATION INFARMMACHINERY	2+1	1
FMPE514	SYSTEMS SIMULATIONANDCOMPUTERAIDEDPROBLEM SOLVINGENENGINEERING	1+1	1
FMPE515	COMPUTERAIDEDDESIGNOFMACHINERY	0+2	2
FMPE516	ADVANCEMANUFACTURINGTECHNOLOGIES	2+0	2
FMPE517	MACHINERYFORPRECISIONAGRICULTURE	2+1	1
FMPE518	MACHINERYFOR HORTICULTUREANDPROTECTEDAGRICULTURE	2+0	2
FMPE601*	ADVANCESIN FARMMACHINERYANDPOWERENGINEERING	2+1	1
FMPE602	ADVANCESINMACHINERYFORPRECISIONAGRICULTURE	2+1	2
FMPE603	ENERGYCONSERVATION ANDMANAGEMENT INPRODUCTIONAGRICULTURE	3+0	2
FMPE604	MECHANICSOFTILLAGEIN RELATIONTO SOILANDCROP	2+1	1
FMPE611	MECHANICSOFTRACTIONANDITS APPLICATION	2+1	2
FMPE612*	FARMMACHINERYMANAGEMENT ANDSYSTEMSENGINEERING	2+1	2
FMPE613	MACHINERYFORSPECIALFARMOPERATIONS	2+1	2
FMPE614	ERGONOMICSINWORKINGENVIRONMENT	2+1	1
<b>PROCESSING AND FOOD ENGINEERING</b>			
*PFE501	TRANSPORTPHENOMENAINFOODPROCESSING	2+1	1
*PFE502	UNITOPERATIONSINFOODPROCESSENGINEERING	2+1	1
*PFE503	FIELDCROSPROCESSENGINEERING	2+1	2
*PFE504	HORTICULTURALCROSPROCESSENGINEERING	2+1	2
PFE505	STORAGEENGINEERINGANDHANDLINGOFAGRICULTURALPRODUC E	2+1	1
PFE506	FOODPACKAGEENGINEERING	1+1	1
PFE507	INSTRUMENTATION ANDSENSORSINFOODPROCESSING	2+1	2

PFE508	APPLICATION OF ENGINEERING PROPERTIES IN FOOD PROCESSING	2+1	2
PFE509	FOOD QUALITY AND SAFETY	2+1	1
PFE510	FOOD PROCESSING TECHNOLOGIES	2+1	2
PFE511	FOOD PROCESSING EQUIPMENT AND PLANT DESIGN	1+1	2
PFE512	SEED PROCESS ENGINEERING	1+1	2
PFE513	AGRI-PROJECT PLANNING AND MANAGEMENT	2+1	1
PFE514	FARM STRUCTURES AND ENVIRONMENTAL CONTROL	2+1	2
PFE515	DAIRY PRODUCT PROCESSING	2+1	1
PFE516	PROCESSING OF MEAT, POULTRY AND FISH	2+1	1
PFE517	DESIGN OF AQUACULTURAL STRUCTURES	2+1	1
PFE518	THERMAL ENVIRONMENTAL ENGINEERING FOR AGRICULTURAL PROCESSING	2+1	2
*PFE601	ADVANCES IN FOOD PROCESS ENGINEERING	2+1	1
*PFE602	DRYING AND DEHYDRATION OF FOOD MATERIALS	2+1	2
PFE603	TEXTURAL AND RHEOLOGICAL CHARACTERISTICS OF FOOD MATERIALS	2+1	1
PFE604	AGRICULTURAL WASTE AND BY-PRODUCTS UTILIZATION	2+1	2
PFE605	MATHEMATICAL MODELING IN FOOD PROCESSING	3+0	1
PFE606	BIOPROCESS ENGINEERING	2+1	2
<b>SOIL AND WATER CONSERVATION ENGINEERING</b>			
*SWCE501	ADVANCED SOIL AND WATER CONSERVATION ENGINEERING	2+1	1
*SWCE502	APPLIED WATERSHED HYDROLOGY	2+1	1
SWCE503	SOIL AND WATER CONSERVATION STRUCTURES	2+1	2
SWCE504	STOCHASTIC HYDROLOGY	2+1	1
*SWCE505	WATERSHED MANAGEMENT AND MODELING	2+1	2
SWCE506	FLOW THROUGH POROUS MEDIA	2+0	2
SWCE507/IDE507	REMOTE SENSING AND GIS FOR LAND AND WATER RESOURCE MANAGEMENT	2+1	1
SWCE508	CLIMATE CHANGE AND WATER RESOURCES	3+0	1
SWCE509	NUMERICAL METHODS IN HYDROLOGY	2+0	2
SWCE510	DRY LAND WATER MANAGEMENT TECHNOLOGIES	2+0	2
*SWCE601	ADVANCES IN HYDROLOGY	2+1	2
*SWCE602	SOIL AND WATER SYSTEMS SIMULATION AND MODELING	2+1	1
SWCE603	RESERVOIR OPERATION AND RIVER BASIN MODELING	2+1	2
SWCE604	MODELING SOIL EROSION PROCESSES AND SEDIMENTATION	2+1	1
SWCE605	WASTEWATER TREATMENT AND UTILIZATION	3+0	1
SWCE606	HYDRO-CHEMICAL MODELING	2+0	2
SWCE691	SEMINAR-I	0+1	1/2
SWCE692	SEMINAR-II	0+1	1/2
SWCE699	THESIS RESEARCH	0+75	1/2

**AGRICULTURAL EXTENSION**

COURSE CODE	COURSE NAME	CREDIT-L	CREDIT-P
<b>I-SEMESTER</b>			
EXT 501*	EXTENSIONLANDSCAPE	2	0
EXT 502*	APPLIEDBEHAVIOURCHANGE	2	1
EXT 503*	ORGANISATIONALBEHAVIOURANDDEVELOPMENT	2	1
EXT 504*	RESEARCHMETHODOLOGYINEXTENSION	2	1
EXT 505*	CAPACITYDEVELOPMENT	2	1
EXT511***	FOUNDATIONS OF EXTENSION EDUCATION	2	1
EXT-601*	POLICY ENGAGEMENT AND EXTENSION	2	1
EXT-602*	METHODOLOGIES FOR SOCIAL AND BEHAVIOURAL SCIENCES	2	1
EXT-603*	TECHNOLOGY COMMERCIALIZATION AND INCUBATION	2	1
EXT-608**	ADVANCES IN AGRICULTURAL EXTENSION EDUCATION	2	1
EXT-609**	AGRICULTURAL JOURNALISM	2	1
EXT-591	MASTER'S SEMINAR	1	1
EXT-691	DOCTORAL SEMINAR	1	1
EXT-692	DOCTORAL SEMINAR	1	1
EXT 501*	EXTENSIONLANDSCAPE	2	0
EXT 502*	APPLIEDBEHAVIOURCHANGE	2	1
<b>II-SEMESTER</b>			
EXT 506*	ICTS FOR AGRICULTURAL EXTENSION AND ADVISORY SERVICES	2	1
EXT 507*	EVALUATIONANDIMPACTASSESSMENT	2	1
EXT 508	MANAGING EXTENSION ORGANISATIONS	2	1
EXT 509	ENABLING INNOVATION	2	1
EXT 510	GENDER MAINSTREAMING	2	1
EXT-604*	EDUCATIONAL TECHNOLOGY AND INSTRUCTIONAL DESIGN	2	1
EXT-605	RISK MANAGEMENT AND CLIMATE CHANGE ADAPTATION	2	1
EXT-606	LIVELIHOOD DEVELOPMENT	1	1
EXT-607	FACILITATION FOR PEOPLE CENTRIC DEVELOPMENT	2	1
EXT-610**	EMERGING TECHNOLOGIES IN AGRICULTURE	2	1
EXT-591	MASTER'S SEMINAR	1	0
EXT-691	DOCTORAL SEMINAR	1	0
EXT-692	Doctoral Seminar	1	0
<b>Research work</b>			
EXT-599	Master's research	30 credits	



EXT-699	Doctoral research	75 credits	
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**\*Core courses recommended by BSMA**

**\*\* Proposal for continuance of existing courses at IARI**

**\*\*\* Proposal for introduction of new courses**

**AGRICULTURAL PHYSICS**

COURSE CODE	COURSE NAME	CREDIT-L	CREDIT-P
<b>I-SEMESTER</b>			
AP 501*	BASIC CONCEPTS OF AGRICULTURAL PHYSICS -I	2	1
AP 502*	BASIC CONCEPTS OF AGRICULTURAL PHYSICS -II	3	0
AP 503	FUNDAMENTALS OF SOIL PHYSICS	2	1
AP 504*	MATHEMATICS IN AGRICULTURE	3	0
AP 505	FUNDAMENTALS OF METEOROLOGY	2	1
AP 506*	PRINCIPLES OF BIOPHYSICS	2	1
AP 507	PRINCIPLES OF REMOTE SENSING	2	1
AP 591	MASTER'S SEMINAR	1	0
AP 599	MASTER'S RESEARCH	30	0
AP 601*	ADVANCED OF SOIL PHYSICS	2	1
AP 603	CROP MICROMETEOROLOGY AND EVAPOTRANSPIRATION	2	1
AP 604*	DIGITAL IMAGE PROCESSING	1	1
AP 691	DOCTORAL SEMINAR I	1	0
AP 599	MASTER RESEARCH	30	
<b>II-SEMESTER</b>			
AP 508	PHYSICS OF SOIL AND WATER CONSERVATION	2	1
AP 509	GENERAL CLIMATOLOGY	2	1
AP 510	SOIL PHYSICAL ENVIRONMENT AND PLANT GROWTH	2	1
AP 511	SIMULATION OF SOIL, PLANT AND ATMOSPHERIC PROCESSES	2	1
AP 512	PRINCIPLES OF PHYSICAL TECHNIQUES IN AGRICULTURE	2	1
AP513	PRINCIPLES AND APPLICATIONS OF GIS AND GPS	2	1
AP 514	NANOSCIENCE AND TECHNOLOGY FOR AGRICULTURE	2	0
AP 515	REMOTE SENSING IN AGRICULTURE	2	1
AP 602	APPLIED SOIL PHYSICS	2	1
AP 605	SATELLITE AGROMETEOROLOGY	2	1
AP 606	SENSORS FOR SOIL, CROP AND ENVIRONMENT MONITORING	2	1
AP 607	WEATHER HAZARDS AND ITS MANAGEMENT	2	0
AP 692	DOCTORAL SEMINAR II	1	0
AP 699	DOCTORAL RESEARCH	75	

- \* Core Courses for M.Sc. and Ph.D.

**AGRICULTURAL STATISTICS**

COURSE CODE	COURSE NAME	CREDIT-L	CREDIT-P
<b>I-SEMESTER</b>			
*STAT552	PROBABILITYTHEORY	2	0
*STAT553	STATISTICALEMETHODS	2	1
*STAT571	MULTIVARIATEANALYSIS	2	1
*STAT572	REGRESSIONANALYSIS	1	1
*STAT573	STATISTICALCOMPUTING	1	1
STAT591	SEMINAR	0	1
STAT551	MATHEMATICS-I	3	0
STAT554	ACTUARIALSTATISTICS	2	0
STAT555	BIOINFORMATICS	2	0
STAT556	ECONOMETRICS	2	0
STAT574	TIMESERIESANALYSIS	1	1
STAT575	DEMOGRAPHY	2	0
STAT576	STATISTICALMETHODSFORLIFESCIENCES	2	0
STAT577	STATISTICALECOLOGY	2	0
STAT501	MATHEMATICS FOR APPLIED SCIENCES	2	0
STAT502	STATISTICAL METHODS FOR APPLIED SCIENCES	3	1
STAT521	APPLIEDREGRESSIONANALYSIS	2	1
STAT522	DATAANALYSISUSINGSTATISTICALPACKAGES	2	1
*STAT 601	ADVANCED DATA ANALYTICS	1	2
*STAT 602	SIMULATION TECHNIQUES	1	1
*STAT 603	LINEAR MODELS	2	0
*STAT 604	ADVANCED STATISTICAL METHODS	2	1
STAT 691	SEMINAR I	0	1
STAT 605	MODELING TECHNIQUES FOR FORECASTING	2	1
STAT 606	STOCHASTIC PROCESSES	2	0
STAT 607	SURVIVAL ANALYSIS	2	0
STAT 608	SPATIAL STATISTICS	1	1
STAT 692	SEMINAR II	0	1
STAT 699	RESEARCH	75	0
<b>II-SEMESTER</b>			
*STAT562	STATISTICALINFERENCE	2	1
*STAT563	DESIGNOF EXPERIMENTS	2	1
*STAT564	SAMPLINGTECHNIQUES	2	1

*STAT565	STATISTICALGENETICS	2	1
STAT561	MATHEMATICS-II	2	0
STAT566	STATISTICALQUALITYCONTROL	2	0
STAT567	OPTIMIZATIONTECHNIQUES	1	1
STAT511	EXPERIMENTALDESIGNS	2	1
STAT512	BASICSAMPLINGTECHNIQUES	2	1
STAT 613	ADVANCED SAMPLING TECHNIQUES	2	1
STAT 614	ADVANCED STATISTICAL GENETICS	2	1
STAT 615	ADVANCED TIME SERIES ANALYSIS	2	0
STAT 616	ADVANCED BIOINFORMATICS	2	0
STAT 612	ADVANCED DESIGN OF EXPERIMENTS	2	1
STAT 610#	ADVANCED STATISTICAL INFERENCE	3	0
*STAT 611	BAYESIAN INFERENCE	2	0
STAT 691	SEMINAR I	0	1
STAT 692	SEMINAR II	0	1
STAT 699	RESEARCH	75	0

\*Core Courses which are Compulsory for M.Sc. and Ph.D. Programme

# New course to be added

**AGRONOMY**

COURSE CODE	COURSE NAME	CREDIT-L	CREDIT-P
I-SEMESTER			
AGRON 501*	MODERN CONCEPTS IN CROP PRODUCTION	3	0
AGRON 503*	PRINCIPLES AND PRACTICES OF WEED MANAGEMENT	2	1
AGRON505	CONSERVATION AGRICULTURE	1	1
AGRON 506	AGRONOMY OF MAJOR CEREALS AND PULSES	2	0
AGRON 508	AGRONOMY OF MEDICINAL, AROMATIC AND UNDER-UTILIZED CROPS	2	1
AGRON 510/ ES 510	AGROSTOLOGY AND AGROFORESTRY	2	1
AGRON 511	CROPPING SYSTEM AND SUSTAINABLE AGRICULTURE	2	0
AGRON550	MASTER'S SEMINAR	1	0
AGRON 602*	RECENT TRENDS IN CROP GROWTH AND PRODUCTIVITY	2	1
AGRON 603	IRRIGATION MANAGEMENT	2	1
AGRON 606	SOIL CONSERVATION AND WATERSHED MANAGEMENT	2	1
AGRON 608	RESEARCH AND PUBLICATION ETHICS	2	0
AGRON 691	DOCTORAL SEMINAR I	1	0
AGRON 699	DOCTORAL RESEARCH	75	
AGRON560	MASTER'S RESEARCH	30	
II-SEMESTER			
AGRON 502*	PRINCIPLES AND PRACTICES OF SOIL FERTILITY AND NUTRIENT MANAGEMENT	2	1
AGRON 504*	PRINCIPLES AND PRACTICES OF WATER MANAGEMENT	2	1
AGRON 507	AGRONOMY OF OILSEED, FIBRE AND SUGAR CROPS	2	1
AGRON 509	AGRONOMY OF FODDER AND FORAGE CROPS	2	1
AGRON 512	DRYLAND FARMING AND WATERSHED MANAGEMENT	2	1
AGRON 513	PRINCIPLES AND PRACTICES OF ORGANIC FARMING	2	1
AGRON550	MASTER'S SEMINAR	1	0
AGRON560	MASTER'S RESEARCH	30	
AGRON 601*	CURRENT TRENDS IN AGRONOMY	3	0
AGRON 604	RECENT TRENDS IN WEED MANAGEMENT	2	0
AGRON 605	INTEGRATED FARMING SYSTEMS FOR SUSTAINABLE AGRICULTURE	2	0
AGRON 607	STRESS CROP PRODUCTION	2	1
AGRON 609	EXPERIMENTAL TECHNIQUES IN AGRONOMY	2	1
AGRON 692	DOCTORAL SEMINAR II	1	0
AGRON 699	DOCTORAL RESEARCH	75	

\* Compulsory Courses; AGRON 510/ES 510 Joint Courses with Environmental Sciences

**BIOCHEMISTRY**

<b>COURSE CODE</b>	<b>COURSE NAME</b>	<b>CREDIT-L</b>	<b>CREDIT-P</b>
<b>I-SEMESTER</b>			
BIOCHEM 501*	BASIC BIOCHEMISTRY	3	1
BIOCHEM 503*	ENZYMOLGY	2	1
BIOCHEM 508	ANIMAL BIOCHEMISTRY	3	0
BIOCHEM 509	NUTRITIONAL BIOCHEMISTRY	2	1
BIOCHEM 510	NITROGEN AND SULPHUR METABOLISM	2	1
BIOCHEM 602	ADVANCED MOLECULAR BIOLOGY	3	0
BIOCHEM 603	BIOCHEMISTRY OF BIOTIC AND ABIOTIC STRESSES	3	0
BIOCHEM 604	FRONTIER TOPICS IN BIOCHEMISTRY	2	0
BIOCHEM 606	BIOMEMBRANES	2	0
BIOCHEM 607*	APPLICATIONS OF TECHNIQUES IN BIOCHEMISTRY	1	2
BIOCHEM 691	DOCTORAL SEMINAR-I	1	0
BIOCHEM 591	MASTER'S SEMINAR	1	0
BIOCHEM 599	MASTER'S RESEARCH	30	
<b>II-SEMESTER</b>			
BIOCHEM 502*	INTERMEDIARY METABOLISM	3	0
BIOCHEM 504	MOLECULAR BIOLOGY	2	1
BIOCHEM 505*	TECHNIQUES IN BIOCHEMISTRY	2	2
BIOCHEM 506	IMMUNO CHEMISTRY	2	1
BIOCHEM 507	PLANT BIOCHEMISTRY	2	1
BIOCHEM 511	BIOCHEMISTRY ON XENOBIOTICS	2	0
BIOCHEM 591	MASTER'S SEMINAR	1	0
BIOCHEM 601*	ADVANCED ENZYMOLOGY	2	1
BIOCHEM 605	CONCEPTS AND APPLICATIONS OF OMICS IN BIOLOGICAL SCIENCE	3	0
BIOCHEM 608**	INDUSTRIAL BIOCHEMISTRY	2	1
BIOCHEM 692	DOCTORAL SEMINAR-II	1	0
BIOCHEM 599	DOCTORAL RESEARCH	75	

\*Core course

\*\* New Course proposed



**BIOINFORMATICS**

COURSE CODE	COURSE NAME	CREDIT-L	CREDIT-P
<b>I-SEMESTER</b>			
*BI 501	INTRODUCTION TO BIOINFORMATICS & COMPUTATIONAL BIOLOGY*	2	1
BI 503	GENOME ASSEMBLY AND ANNOTATION	1	1
*BI 504	BIOMOLECULAR MODELLING AND SIMULATION*	2	1
BI 505	TRANSCRIPTOMICS AND METAGENOMICS	2	1
*BI 506	BIOLOGICAL DATA MANAGEMENT*	2	1
BI 507	BIOLOGICAL NETWORK MODELLING AND ANALYSIS	2	1
BI 510	GRAPHICS AND VISUALIZATION OF BIOLOGICAL DATA	1	1
*BI 605	#COMPARATIVE AND FUNCTIONAL GENOMICS*	1	1
BI 606	PHYLOGENETICS	2	1
BI 607	#R AND HIGH DIMENSIONAL GENOME DATA	1	1
BI 608	PHARMACOGENOMICS & IPR	3	1
BI 609	BIOLOGICAL DATA INTEGRATION AND QUALITY CONTROL	1	1
<b>II-SEMESTER</b>			
BI 508	COMPUTER PROGRAMMING IN BIOINFORMATICS	2	1
BI 509	MACHINE LEARNING TECHNIQUES IN BIOINFORMATICS	2	1
BIF 511	OPTIMIZATION TECHNIQUES IN BIOINFORMATICS	1	1
BIF 512	PROTEOMICS AND METABOLOMICS	2	1
*BI 601	GENOME WIDE ASSOCIATION STUDY*	2	1
BI 602	#COMPUTATIONAL ANALYSIS OF NON-CODING RNAs	1	1
BI 603	#BIG DATA ANALYTICS	1	1
BI 604	#SYSTEMS BIOLOGY	3	0
BI 610	QUANTUM THEORY AND APPLICATIONS IN BIOINFORMATICS	1	1
BI 591/592	MASTER'S SEMINAR-I/II	1	0
BI 691/692	DOCTORAL SEMINAR-I/II	1	0

\* Indicates Core Courses which are Compulsory for Ph.D. Programme

# indicates New Courses introduced

**COMPUTER APPLICATION**

COURSE CODE	COURSE NAME	CREDIT-L	CREDIT-P
<b>I-SEMESTER</b>			
*MCA 513	MATHEMATICS FOR APPLIED SCIENCES	2+0	I
*MCA 514	STATISTICAL COMPUTING	1+1	III
*MCA 551	MATHEMATICAL FOUNDATIONS IN COMPUTER SCIENCE	3+0	I
*MCA 552	OBJECT ORIENTED PROGRAMMING	2+1	I
*MCA 553	DESIGN AND ANALYSIS OF ALGORITHMS	2+1	I
*MCA 571	DATABASE MANAGEMENT SYSTEMS	2+1	III
*MCA 572	SOFTWARE ENGINEERING	2+0	III
MCA 573	OPERATING SYSTEM	2+1	III
MCA 574	COMPILER CONSTRUCTION	2+1	III
MCA 575	DATA WAREHOUSING AND DATA MINING	2+1	III
MCA 501	COMPUTERS FUNDAMENTALS AND PROGRAMMING	2+1	I
MCA 502	COMPUTER ORGANIZATION AND ARCHITECTURE	2+0	I
NOT ASSIGNED	ARTIFICIAL INTELLIGENCE	2+1	III
MCA 603	SIMULATION AND MODELING	1+1	I
MCA 604	INTRODUCTION TO BIG DATA	2+1	I
MCA 605	INTRODUCTION TO IOT	2+1	I
MCA 606	MANAGEMENT INFORMATION SYSTEMS	2+0	I
NOT ASSIGNED	FUZZY SETS AND ROUGH SETS	2+1	I
NOT ASSIGNED	ANN AND DEEP LEARNING	2+1	I
NOT ASSIGNED	DIGITAL IMAGE PROCESSING	2+1	I
<b>II-SEMESTER</b>			
*MCA 561	DATA STRUCTURES	2+1	II
*MCA 562	SYSTEM SOFTWARE AND PROGRAMMING	2+1	II
*MCA 563	INTERNET TECHNOLOGIES	1+1	II
MCA 564	BIOINFORMATICS COMPUTING	1+1	II
MCA 565	SOFT COMPUTING TECHNIQUES	1+1	II
*MCA 611	COMPUTER ORIENTED NUMERICAL ANALYSIS	2+1	II
*MCA 612	ARTIFICIAL INTELLIGENCE AND MACHINE LEARNING	2+1	II
*MCA 615	BIOINFORMATICS COMPUTING	2+0	II
MCA 691	SEMINAR I	0+1	I/II
MCA 692	SEMINAR II	0+1	I/II
MCA 511	INTRODUCTION TO COMMUNICATION TECHNOLOGIES	1+1	II
MCA 613	MULTIMEDIA AND ITS APPLICATIONS	1+1	II
MCA 614	KNOWLEDGE BASED SYSTEMS FOR SEMANTIC WEB	1+1	II
NOT ASSIGNED	NATURAL LANGUAGE PROCESSING	2+1	II

**ENTOMOLOGY**

COURSE CODE	COURSE NAME	CREDIT-L	CREDIT-P
<b>I-SEMESTER</b>			
ENT501*	INSECT MORPHOLOGY	2	1
ENT502*	INSECT ANATOMY AND PHYSIOLOGY	2	1
ENT503*	INSECT TAXONOMY	2	1
ENT505*	BIOLOGICAL CONTROL OF INSECT PESTS AND WEEDS	2	1
ENT509*	PESTS OF FIELD CROPS	2	1
ENT510*	PESTS OF HORTICULTURE AND PLANTATION CROPS	2	1
ENT511*	POST HARVEST ENTOMOLOGY	2	1
ENT515	TECHNIQUES IN PLANT PROTECTION	0	1
ENT516	APICULTURE	2	1
ENT517	SERICULTURE	2	1
ENT518	LAC CULTURE	2	1
ENT520	PLANT QUARANTINE, BIOSAFETY AND BIOSECURITY	2	0
ENT521	EDIBLE AND THERAPEUTIC INSECTS	1	1
ENT522	MEDICAL AND VETERINARY ENTOMOLOGY	1	1
ENT523	FOREST ENTOMOLOGY	1	1
ENT524	MASTER'S SEMINAR	1	0
ENT599	MASTER'S RESEARCH	30	
ENT601*	INSECT PHYLOGENY AND SYSTEMATICS	1	2
ENT603*	INSECT ECOLOGY AND DIVERSITY	1	2
ENT604*	INSECT BEHAVIOUR	1	1
ENT606*	INSECT TOXICOLOGY AND RESIDUES	1	2
ENT607	PLANT RESISTANCE TO INSECTS	1	1
ENT608	ACAROLOGY	1	1
ENT609	MOLECULAR ENTOMOLOGY	1	1
ENT691	INTEGRATED PEST MANAGEMENT	2	0
ENT692*	DOCTORAL SEMINAR	1	0
ENT699	DOCTORAL RESEARCH	75	
<b>II-SEMESTER</b>			
ENT504*	INSECT ECOLOGY	2	1
ENT506*	TOXICOLOGY OF INSECTICIDES	2	1
ENT507*	HOST PLANT RESISTANCE	1	1
ENT508*	CONCEPTS OF INTEGRATED PEST MANAGEMENT	2	0
ENT510*	PESTS OF HORTICULTURE AND PLANTATION CROPS	2	1
ENT512	INSECT VECTORS OF PLANT PATHOGENS	2	1
ENT513	PRINCIPLES OF ACAROLOGY	2	1
ENT514	VERTEBRATE PEST MANAGEMENT	2	1
ENT519	MOLECULAR APPROACHES IN ENTOMOLGOY	2	1
ENT602*	INSECT PHYSIOLOGY AND NUTRITION	1	2
ENT605*	BIO-INPUTS FOR PEST MANAGEMENT	1	2

**Core Courses for M.Sc. and PhD.**

**ENVIRONMENTAL SCIENCES**

COURSE CODE	COURSE NAME	CREDIT-L	CREDIT-P
<b>I-SEMESTER</b>			
ES 501	INTRODUCTION TO ENVIRONMENTAL SCIENCES	2	1
ES 502	ENVIRONMENTAL CHEMISTRY	2	1
ES 503/ PP605	CLIMATE CHANGE AND CLIMATE SMART AGRICULTURE	2	1
ES 504	INSTRUMENTAL METHODS FOR ENVIRONMENTAL MONITORING	2	1
ES 506	ENVIRONMENTAL POLLUTION	2	1
ES 601	ANALYSIS OF AGROECOSYSTEM	2	1
ES 602	ENVIRONMENTAL IMPACT ASSESSMENT	2	1
ES 603	WASTE MANAGEMENT	2	1
ES 604	CROP GEOGRAPHY AND ECOLOGY	2	1
ES 591	MASTERS SEMINAR	1	0
ES 691	DOCTORAL SEMINAR I	1	0
ES 692	DOCTORAL SEMINAR II	1	0
<b>II-SEMESTER</b>			
ES 505	ENVIRONMENTAL ENGINEERING	2	1
ES 507	ENVIRONMENTAL MICROBIOLOGY AND ECOLOGY	2	1
ES 508	BIOFULES AND ENVIRONMENTAL PROTECTION	2	1
ES 509	ENVIRONMENTAL TOXICOLOGY	2	1
ES 510/AGRON 510	AGROSTOLOGY AND AGROFORESTRY	2	1
ES 511	ENVIRONMENTAL GEOSCIENCES	2	0
ES 605	BIODIVERSITY	2	1
ES 606/SWE 606	PLANT GROWTH MODELING AND SIMULATION OF ECOLOGICAL PROCESSES	2	1
ES 607	INTRODUCTION TO ENVIRONMENT LAW AND POLICY	2	1
ES 591	MASTERS SEMINAR	1	0
ES 691	DOCTORAL SEMINAR I	1	0
ES 692	DOCTORAL SEMINAR II	1	0

**Core courses:**

MSc: ES 501, ES 502, ES 503, ES 504

PhD: ES 601, ES 602

**FLORICULTURE AND LANDSCAPING**

COURSE CODE	COURSE NAME	CREDIT-L	CREDIT-P
<b>I-SEMESTER</b>			
FLS501*	SYSTEMATIC OF ORNAMENTAL PLANTS	2	1
FLS502*	BREEDING OF ORNAMENTAL PLANTS	2	1
FLS504*	COMMERCIAL PRODUCTION OF LOOSE FLOWERS	2	1
FLS505*	ORNAMENTAL GARDENING AND LANDSCAPING	2	1
FLS509	VALUE ADDITION IN FLORICULTURE	2	1
FLS512	SEED PRODUCTION IN FLOWER CROPS	1	1
FSC515/VSC515/FLS 515#	BASIC HORTICULTURE	2	1
FLS 591	SEMINAR	0	1
FLS.601**	CROP REGULATION IN ORNAMENTAL CROPS	1	1
FLS.602**	POST HARVEST BIOLOGY OF FLORICULTURAL CROPS	2	1
FLS.604	BIOTECHNOLOGICAL APPROACHES IN FLORICULTURAL CROPS	2	1
FLS.605**	ADVANCES IN LANDSCAPING	1	1
FLS.608	CURRENT TRENDS IN PRODUCTION TECHNOLOGY OF FLORICULTURAL CROPS	2	1
FLS 691	SEMINAR I	0	1
<b>II-SEMESTER</b>			
FLS 503*	COMMERCIAL PRODUCTION OF CUT FLOWERS	2	1
FLS 506	INDOOR PLANTS AND INTERIORSCAPING	1	1
FLS 507	NURSERY MANAGEMENT IN ORNAMENTAL PLANTS	2	1
FLS 508	TURF GRASS MANAGEMENT	2	1
FLS 510	PROTECTED CULTIVATION OF FLOWER CROPS	2	1
FLS 511	CAD FOR LANDSCAPING	1	2
FLS 591	SEMINAR	0	1
FLS 603	SPECIALITY FLOWERS, FILLERS AND CUT GREENS	1	1
FLS 606	VERTICAL GARDENING	1	2
FLS 607	MODERN APPROACHES IN BREEDING OF FLORICULTURAL CROPS	2	1
FLS 609	RECENT DEVELOPMENTS IN PROTECTED CULTIVATION OF FLORICULTURAL CROPS	2	1
FLS 692	SEMINAR-II	0	1

\*Compulsory Courses for M.Sc., # Cross Listed Course (new course introduced in addition to the courses recommended by BSMA)

**Note:** All finalized courses (for M.Sc. programme) including their content are as per BSMA recommendations except one Cross Listed Course i.e. Course No. FSC515/VSC515/FLS 515# (Basic Horticulture, 2L+1P).



**FRUIT SCIENCE**

<b>COURSE CODE</b>	<b>COURSE NAME</b>	<b>CREDIT-L</b>	<b>CREDIT-P</b>
<b>I-SEMESTER</b>			
FSC 501*	TROPICAL FRUIT PRODUCTION	2	1
FSC 503*	PROPAGATION AND NURSERY MANAGEMENT OF FRUIT CROPS	2	1
FSC 505	SYSTEMATICS OF FRUIT CROPS	2	1
FSC 506	CANOPY MANAGEMENT IN FRUIT CROPS	1	1
FSC 510	ORGANIC FRUIT CULTURE	2	1
FSC 512	CLIMATE CHANGE AND FRUIT CROPS	1	0
FSC /VSC/ FLS-515 <sup>#</sup>	BASIC HORTICULTURE	2	1
FSC 591	MASTERS SEMINAR	0	1
FSC 601*	INNOVATIVE APPROACHES IN FRUIT BREEDING	3	0
FSC 602*	MODERN TRENDS IN FRUIT PRODUCTION	3	0
FSC 606	ABIOTIC STRESS MANAGEMENT IN FRUIT CROPS	2	1
FSC 607	BIODIVERSITY AND CONSERVATION OF FRUIT CROPS	2	1
FSC 691	DOCTORAL SEMINAR-I	1	0
<b>II-SEMESTER</b>			
FSC 502*	SUB-TROPICAL AND TEMPERATE FRUIT PRODUCTION	2	1
FSC 504*/GPB 514 <sup>#</sup>	BREEDING OF FRUIT CROPS	2	1
FSC 507	GROWTH AND DEVELOPMENT OF FRUIT CROPS	2	1
FSC 508	NUTRITION OF FRUIT CROPS	2	1
FSC 509	BIOTECHNOLOGY OF FRUIT CROPS	2	1
FSC 511	EXPORT ORIENTED FRUIT PRODUCTION	2	1
FSC 513	MINOR FRUIT PRODUCTION	2	1
FSC 591	MASTERS SEMINAR	0	1
FSC 603	RECENT DEVELOPMENTS IN GROWTH REGULATION	3	0
FSC 604	ADVANCED LABORATORY TECHNIQUES	1	2
FSC 605	ARID AND DRY LAND FRUIT PRODUCTION	2	0
FSC 608	SMART FRUIT PRODUCTION	2	0
FSC 692	DOCTORAL SEMINAR-II	1	0
FSC 699	DOCTORAL RESEARCH	75	

\*Compulsory Courses for M.Sc., <sup>#</sup> Cross Listed Course (new course introduced in addition to the courses recommended by BSMA)

**GENETICS AND PLANT BREEDING**

COURSE CODE	COURSE NAME	CREDIT-L	CREDIT-P
<b>I-SEMESTER</b>			
GPB501*	PRINCIPLES OF GENETICS	2	1
GPB502*	PRINCIPLES OF PLANT BREEDING	2	1
GPB505**	PRINCIPLES OF CYTOGENETICS	2	1
GPB508	MUTAGENESIS AND MUTATION BREEDING	2	1
GPB511	CROP BREEDING-I (KHARIF CROPS)	2	1
GPB517****	GERMPLASM CHARACTERIZATION AND EVALUATION	1	1
GPB518	GENETIC ENHANCEMENT FOR PGR UTILIZATION	1	1
GPB591	SEMINAR	1	
GPB599	THESIS/RESEARCH	30	
GPB601*	ADVANCES IN PLANT BREEDING SYSTEMS	3	1
GPB602	ADVANCES IN BIOMETRICAL GENETICS	2	1
<b>II-SEMESTER</b>			
GPB503*	FUNDAMENTALS OF QUANTITATIVE GENETICS	2	1
GPB504	VARIETAL DEVELOPMENT AND MAINTENANCE BREEDING	1	1
GPB506*	MOLECULAR BREEDING AND BIOINFORMATICS	2	1
GPB509	HYBRID BREEDING	2	1
GPB510	SEED PRODUCTION AND CERTIFICATION	1	1
GPB507	BREEDING FOR QUALITY AND SPECIAL TRAITS	2	1
GPB602	ADVANCES IN BIOMETRICAL GENETICS	2	1
GPB603	MOLECULAR CYTOGENETIC FOR CROP IMPROVEMENT	2	0
GPB604****	PLANT GENETICS RESOURCES, CONSERVATION AND UTILIZATION	2	0
GPB605*	GENOMICS IN PLANT BREEDING	3	0
GPB607	CROP EVOLUTION	3	0
GPB608	BREEDING DESIGNER CROPS	1	1
GPB609*	IPR AND REGULATORY MECHANISM (E-COURSE)	1	0
GPB610***	DEVELOPMENT OF GENE CONCEPT	3	0
GPB611***	PLANT GENE EXPRESSION AND REGULATION	3	0
GPB612***	GENETIC DATA ANALYSIS	0	2
GPB691	SEMINAR I	1	
GPB692	SEMINAR II	1	
GPB699	THESIS/RESEARCH	75	
GPB512	CROP BREEDING-II (RABI CROPS)	2	1
GPB513*****	BREEDING VEGETABLE CROPS	2	1
GPB514##	BREEDING FRUIT CROPS	2	1
GPB515*****	BREEDING ORNAMENTAL CROPS	2	1
GPB516	BREEDING FOR STRESS RESISTANCE AND CLIMATE CHANGE	2	1

GPB519***	DEVELOPMENT OF GENE CONCEPT	3	0
GPB520***	PLANT GENE EXPRESSION AND REGULATION	3	0
GPB603	MOLECULAR CYTOGENETIC FOR CROP IMPROVEMENT	2	0
GPB606	POPULATION GENETICS	2	0

\*: Compulsory courses recommended by BSMA

\*\*: Course (GPB505) to be made compulsory as proposed by the BOS

\*\*\*: New Courses (GPB519 & GPB520) proposed by the BOS

\*\*\*\*: GPB517 to have faculty from discipline of PGR

\*\*\*\*\*: GP513 and GP 515 to have faculty from discipline of VSC and FLA

#GPB506 (Molecular Breeding and Bioinformatics)/ MBB511 (Molecular Plant Breeding) to Be cross listed with discipline of MBB

#GPB514 (Breeding Fruit Crops)/ FSC504 (Breeding of Fruit Crops) to be cross listed with Discipline of FSC

§: For students from Discipline of GPB, SST, PGR, MBB & VSC; §§: For students from Disciplines other than above

**MIRCOBIOLOGY**

<b>COURSE CODE</b>	<b>COURSE NAME</b>	<b>CREDIT-L</b>	<b>CREDIT-P</b>
<b>I-SEMESTER</b>			
MICRO 501	TECHNIQUES IN MICROBIOLOGY	0	2
MICRO 502*	PRINCIPLES OF MICROBIOLOGY	3	1
MICRO 503*	MICROBIAL PHYSIOLOGY AND METABOLISM	3	1
MICRO 505*	SOIL MICROBIOLOGY	2	1
MICRO 510	INDUSTRIAL MICROBIOLOGY	2	1
MICRO 512	CYANOBACTERIAL AND ALGAL BIOTECHNOLOGY	2	0
MICRO 591	MASTER'S SEMINAR	1	0
MICRO 599	MASTER'S RESEARCH	30	
MICRO 603*	RECENT DEVELOPMENTS IN SOIL MICROBIOLOGY	2	0
MICRO 604	RECENT APPROACHES IN ENVIRONMENTAL MICROBIOLOGY	2	0
MICRO 605*	PLANT-MICROBE INTERACTIONS	2	1
MICRO 691	DOCTORAL SEMINAR	1	0
<b>II-SEMESTER</b>			
MICRO 504	MICROBIAL GENETICS	2	1
MICRO 507*	FOOD MICROBIOLOGY	2	1
MICRO 509	ENVIRONMENTAL MICROBIOLOGY	2	1
MICRO 511*	BIOFERTILIZER TECHNOLOGY	2	1
MICRO 601*	IMPROVEMENT IN FERMENTATION TECHNOLOGY	2	1
MICRO 602	MICROBIAL PHYSIOLOGY AND REGULATION	2	1
MICRO 606	MICROBIAL GENOMICS AND METABOLOMICS	2	0
MICRO 691	DOCTORAL SEMINAR	1	0
MICRO 699	DOCTORAL RESEARCH	1	0

- \* Core Courses for M.Sc. and Ph.D.

**MOLECULAR BIOLOGY AND BIOTECHNOLOGY**

COURSE CODE	COURSE NAME	CREDIT-L	CREDIT-P
<b>I-SEMESTER</b>			
MBB 501*	PRINCIPLES OF BIOTECHNOLOGY	3	0
MBB 502*	FUNDAMENTALS OF MOLECULAR BIOLOGY	3	0
MBB 504*	TECHNIQUES IN MOLECULAR BIOLOGY I	0	3
MBB509	PLANT TISSUE CULTURE	2	1
MBB510	MICROBIAL AND INDUSTRIAL BIOTECHNOLOGY	2	1
MBB 514	NANO-BIOTECHNOLOGY	2	1
MBB515	ENVIRONMENTAL BIOTECHNOLOGY	3	0
MBB518	GENE REGULATION	2	0
MBB 601**	PLANT MOLECULAR BIOLOGY	3	0
MBB 603	PLANT OMICS AND MOLECULAR BREEDING	3	0
MBB604	COMMERCIAL PLANT TISSUE CULTURE	2	0
MBB607	PLANT HORMONES AND SIGNALING	2	0
MBB691	SEMINAR	1	
<b>II-SEMESTER</b>			
MBB 503*	MOLECULAR CELL BIOLOGY	3	0
MBB 505*	OMICS AND SYSTEM BIOLOGY	2	1
MBB 506	PLANT GENETIC ENGINEERING	3	1
MBB 507	TECHNIQUES IN MOLECULAR BIOLOGY II	0	3
MBB 508	INTRODUCTION TO BIOINFORMATICS	2	1
MBB511	MOLECULAR PLANT BREEDING	2	1
MBB512	IPR, BIOSAFETY & BIOETHICS	2	0
MBB 513	IMMUNOLOGY AND MOLECULAR DIAGNOSTICS	3	0
MBB516	BIO-ENTREPRENEURSHIP	1	0
MBB 517	STRESS BIOLOGY AND GENOMICS	2	0
MBB 602 **	PLANT GENOME ENGINEERING	3	0
MBB605	PLANT MICROBE INTERACTION	2	0
MBB 606	RNA BIOLOGY	2	0
MBB591/691	SEMINAR	1	

\*Core course for M. Sc. \*\*Core course for Ph. D.



**NEMATOLOGY**

COURSE CODE	COURSE NAME	CREDIT-L	CREDIT-P
<b>I-SEMESTER</b>			
NEMA501*	PRINCIPLES OF NEMATOLOGY	2	1
NEMA503*	STRUCTURAL ORGANISATION OF NEMATODES	2	1
NEMA 504*	NEMATODE SYSTEMATICS	2	1
NEMA505*	NEMATOLOGICAL TECHNIQUES	1	2
NEMA506*	NEMATODE DISEASES OF CROPS	3	1
NEMA507	NEMATODE BIOLOGY AND PHYSIOLOGY	2	1
NEMA508	NEMATODE ECOLOGY	2	1
NEMA511	BENEFICIAL NEMATODES	1	1
NEMA 512/ ENT 510 <sup>\$</sup>	PRINCIPLES OF INTEGRATED PEST MANAGEMENT	1	1
NEMA 513/PL PATH 513 <sup>@</sup>	DISEASE RESISTANCE IN PLANTS	2	0
NEMA 514/ENT520/PL PATH 520	PLANT QUARANTINE, BIOSAFETY AND BIOSECURITY	2	0
NEMA591	MASTER'S SEMINAR	1	0
NEMA 602**	NEMATODE DISEASES DEVELOPMENT AND HOST RESISTANCE	2	1
NEMA603**	ADVANCES IN NEMATODE MANAGEMENT	2	1
NEMA691	DOCTORAL SEMINAR-I	1	0
<b>II-SEMESTER</b>			
NEMA502/ENT503 <sup>\$</sup>	PRINCIPLES OF TAXONOMY	2	1
NEMA510*	NEMATODE MANAGEMENT	2	1
NEMA509	NEMATODE INTERACTIONS WITH ORGANISMS	2	1
NEMA 515/PL PATH 521/ENT 524	IPM IN PROTECTED CULTIVATION	2	1
NEMA591	MASTER'S SEMINAR	1	0
NEMA 599	MASTER'S RESEARCH	0	30
NEMA601**	NEMATODE PHYLOGENY AND SYSTEMATICS	2	1
NEMA 607	ADVANCES IN NEMATOLOGICAL TECHNIQUES	1	1
NEMA604**	PHYSIOLOGICAL AND MOLECULAR NEMATOLOGY	2	1
NEMA 605/ ENT 613 <sup>\$</sup> / PL PATH 606 <sup>@</sup>	PLANT BIOSECURITY AND BIOSAFETY	2	0
NEMA 692	DOCTORAL SEMINAR-II	1	0
NEMA 699	DOCTORAL RESEARCH	0	75

\*Core courses Master's, @Cross-listed with Plant Pathology; \$ Cross-listed with Entomology

**PLANT PATHOLOGY**

COURSE CODE	COURSE NAME	CREDIT-L	CREDIT-P
<b>I-SEMESTER</b>			
PL PATH 501*	MYCOLOGY	2	1
PL PATH 502	PLANT VIROLOGY	2	1
PL PATH 503	PLANT PATHOGENIC PROKARYOTES	2	1
PL PATH 504	<b>PLANT NEMATOTOLOGY/NEMA 501 PRINCIPLES OF NEMATOTOLOGY</b>	2	1
PL PATH 505	PRINCIPLES OF PLANT PATHOLOGY	2	1
PL PATH 506	TECHNIQUES IN DETECTION AND DIAGNOSIS OF PLANT DISEASES	0	2
PL PATH 508	EPIDEMIOLOGY AND FORECASTING OF PLANT DISEASES	1	0
PL PATH 509	DISEASE RESISTANCE IN PLANTS	2	0
PL PATH 510	ECOLOGY OF SOIL-BORNE PLANT PATHOGENS	1	1
PL PATH 511	CHEMICALS AND BOTANICALS IN PLANT DISEASE MANAGEMENT	2	1
PL PATH 604*	MOLECULAR BASIS OF HOST-PATHOGEN INTERACTION	2	1
PL PATH 605	PRINCIPLES AND PROCEDURES OF CERTIFICATION	1	0
PL PATH 606	PLANT BIO SECURITY AND BIO SAFETY	2	0
PLPATH 591	MASTER'S SEMINAR	30	
<b>II-SEMESTER</b>			
PL PATH 601	ADVANCES IN MYCOLOGY	2	1
PL PATH 602	ADVANCES IN VIROLOGY	2	1
PL PATH 603	ADVANCES IN PLANT PATHOGENIC PROKARYOTES	2	1
PL PATH 507	PRINCIPLES OF PLANT DISEASE MANAGEMENT	2	1
PL PATH 512	DETECTION AND MANAGEMENT OF SEED BORNE PATHOGENS	2	1
PL PATH 513	BIOLOGICAL CONTROL OF PLANT DISEASES	1	1
PL PATH 514	INTEGRATED DISEASE MANAGEMENT	2	1
PL PATH 515*	DISEASES OF FIELD AND MEDICINAL CROPS	2	1
PL PATH 516	DISEASES OF FRUITS, PLANTATION AND ORNAMENTAL CROPS	2	1
PL PATH 517	DISEASES OF VEGETABLE AND SPICES CROPS	2	1
PL PATH 518	POST HARVEST DISEASES	2	1
PL PATH 519	PLANT QUARANTINE AND REGULATORY MEASURES	1	0
PL PATH 691	DOCTORAL SEMINAR-I	1	0
PL PATH 692	DOCTORAL SEMINAR-II	1	0

\*Core Courses for Master's degree programme

\*\*Core Courses for Doctoral Programme

\*PL PATH 504 is cross linked with NEMA 501

\*PL PATH 606 is cross linked with NEMA 605

**PLANT PHYSIOLOGY**

COURSE CODE	COURSE NAME	CREDIT-L	CREDIT-P
<b>I-SEMESTER</b>			
PP 501*	PRINCIPLES OF PLANT PHYSIOLOGY - I: PLANT WATER RELATIONS AND MINERAL NUTRITION	2	1
PP 503*	PLANT DEVELOPMENTAL BIOLOGY: PHYSIOLOGICAL AND MOLECULAR BASIS	2	1
PP 506	PHYSIOLOGICAL AND MOLECULAR MECHANISMS OF MINERAL NUTRIENT ACQUISITION AND THEIR FUNCTIONS	2	1
PP 507	PHOTOSYNTHETIC PROCESSES, CROP GROWTH AND PRODUCTIVITY AND CONCEPTS OF CROP MODELLING	2	1
PP 510*	SEED PHYSIOLOGY	2	1
PP 591	MASTER'S SEMINAR	1	0
PP 601	FUNCTIONAL GENOMICS AND GENES ASSOCIATED WITH A FEW PHYSIOLOGICAL PROCESSES	2	0
PP 602*	SIGNAL PERCEPTIONS AND TRANSDUCTION AND REGULATION OF PHYSIOLOGICAL PROCESSES	2	0
PP 603	MOLECULAR APPROACHES FOR IMPROVING PHYSIOLOGICAL MECHANISMS THROUGH TRAIT INTROGRESSION	2	1
PP 604	PLANT PHENOMICS – NEXT GENERATION PHENOMICS PLATFORMS	2	0
PP 605	EXPERIMENTAL TECHNIQUES TO CHARACTERIZE PLANT PROCESSES FOR CROP IMPROVEMENT	0	2
PP 691	DOCTORAL SEMINAR I	1	0
<b>II-SEMESTER</b>			
PP 502*	PRINCIPLES OF PLANT PHYSIOLOGY-II: METABOLIC PROCESSES AND GROWTH REGULATION	2	1
PP 504	PHYSIOLOGICAL AND MOLECULAR RESPONSES OF PLANTS TO ABIOTIC STRESSES	2	1
PP 505	HORMONAL REGULATION OF PLANT GROWTH AND DEVELOPMENT	2	1
PP 508	PHYSIOLOGY OF FIELD CROPS	2	0
PP 509	PHYSIOLOGY OF HORTICULTURE CROPS	2	0
PP 511	PHENOTYPING PHYSIOLOGICAL PROCESSES	2	0
PP 512	CROP GROWTH REGULATION AND MANAGEMENT	2	0
PP 591	MASTER'S SEMINAR	1	0
PP 606	GLOBAL CLIMATE CHANGE AND CROP RESPONSE	2	0
PP 607*	PHYSIOLOGICAL AND MOLECULAR ASPECTS OF SOURCE-SINK CAPACITY FOR ENHANCING YIELD	3	0
PP 608	SEED AND FRUIT GROWTH AND THEIR QUALITY IMPROVEMENT	2	0
PP 609	PLANT-MICROBE INTERACTIONS	2	1
PP 610	WEED BIOLOGY AND PHYSIOLOGY OF HERBICIDE ACTION	2	0
PP 692	DOCTORAL SEMINAR II	1	0

\* Core courses

**POST HARVEST MANAGEMENT**

COURSE CODE	COURSE NAME	CREDIT-L	CREDIT-P
<b>I-SEMESTER</b>			
PHM 501*	POSTHARVEST MANAGEMENT OF HORTICULTURAL CROPS	2	1
PHM 502*	POSTHARVEST PHYSIOLOGY AND BIOCHEMISTRY OF PERISHABLES	2	1
PHM 505*	PRINCIPLES AND METHODS OF FRUIT AND VEGETABLE PRESERVATION	2	1
PHM 506	LABORATORY TECHNIQUES IN POSTHARVEST MANAGEMENT	1	2
PHM 515/FSC515/VSC515/FLS 515#	BASIC HORTICULTURE	2	1
PHM 508	QUALITY ASSURANCE, SAFETY AND SENSORY EVALUATION OF FRESH AND PROCESSED HORTICULTURAL PRODUCE		
PHM 601**	RIPENING AND SENESENCE OF FRUITS AND VEGETABLES	1	1
PHM 602**	RECENT TRENDS IN FOOD PRESERVATION	1	1
PHM 603**	MANAGEMENT AND UTILIZATION OF HORTICULTURAL PROCESSING WASTE	3	0
PHM 606	FOOD ADDITIVES	1	1
PHM 691	SEMINAR I	0	1
<b>II-SEMESTER</b>			
PHM 503	PACKAGING AND STORAGE OF FRESH HORTICULTURAL PRODUCE	1	1
PHM 504	PACKAGING AND STORAGE OF PROCESSED HORTICULTURAL PRODUCE	1	1
PHM 507*	PROCESSING OF HORTICULTURAL PRODUCE	2	2
PHM 509	FUNCTIONAL FOODS FROM HORTICULTURAL PRODUCE	2	0
PHM 510	MARKETING AND ENTREPRENEURSHIP IN POSTHARVEST HORTICULTURE	1	1
PHM604**	SUPPLY CHAIN MANAGEMENT OF PERISHABLES	2	0
PHM 605	EXPORT ORIENTED HORTICULTURE	1	1
PHM 607	ADVANCES IN PROCESSING OF PLANTATION, SPICES, MEDICINAL AND AROMATIC PLANTS	3	0
PHM608	VALUE ADDITION IN ORNAMENTAL CROPS		
PHM 692	SEMINAR-II	0	1

\*Compulsory Courses for M.Sc., # Cross Listed Course (new course introduced in addition to the courses recommended by BSMA)

\*\*Compulsory Courses for Ph.D.

**SEED SCIENCE AND TECHNOLOGY**

COURSE CODE	COURSE NAME	CREDIT-L	CREDIT-P
<b>I-SEMESTER</b>			
SST 501*	SEED DEVELOPMENTAL BIOLOGY	1	1
SST 502	SEED DORMANCY AND GERMINATION	1	1
SST 503*	SEED PRODUCTION PRINCIPLES AND TECHNIQUES IN FIELD CROPS	2	1
SST 504*	SEED PRODUCTION PRINCIPLES AND TECHNIQUES IN VEGETABLE CROPS	2	1
SST 505	SEED PRODUCTION TECHNIQUES IN FRUITS, FLOWERS SPICES, PLANTATION AND MEDICINAL CROPS	2	1
SST 506	SEED PRODUCTION TECHNIQUES IN FORAGE PASTURE AND GREEN MANURE CROPS	1	1
SST 510	SEED TECHNOLOGY OF TREE SPECIES	1	1
SST 591	SEMINAR	1	0
SST 601*	HYBRID SEED PRODUCTION TECHNOLOGY	2	1
SST 602	ORGANIC SEED PRODUCTION	1	1
SST 604*	GENETIC PURITY AND DUS TESTING	2	1
SST 608	GERMPLASM CONSERVATION TECHNIQUES	1	1
SST 610	SEED PLANNING, TRADE AND MARKETING	1	1
SST 691	DOCTORAL SEMINAR I	0	1
SST 692	DOCTORAL SEMINAR II	0	1
<b>II-SEMESTER</b>			
SST 507*	SEED LEGISLATION AND CERTIFICATION	2	1
SST 508*	POST HARVEST HANDLING AND STORAGE OF SEEDS	2	1
SST 509*	SEED QUALITY TESTING AND ENHANCEMENT	1	1
SST 511	SEED INDUSTRY AND MARKETING MANAGEMENT	1	1
SST 512	SEED HEALTH TESTING AND MANAGEMENT	1	1
SST 603	PHYSIOLOGY AND BIOCHEMISTRY OF SEEDS	1	1
SST 605	SEED VIGOUR AND CROP PRODUCTIVITY	1	1
SST 606*	ADVANCES IN SEED SCIENCE	1	1
SST 607	ADVANCES IN SEED QUALITY ENHANCEMENT	1	1
SST 609	SEED ECOLOGY	1	1
SST 691	DOCTORAL SEMINAR-I	0	1
SST 692	DOCTORAL SEMINAR-II	0	1

- \* Core Courses for M.Sc. and Ph.D. Courses



**SOIL SCIENCE**

<b>COURSE CODE</b>	<b>COURSE NAME</b>	<b>CREDIT-L</b>	<b>CREDIT-P</b>
<b>I-SEMESTER</b>			
AGR 004 <sup>§</sup>	SOIL AND ENVIRONMENT	2	1
#SOIL 501/AP 503*	SOIL PHYSICS/ FUNDAMENTALS OF SOIL PHYSICS	2	1
SOIL 502*	SOIL FERTILITY AND FERTILIZER USE	2	1
SOIL 503*	SOIL CHEMISTRY	2	1
SOIL 504*	SOIL MINERALOGY, GENESIS AND CLASSIFICATION	2	1
#SOIL 509/AP 515	REMOTE SENSING AND GIS TECHNIQUE FOR SOIL AND CROP STUDIES/ REMOTE SENSING IN AGRICULTURE	2	1
SOIL 605	BIOCHEMISTRY OF SOIL ORGANIC MATTER	2	1
SOIL 606	SOIL RESOURCE MANAGEMENT	3	0
SOIL 607	MODELING OF SOIL PLANT SYSTEM	2	0
SOIL 609	RECENT TRENDS IN SOIL MICROBIAL BIODIVERSITY	2	1
SOIL 611**	SOIL CHEMICAL ENVIRONMENT AND PLANT GROWTH	2	1
SOIL 612	SOIL TESTING AND FERTILIZER RECOMMENDATION	2	1
SOIL 591	MASTER'S SEMINAR	1	0
SOIL 691	DOCTORAL SEMINAR I	1	0
SOIL 692	DOCTORAL SEMINAR II	1	0
<b>II-SEMESTER</b>			
SOIL 505	SOIL EROSION AND CONSERVATION	2	1
SOIL 506*	SOIL BIOLOGY AND BIOCHEMISTRY	2	1
SOIL 507	RADIOISOTOPES IN SOIL AND PLANT STUDIES	1	1
SOIL 508	SOIL, WATER AND AIR POLLUTION	2	1
SOIL 510	ANALYTICAL TECHNIQUES AND INSTRUMENTAL METHODS IN SOIL AND PLANT ANALYSIS	0	2
SOIL 511	MANAGEMENT OF PROBLEM SOILS AND WATERS	2	1
SOIL 512	LAND DEGRADATION AND RESTORATION	1	0
SOIL 513	SOIL SURVEY AND LAND USE PLANNING	2	1
SOIL 514	INTRODUCTION TO NANOTECHNOLOGY	2	1
SOIL 515	MANURES AND FERTILIZERS	2	1
SOIL 601	RECENT TRENDS IN SOIL PHYSICS	2	0
SOIL 602	MODERN CONCEPT IN SOIL FERTILITY	2	0
SOIL 603**	PHYSICAL CHEMISTRY OF SOIL	2	0
SOIL 604**	SOIL GENESIS AND MICRO MORPHOLOGY	2	0
SOIL 608	CLAY MINERALOGY	2	1
SOIL 591	MASTER'S SEMINAR	1	0
SOIL 691	DOCTORAL SEMINAR I	1	0
SOIL 692	DOCTORAL SEMINAR II	1	0

1. Indicate the Courses Compulsory for Masters\* or Doctoral programme\*\*
2. Courses cross listed with other Disciplines#
3. List the remedial courses<sup>§</sup>

**VEGETABLE SCIENCE**

<b>I-SEMESTER</b>			
VSC 501*	PRODUCTION OF COOL SEASON VEGETABLE CROPS	2	1
VSC 504*	PRINCIPLES OF VEGETABLE BREEDING	3	1
VSC 505	BREEDING OF SELF POLLINATED VEGETABLE CROPS	2	1
VSC 509	PRODUCTION OF UNDERUTILIZED VEGETABLE CROPS	2	1
VSC 510	SYSTEMATICS OF VEGETABLE CROPS	1	1
VSC 514	POST HARVEST MANAGEMENT OF VEGETABLE CROPS	2	1
VSC-515/FLS/FHT#	BASIC HORTICULTURE	2	1
VSC 601*	RECENT TRENDS IN VEGETABLE PRODUCTION	3	0
VSC 602*	ADVANCES IN BREEDING OF VEGETABLE CROPS	3	0
VSC 603	ABIOTIC STRESS MANAGEMENT IN VEGETABLE CROPS	2	1
VSC606	BIODIVERSITY AND CONSERVATION OF VEGETABLE CROPS	2	1
VSC 691	DOCTORAL SEMINAR I	0	1
VSC 591	MASTER'S SEMINAR	0	1
VSC 599	MASTER'S RESEARCH	30	
VSC605	BREEDING FOR SPECIAL TRAITS IN VEGETABLE CROPS	2	1
VSC 607	BIOTECHNOLOGICAL APPROACHES IN VEGETABLE CROPS	2	1
VSC 608	ADVANCED LABORATORY TECHNIQUES OF VEGETABLE CROPS	1	2
VSC604	SEED CERTIFICATION, PROCESSING AND STORAGE OF VEGETABLE CROPS	2	1
VSC 692	DOCTORAL SEMINAR II	0	1
VSC699	DOCTORAL RESEARCH	75	
<b>II-SEMESTER</b>			
VSC 502*	PRODUCTION OF WARM SEASON VEGETABLE CROPS	2	1
VSC 503*	GROWTH AND DEVELOPMENT OF VEGETABLE CROPS	2	1
VSC 506	BREEDING OF CROSS POLLINATED VEGETABLE CROPS	2	1
VSC 507	PROTECTED CULTIVATION OF VEGETABLE CROPS	1	1
VSC 508	SEED PRODUCTION OF VEGETABLE CROPS	2	1
VSC 511	ORGANIC VEGETABLE PRODUCTION	1	1
VSC-512	PRODUCTION OF SPICE CROPS	2	1
VSC 513	PROCESSING OF VEGETABLE	1	1
VSC605	BREEDING FOR SPECIAL TRAITS IN VEGETABLE CROPS	2	0
VSC 607	BIOTECHNOLOGICAL APPROACHES IN VEGETABLE CROPS	2	1
VSC 608	ADVANCED LABORATORY TECHNIQUES OF VEGETABLE CROPS	1	2
VSC604	SEED CERTIFICATION, PROCESSING AND STORAGE OF VEGETABLE CROPS	2	1
VSC 692	DOCTORAL SEMINAR II	0	1
VSC699	DOCTORAL RESEARCH	75	

\*Indicates Core Courses which are Compulsory for Master Programme

# Cross listed course FSC515/VSC515/FLS 515# (Basic Horticulture, 2L+1P).

## RECOMMENDATIONS OF THE COMMITTEE CONSTITUTED FOR THE INITIATION OF

- 1) Sandwich Ph.D. degree program
- 2) Self-finance scheme for Indian, foreign national and Non-Resident Indian students
- 3) International Faculty

### Composition of the Committee

**Chairman:** Dr. Viswanathan Chinnusamy, Head, Plant Physiology

**Members:** Dr. Anupama Singh, Head, Agricultural Chemicals

Dr. K.K. Vinod, Principal Scientist, Genetics

Dr. A. Kumar, Principal Scientist, Plant Pathology

Dr. Kapila Shekhawat, Senior Scientist, Agronomy

**Member Secretary:** Dr. Anil Dahuja, Professor, Biochemistry

The **National Education Policy 2020** (NEP2020) proposes internationalization of higher education to restore the role of India as a **Vishwa Guru**. The NEP2020 suggests that all deemed to be Universities shall upgrade themselves to university. To maintain the flagship role in education it is necessary to become a Global University. To become a Global University, increase in international students, faculty and international collaborative programs are critical. IARI proposes to become a Global university as it has basic infrastructure for research and can become a most sought destination for higher education particularly for the students of African, SAARC, Caribbean and many Latin American countries. Global University ranking will attract higher research grant, international collaboration, international students, and help excellence in research and education. Further, IARI can strengthen its research collaboration with top ranking Universities through Sandwich Ph.D. programs with top ranking universities. Further, internationalization also demands recruitment of foreign faculty. Since regular recruitment of foreign faculty is difficult, Foreign faculty may be appointed as visiting faculty at IARI.

The Committee recommends three programs for internationalization of education namely 1) Sandwich Ph.D. program, 2) Self finance scheme for Indian, foreign and NRI student at UG, PG and Ph.D. programs, and 3) Foreign faculty as Visiting Faculty.

The Committee recommends setting up of an “Office of the International affairs” at IARI, New Delhi for implementation of programs related to international students and faculty, and international collaborations. This is also mandatory under the University Grants Commission (Academic Collaboration between Indian and Foreign Higher Educational Institutions to offer

Twinning, Joint Degree and Dual Degree Programmes) Regulations, 2022, which is effective from May 2, 2022 (Gazette of India notification F. No. 4-1/2022(IC) dated 2nd May, 2022).

### **Establishment of Office of the International Affairs at IARI, New Delhi**

**Head of the office:** Dean (International Affairs) or Chairperson (International Affairs)

A Principal Scientist with at least 10 years of experience and having adequate international exposure may be appointed as Dean/Chair by the Director and Chairperson Academic Council.

**Members:** One Principal scientist/Professor from each school (6)

International Relations Officer

Master of Halls of residence

Representative from “Law Section” of IARI

Registrar, Member-Secretary

Administrative Assistant

**The Office of the International Affairs shall carry out following activities but not limited to:**

1. Liaising with regulatory/statutory bodies (UGC/HEIC/DARE, etc)
2. Coordination of activities related to Sandwich Ph.D. programs
3. Admission of the International students: foreign and NRIs to B.Sc., B.Tech., M.Sc., M.Tech., and Ph.D. programmes.
4. Coordinating International Faculty Exchange Program and induction of visiting faculty
5. Formulation and execution of MoUs with International Institutes abroad, strengthening existing partnerships and developing new partners
6. Establishment of the Offshore offices/Campuses and conducting various brand-building campaigns and other promotional activities.
7. Addressing the grievances of sandwich PhD students and international students undergoing regular degree programs at IARI.
8. Newsletters, popularization, etc.

### **New Program 1. Sandwich Ph.D. degree program**

**Preamble:** IARI proposes to introduce a sandwich PhD programme, in which a student enrolling in the IARI will be required to complete a mandatory resident period at IARI campus, before moving to a host institution to carry out research work for a prescribed period and joining back in IARI to complete the doctoral programme. The research programme is proposed to be jointly formulated by the parent and the host institutions.

**Purpose:** To expose the students involved in agricultural research to wider research opportunities to improve their research skills and inculcate the professional competence of global standard.

## 1. Scope

The Committee recommend all the following three categories of sandwich Ph.D. programs approved by UGC (Academic Collaboration between Indian and Foreign Higher Educational Institutions to offer Twinning, Joint Degree and Dual Degree Programmes) Regulations, 2022: 1) Twinning Programme, 2) Joint degree programme and 3) Dual degree programme.

## 2. Eligibility

- (i) For IARI enrolled students, a minimum stay for two semesters at the IARI campus with a pass in qualifying examination, and successful defence of the research proposal.

## 3. Criteria and requirements for different sandwich Ph.D. programs

**A. Twinning Programme:** A collaborative arrangement whereby students enrolled with IARI and its outreach programs may undertake their programme of study partly in IARI, **complying with relevant UGC regulations**, and partly in the Foreign Higher Educational Institution (FHEI).

- i. Credits earned from the FHEI should not exceed 30% of the total programme.
- ii. Ph.D. degree to be awarded under such twinning programme must be in conformity with the provisions of section 22 (3) of the UGC Act, 1956 and shall also be in conformity with the norms, standards and requirement for award of such degree, as laid down by the statutory authority concerned such as DARE/ICAR
- iii. The research programme of the student shall be formulated jointly by the IARI and the FHEI.
- iv. Student will submit thesis to IARI, and IARI will award the Ph.D. degree

**B. Joint degree programme:** A collaborative arrangement wherein the **curriculum is designed in collaboration between the IARI and FHEI**. Upon completion of the programme, **the degree is awarded jointly by the IARI and FHEI with a single certificate**.

- i. The students must earn at least 30 per cent of the total credits from each of the IARI and FHEI.
- ii. The research programme of the student shall be formulated jointly by the IARI and the FHEI.
- iii. Students must have a supervisor at IARI as well as at FHEI
- iv. Ph.D. degree to be awarded under such twinning programme must be in conformity with the provisions of section 22 (3) of the UGC Act, 1956 and shall also be in conformity with the norms, standards and requirement for award of such degree, as laid down by the statutory authority concerned such as DARE/ICAR.

**C. Dual degree programme:** A programme jointly designed and offered by **IARI and an FHEI in the same discipline/subject areas** and in the same level. **The degree is**



**conferred by the IARI and FHEI, separately and simultaneously**, upon completion of degree requirements of both the institutions.

- i. The students must earn at least 30 percent of total credits from IARI.
- ii. The research programme of the student shall be formulated jointly by the IARI and the FHEI.
- iii. Students must have a supervisor at each institution.
- iv. The student shall submit a single thesis at both the Institutions separately.
- v. Ph.D. degree to be awarded under such twinning programme must be in conformity with the provisions of section 22 (3) of the UGC Act, 1956 and shall also be in conformity with the norms, standards and requirement for award of such degree, as laid down by the statutory authority concerned such as DARE/ICAR

#### **4. Financial Support**

- (i) A maximum of twenty-five (25) students shall be supported per academic session. To begin with in the academic session 2022-23, 10 students may be supported depending upon the budget availability.
- (ii) In case of universities with which IARI signs MoU, the financial support will be as per the terms and conditions of MoU.
- (iii) A Student/Faculty of IARI can also secure admission/bench space/fellowship etc, from FHEI by individual effort of student/faculty (guide of the student). In such cases, a formal agreement may be signed between the mentor from FHEI and IARI for Twining PhD. program. However for joint-Degree and Dual Degree programs, MoU should be signed by IARI and FHEI.
- (iv) IARI shall provide support of a maximum of Rs 5.00 lakhs (on a case-to-case basis depending upon the country of visit), and the actual fellowship that they are getting from IARI.  
  
Rs. 5.00 Lakhs for North America, Australia, South America and New Zealand  
  
Rs. 4.00 Lakhs for Europe, Far-East Asia, Japan, China, Hong Kong, Taiwan, Korea, Indonesia and Africa  
  
Rs. 2.00 Lakhs for Neighbouring Countries, Sri Lanka, Nepal, Bangladesh, Burma, Pakistan, Gulf Countries, Singapore Malaysia, Thailand and Maldives
- (vi) The students securing financial support from other funding sources/host institutions shall be encouraged. In these cases, on case-to-case basis, IARI may provide partial financial support.
- (vii) If the student's residence at the host institute is of duration of >6 months, the students need to secure additional financial support from the host institution/ from other sources.

#### **5. Research programme**

- (i) Any material transfer/ Digital Sequence Information (DSI) sharing shall be regulated by the extant rules of the Government of India, and terms and conditions of the MoU/Agreement
- (ii) Any outcome of the research programme, including research papers, patents etc. shall show joint affiliation of IARI and the host institute

## **6. Selection criteria**

### ***A. Indian students***

- (i) Academic performance in Graduate and Post Graduate programme, Co-curricular and extra-curricular activities at PG level.
- (ii) Students' academic performance in Ph.D. course work, qualifying examination and research proposal seminar as well as their overall attendance.
- (iii) Student's publications (research papers, reviews and book chapters) and patents, if any.
- (iv) The host institute with QS/THE world ranking is preferred. However, recognised international government institutions as per Government of India policy shall also be considered.
- (v) Research ranking of the Professor with whom the sandwich programme.
- (vi) Quality of the research proposal to be carried out by the student in the University abroad in the Sandwiched programme.
- (vii) Consent letter from overseas universities and mentor for bench space and academic guidance etc.
- (viii) Eligible students with self-financing can also avail sandwich program, however, no financial support from IARI shall be provided.
- (ix) The students who have already secured financial support from the host institute or any other funding agency will be given preference.

### ***B. Foreign students***

- (i) Selection of the students shall be based on Statement of Purpose (SoP), recommendation letters and academic proficiency.
- (ii) Selected students shall be from Government recognised University.
- (iii) The students shall have proficiency in English as certified by IELTS or TOEFL.
- (iv) Students shall have research proficiency as proved by research publications/ patents (desirable).
- (v) Consent letter from Indian Mentor for bench space.
- (vi) Letter of recommendations from three referees.

- (vii) University with which the student is registered for PhD programme must have an international ranking (QS/THE).
- (viii) Student allotment to IARI laboratories shall be governed by the research plan, availability of competent faculty and infrastructure, as recommended by the Dean & Joint Director (Edn.), PG School, ICAR-IARI, New Delhi.
- (ix) The number of international students shall be limited to 25 (twenty-five) per academic session. To begin with in the academic session 2022-23, 10 students may be supported depending upon the budget availability.
- (x) A formal agreement shall be signed between the Indian mentor, foreign faculty and the foreign student.

## **7. Funding for foreign students**

- (i) In the case of the Universities with which IARI has a formal MoU, the financial support will be governed by the terms and conditions of the MoU.
- (ii) For other students, IARI may provide financial support of Rs 50,000/- per month, and free hostel accommodation (single room).

## **8. Call for proposals**

- (i) Call for the sandwich PhD. The programme shall be made once a year, upon completion of the second semester (preferably during March).
- (ii) Students enrolled in a particular academic session need to avail the Sandwich Ph.D. degree program within the first year itself.

## **New Program 2.1a. Self-finance scheme for foreign & NRI students in UG program**

### **1. Eligibility:**

- i. Applicant must be a Foreign National or Overseas Citizen of India (OCI) Cardholders or NRI
- ii. Applicant must have completed 12 years of formal education at the school level. At 12<sup>th</sup> level, students must have studied a) Biology, Physics and Chemistry at the 12<sup>th</sup> level for B.Sc. Agriculture and B.Tech. Biotechnology, b) Physics, Chemistry and Maths for B.Tech. Engineering Admission, and social sciences for B.Sc. Community Science Admission).
- iii. Foreign students / Foreign University Degree holders are required to attach photocopies of academic transcripts & AIU Equivalence Certificate
- iv. English Language Proficiency certificate (TOFEL, IELTS, SAT, ACT, etc.)

### **2. Selection Criteria:**

1. Academic score in 10<sup>th</sup> and 12<sup>th</sup> exam
2. English Language Proficiency score (TOFEL, IELTS, SAT, ACT, etc.)
3. Co-curricular and extra-curricular activities.

4. Online Interview before the selection committee and interview marks.

**3. Tuition Fee:**4000 USD/Semester

**4. Hostel Fees:** As fixed for international students' hostel. Due to paucity of hostel facilities, accommodation shall be provided as per the availability and merit.

### **New Program 2.1b Self-finance scheme for Indian students in UG program**

#### **1. Eligibility:**

- i. Applicant must be an Indian National.
- ii. Applicant must write All India Entrance Examination for Admission, AIEEA (UG) Conducted by ICAR through NTA.
- iii. In order to appear in AIEEA (UG) 2021, Indian national candidates must have passed 10+2 Senior Secondary Examination of the Central Board of Secondary Education or any other examination within scope and standard found to be equivalent to the Senior Secondary Examination of a recognized Indian Board/University (Annexure VI), with minimum prescribed marks/grade, after a period of 12 years of study. The medium of instruction in the admitting University will be English.
- iv. Candidate must have passed any one of the qualifying examinations enumerated above securing not less than 50% marks in aggregate for General, OBC (NCL), UPS, EWS categories and 40% marks in aggregate for SC, ST, Third Gender, PwD categories. There will be no rounding-off of the OGPA/percentage of marks of qualifying examination while deciding the basic eligibility of any candidate for admission e.g. if a candidate obtained 49.99% marks in his/her qualifying examination, then it will not be rounded-off to 50%.
- v. Age Limit: Indian Nationals of at least 16 years of age as the date given in the information bulleting are eligible to apply for the examination. No relaxation is admissible regarding the minimum age limit

#### **2. Selection Criteria:**

1. Candidate must score at least 50 percent or percentile marks in the AIEEA (UG)
2. Admission in self-finance scheme will be given as per the order of merit among the applicants.

**3. Tuition Fee:**Rs 50000 per Semester

**4. Hostel Fees:**Same as that fixed for other students. Due to paucity of hostel facilities, accommodation shall be provided as per the availability and merit.

Total number of seats admitted through self finance scheme for Indian, foreign and NRI students shall not exceed 40% over and above the intake of the UG programme.

### **New Program 2.2. Self-finance scheme for Foreign Nationals/NRIs in PG & Ph.D.**

Admission of Foreign National students for self-financed M.Sc./M.Tech. /PhD programmes: A maximum of 50 students per academic session.

#### **1. Academic qualifications:**

1. Applicant must be a Foreign National or Overseas Citizen of India (OCI) Cardholders or NRI.
2. Applicant must have completed 12 years of formal education at the school level followed by a Bachelor's Degree of at least 4 years duration for PG admission, and in addition to the above, 2 years Master's program for Ph.D. admission.
3. Foreign students / Foreign University Degree holders are required to attach photocopies of academic transcripts & AIU Equivalence Certificate
4. English Language Proficiency (TOFEL, IELTS, SAT, ACT, etc.)
5. Co-curricular and extra-curricular activities.
6. Research achievements during PG level, if any.

## **2. Selection procedure:**

1. Academic performance of the student in UG/PG program
2. English Language Proficiency score (TOFEL, IELTS, SAT, ACT, etc.)
3. Online Interview before the selection committee and interview marks.
4. Letter of recommendations from three referees including one from IARI.

## **3. Tuition Fees:**

2500 USD per semester for Master's program and 2000 USD per semester for Ph.D. program or Equivalent to that of the fee paid by students admitted through the Indian Council of Cultural Relations, New Delhior decided by ICAR

**4. Hostel Fees:**As fixed for international students' hostel.Due to paucity of hostel facilities, accommodation shall be provided as per the availability and merit.

## **5. Exchange of materials:**

Any material transfer/ Digital Sequence Information (DSI) sharing shall be regulated by the extant rules of the Government of India, and the terms and conditions of the MoU/Agreement.

## **New Program 3. International Faculty**

**1. Preamble:** IARI proposes to host eminent and competent faculty as visiting professors from universities of international repute to meet higher quality benchmarks in teaching and research and to promote productive academic international cooperation.

## **2. Selection process**

NRI Faculties coming through VAJRA (Visiting Advanced Joint Research) Faculty scheme of DST and other government schemes with full funding support from either Countryor

Selection of overseas faculty as Visiting Professors as per the UGC guidelines.

The number of visiting professors may be up to 50 (10% of the faculty strength). To begin with, one faculty per school may be appointed.

## **3. Selection criteria for non-VAJRA and other Govt. scheme faculties**



- i. Academic performance in the overseas university is judged by citation indices
- ii. Research achievements during a career as judged by Fellowships, Awards etc.
- iii. University must have an international ranking (within the top 500)
- iv. Ongoing collaborative project in India/IARI

**4. Duration & Remuneration: (for non-VAJRA and other Govt. scheme faculties)**

- i. The duration is One to Two weeks for lectures and practicals, or more subject to fund availability
- ii. **Remuneration:** Local hospitality during the stay; To and Fro airfare in economy class, Visa fee; Insurance premium; Honorarium USD 100/ per lecture; USD 200 per practical.

**Summary of Resource Generation and Expenditure in the programmes proposed:**

S.No.	New Program	Rupees in Lakhs	
		Expenditure	Income
1.	Sandwich Ph.D. degree program - IARI Students (10 in Academic session 2022-23) (10 x 5.0 Lakhs per student)	50.00	-
	Sandwich Ph.D. degree program - Foreign Students(10 in Academic session 2022-23) (10 x 5.0 Lakhs per student)	50.00	-
2	Self-finance scheme – UG program (Total seats shall not exceed 40%). In 2022-23 academic session, a total of 300 students have been proposed. So about 120 can be admitted under self-finance scheme for Indian, foreign, and NRI students put together)	-	
	(a) Self-finance scheme – UG program for Indian Nationals (about 80 students; the number may vary; 80*1.0 Lakhs per annum)	-	80.00
	(b) Self-finance scheme – UG program for Foreign Nationals & NRIs (about 40 students; the number may vary, 4000USD per year) (40*4000USD = 160,000	-	128.00
	(c) Self-finance scheme – PG & Ph.D. for Foreign Nationals(50 in Academic session 2022-23; 25 each in MSc and PhD, respectively) (MSc- 25 x 5000US\$ and PhD -25*4000US\$ per student and per annum)	-	180.00
3.	International Faculty (5 in Academic session 2022-23) (5 x 4.5 Lakhs per faculty) = 22.50	22.50	-
	Total	125.00	388.00

**Appendix-III**

**RECOMMENDATIONS OF THE COMMITTEE CONSTITUTED FOR  
THE INITIATION OF**

**Post Graduate Diploma and Certificate Courses  
Committee**

S.No	Name	Members	Courses
1.	Dr.Alka Singh, Head , Ag.Econ.	Chairperson	
2.	Dr.Raj Singh, Head Agronomy	Member	Integrated Farming System
3.	Dr.Y.S.Shivay, Pri.Scientist	Member	Organic farming
4.	Dr.Monika A Joshi, Professor	Member	Seed production, processing and quality control
5.	Dr.Bishnu M Bashyal, / Dr. S. Subramanian	Member	Disease and Pest Management
6.	Dr.Gopala Krishanan, Pri.Scientist	Member	GAP for basmati farming
7.	Dr.Murthaza Hassan, Pri.Scientist	Member	Greenhouse Hydroponic and Aeroponic Farming
8.	Dr.Manish Srivastava, Professor	Member	Fruit production and orchard management
9.	Dr.P.K.Sahoo, Pri.Scientist	Member	Farm Machinery Operation and Management
10.	Dr Chandan Kumar Deb/ Dr Soumen Pal ICAR-IASRI	Member	Data Science and Analytics
11.	Dr.Rane, ICAR-NIBSM	Special Invitee	Abiotic Stress Management in Field and Horticultural Crops
12.	Dr. P. Venkatesh	Member Secretary	

## 1. About IARI

The journey of the Indian Agricultural Research Institute (IARI), popularly known as Pusa Institute, began in 1905 at Pusa (Bihar) with the generous grant of 30,000 pounds from an American philanthropist, Mr. Henry Phipps. The institute was then known as Agricultural Research Institute (ARI) which functioned with five departments, namely Agriculture, Cattle Breeding, Chemistry, Economic Botany and Mycology. The Bacteriology unit was added in 1907. The name of IARI was changed to Imperial Institute of Agricultural Research in 1911 and, in 1919 it was renamed as Imperial Agricultural Research Institute. Following a devastating earthquake on 15<sup>th</sup> January 1934, the institute was shifted to Delhi on 29<sup>th</sup> July 1936. Post-independence, the institute has been renamed as Indian Agricultural Research Institute (IARI). During the fifties, the advancement of scientific disciplines constituted the core program of IARI and provided the base for its fast expansion in the 1960's and 1970's. It attained the status of a Deemed University in the year 1958.

The green revolution that brought smiles to millions of Indians bloomed from the fields of IARI with the development of famous wheat varieties, contributing an estimated one billion tons of additional production. As the mother of several ICAR institutions, IARI continues to be the country's leading institution for agricultural research, education, and extension.

The present campus of the Institute is a self-contained sylvan complex spread over an area of about 500 hectares (approx. 1250 acres) and located about 8 km (5 miles) west of New Delhi Railway Station and about 16 km (10 miles) east of IGI Airport (Palam). The location stands at 28.08 °N and 77.12 °E, with a height above the mean sea level of 228.61 meters (750 feet). It is adjacent to hillside road.

Currently, the Institute has 20 divisions, 5 multi-disciplinary centers situated in Delhi, 8 regional stations, 2 off-season nurseries, 3 All India coordinated research projects with headquarters at IARI and 10 national centers functioning under the all India coordinated research projects. It has a sanctioned staff strength of 3540 comprising scientific, technical, administrative and supporting personnel.

## 2. Post Graduate Diploma / Certificate Course Programme

In order to prepare the youth ready to meet the requirement of the agro-industries /service sector; and to inculcate entrepreneurship and start-up among talented students, ICAR-IARI is proposing the following Postgraduate Diploma and certificate course programmes.

**Table 1. List of courses and durations**

S. No	Course name	Course duration	Tuition Fees *	Calendar	Preparedness to start from
<b>Certificate Courses</b>					
1.	Farm Machinery Operation and Management	3 months	Rs. 15,000/-	-	2023-24
2.	Disease and Pest Management	3 Months	Rs. 15,000/-	Aug-Nov	2022-23

3.	GAP for basmati farming	3 Months	Rs. 15,000/-	Jul-Sep	2023-24
4.	Greenhouse Hydroponic and Aeroponic Farming	3 Months	Rs. 15,000/-	Oct- Dec/ Jan- March	2022-23
<b>PG Diploma</b>					
1.	Soil Testing and Nutrient Management	1 Year	Rs.1,20,000/-	Start of Academic year	2022-23
2.	Fruit Production Practices and Nursery Management.	1 Year	Rs.1,20,000/-	Start of Academic year	2023-24
3.	Seed Production, Processing and Quality Control	1 Year	Rs.1,20,000/-	Start of Academic year	2022-23
4.	Organic Farming	1 Year	Rs.1,20,000/-	Start of Academic year	2023-24
5.	Data Science and Analytics	1 Year	Rs.1,20,000/-	Start of Academic year	2022-23
6.	Integrated Farming System	1 Year	Rs.1,20,000/-	-	-
7.	Abiotic Stress Management in Field and Horticultural Crops	1 Year	Rs.1,20,000/-	Start of Academic year	2022-23

\* For industry-sponsored candidates, the amount will be doubled

\*\* Residential Requirements is a must to complete the course (except during industry attachment)

### 3. Eligibility Criteria

Table 2. Eligibility Criteria

S.No	Course name	Education	Employment Opportunity
<b>Certificate Course</b>			

1.	Farm Machinery Operation and Management	12 <sup>th</sup> and above	Self-employment in opening agro-machinery repair centres, Custom Hiring Centres, Farm Machinery Service Centres, Agro machinery industries
2.	Disease and Pest Management	12 <sup>th</sup> and above	Pesticide dealers, Industries, students, start-ups
3.	GAP for basmati farming	12 <sup>th</sup> and above	Millers/ Farmers/ FPOs
4.	Greenhouse Hydroponic and Aeroponic Farming	12 <sup>th</sup> and above	Urban Farming Industries/ Focus on self-employment generation
<b>PG Diploma</b>			
1.	Soil Testing and Nutrient Management	B.Sc Agril & allied sciences/ Science	<p>After this PG Diploma, students will acquire the needed skill to take-up the analysis and/or soil testing work independently in the laboratories of Government, Industries, NGOs, self-employment in the area of soil testing and nutrient management. They would be employed as Soil Analyst, Lab Technician, Extension Worker for the field.</p> <p>There are lots of opportunities in the area of soil testing and nutrient management in the Central and State Government, fertilizer industries, NGOs, self-employment, Soil-Plant Health Clinic etc</p>
2.	Fruit Production and Nursery Management	B.Sc. Agriculture & allied sciences/ Botany	After this PG Diploma, students will have the skill to start own business in fruit production and nursery production, may be absorbed in coming up Pvt. Nurseries, and may start consultancy services on these aspects.



3.	Seed Production, Processing and Quality Control	B.Sc. in Agriculture & allied sciences/ Botany	Public & Private Seed industries, own business. For <b>industry-sponsored candidates</b> , owing to enhanced skill development; they will have better employment scope owing to skill upgradation
4.	Organic Farming	B.Sc. in Agriculture & allied sciences	Entrepreneurs, Consultancy Services Providers, Hi-tech Nurseries Owners.
5.	Data Science and Analytics	Employed professionals / Individuals holding B.Sc./B.E./B.Tech./BCA or equivalent	As Data Analyst in public and private sector companies which work on data analytics
6.	Integrated Farming System	B.Sc. in Agriculture & allied sciences	-
7.	Abiotic Stress Management in Field and Horticultural Crops	B.Sc. in Agriculture & allied	Fruit growers association,

#### 4. Selection criteria

Table 3. Selection criteria

S.No	particulars	Weightage	
		Certificate Course	PG Diploma
1.	10 <sup>th</sup> std	✓	✓
2.	12 <sup>th</sup> std	✓	✓
3.	Bachelor's programme	-	✓
4.	Desirable qualification	-	✓
5.	Entrance exam marks	✓	✓
6.	Interview	✓	✓

The entrance examination will be conducted for shortlisted applicants depending upon number of applications received and the academic qualifications. Further, the suitable candidates will be called for the interview for final selection

## 5. About the courses

### Certificate Courses

#### I Certificate Course in Farm Machinery Operation and Management

**Location:** IARI main campus / Other centers.

**Name of the lead division:** Division of Agricultural Engineering, ICAR-IARI, Pusa, New Delhi.

**Collaboration:** FOSU, Private Industries for training

- M/S SPL Technologies (P) Ltd.
- Shiv Vihar West, Hastal, Delhi, 110059
- M/S Perfect Hydro Pneumatic Engineers, Plot No. 1591/31, Daulatabad Road Industrial Area, Gurgaon-112001 (Haryana)
- M/S Alfa Therm Limited, 431, First Floor, Udyog Vihar, Phase-3, Sector-20, Gurgaon-122016 (Haryana)
- M/S Dashmesh Mechanical Works, Nabha-Malerkotla Road, Amargarh(Sangrur) Punjab
- M/S Bhoomi Agro Industries, Plot No. G-1077, Road No-A-1, Kishan Gate, Lodhika G.I.D.C. A Metoda, Rajkot (Gujrat)

**Background:** The overall demand for agricultural machinery increased in the last decade. In order to lay special emphasis on farm mechanization and ensure greater inclusiveness, a dedicated Sub-Mission on Agricultural Mechanization (SMAM) was launched by Government of India. SMAM puts small and marginal farmers at the core of the interventions. There is special emphasis on ‘reaching the unreached’ – bringing farm mechanization to villages where old technologies are in use. The mission is also catering to adverse economies of scale by promoting Custom Hiring Centers (CHC) through rural entrepreneurship. However, there exist gaps in the skill level of the village youths. The benefits of the mechanization are not fully acquired due to poor operation and management of farm machineries. Low operational efficiency and high cost of management left the owners of the agricultural machineries in a challenging situation to sustain this operation. The certificate course will help the rural youth, mechanics of the small and medium scale agro-industries and operators of the agricultural machineries to acquire skill for performing the tasks in diligent manner. This will also enable to create rural entrepreneurship.

#### **Course contents**

Operation, maintenance of tractors, power-tillers and other prime-movers; Operation, maintenance, repair of farm machineries; Operation and maintenance of irrigation equipment; Safety in farm operations; Industrial training.

S. No.	Name of the course	No. of lectures	Offered by
1.	Sources of Farm Power, Scope of mechanization, Farm Engines: Tractor, Power Tiller (operation, maintenance)	10	Division of Agri Engg

2.	Assemblies of Tractor, ballasting, wheel track adjustment, PTO, draft and position control	10	Division of Agri Engg
3.	Farm Machinery-I (tillage, seed bed preparation, planters/ seeders) operation, maintenance and management	20	Division of Agri Engg, FOSU
4.	Farm Machinery-II (plant protection, harvest, post harvest) operation, maintenance and management	20	Division of Agri Engg, FOSU
5.	Irrigation equipment, pumps, micro-irrigation assemblies, solar powered machines	10	Division of Agri Engg, FOSU
6.	Safety guidelines for tractors, power tillers and farm machineries, ROPS, safety gadgets for operators during field operations	5	Division of Agri Engg
7.	Machine efficiency, economic efficiency, overall efficiency for operations of farm machineries	5	Division of Agri Engg
8.	Industrial training (assembly line, SOP, recurring malfunctions and breakage)	20	Division of Agri Engg, Industries

## II. Certificate Course in Disease and Pest Management in Agriculture

**Location:** IARI main campus/Other centers.

**Name of the Lead Division:** Division of Plant Pathology and Division of Entomology jointly

**Collaboration:** Division of Agricultural Chemicals

**Background:** Pests and diseases are the most important factors affecting crop production. Proper management is critical to avoid damages, meet regulatory standards, protect the environment and decrease pesticide resistance. We will discuss an integrated pest and disease management approach throughout the course. The students will learn methods to identify pests and diseases in the field, ways to avoid the occurrence of pests and diseases, principles of biological control and pesticides, their properties and how to use them wisely.

### Course Content

#### Lectures

- Theory -140 lectures (1 hrs)
- Practical - 70 practical (2 hrs)
- Total - 280 hrs

#### Faculties identified:

- Dr. Bishnu Maya Bashyal
- Dr. Robin Gogoi
- Dr. Lakshman Prasad
- Dr. Dinesh Singh
- Dr. M. S. Saharan
- Dr. Diksha Joshi
- Dr. M. S. Gurjar
- Dr. T. K . Bag
- Dr. Kajal Kumar Biswas

## **Unit 1: Important plant diseases and their identification**

What is a disease, Damages caused by plant diseases, Disease causes – biotic vs. Abiotic, Disease identification, The complexity, Steps in the diagnosis, Signs and symptoms, Effect of the environmental conditions, Fungi – description, symptoms, spread, common fungal diseases and their hosts, Leaf spots, Downey mildew, Powdery mildew, Septoria, Early blight, White rust, Phytophthora blight, Fusarium wilt, Pythium, Rhizoctonia, Bacteria – description, symptoms, spread, common bacterial diseases, Agrobacterium crown gall, Bacterial soft rots, Bacterial leaf spot, Viruses – description, symptoms, hosts, spread, common viral diseases, TSWV, CMV

## **Unit 2: Important pests and their identification**

Introduction to insects and pests, Pests life cycle, effect of the environmental conditions, Damages caused by pests, Detection of pests – what to look for?, Scouting and monitoring, Scouting tools, aids and methods, Recognizing feeding patterns, Recognizing pest signs, Phytotoxicity, Whitefly, Thrips, Aphids, Spider mites

## **Unit 3: Management of plant diseases and pests: Principles and practices**

Introduction and principles of disease control, The disease triangle, Avoiding the pathogen, Disease life cycle, Dissemination and dispersal pathogens, Physical dissemination, Intervention in the disease life cycle, Exclusion, Sanitation, Water disinfection, Quarantine, Other methods, Avoidance, Selecting crop, The planting site, Planting time and density, Irrigation management, Fertilization management, Eradication, Different practices, Crop rotation, Alternative hosts, Soil/media sterilization – steam, Mulches, soil solarisation, Hot water treatment.

Introduction to pest control, Economic damage threshold, Measures to manage, avoid and control pests, Cultural methods, Crop rotation, Managing irrigation and fertilization, Controlling the environment, structure, Anti-insect nets, Traps and pheromones, Sanitation, Weather and pest modeling, Planting dates, and planting densities.

## **Unit 4: Pesticides and biological control agents for disease and pest management**

What are pesticides? Chemical pesticides, Biopesticides, The pesticide label, and how to read it. Handling precautions, the active ingredient, symbols, Pesticide formulations, Modes of action of insecticides, Modes of action of fungicides, Modes of action of biopesticides, Contact pesticides, Systemic pesticides, and Resistance to pesticides.

Introduction to biological control, Techniques of biological control, Augmentation of existing natural enemies, Inoculative release, Inductive release, Selection and genetic engineering, Classical biological control, Conservation, Biological control agents, Biological control of pests, Predatory insects, Parasitic insects, Consideration for application of beneficial insects products, Aphidius colemani, Predatory mites, Predatory bugs, Viral biopesticides, Fungal biopesticides, Nematode biopesticides, Biological control of plant diseases, Mechanisms of biological protection, Biofungicides, Agrobacterium Trichoderma, Bacteriophages, Predation by insects, Biological control of weeds

## **Unit 5: Integrated disease/pest management**

Development of modules and assessment of disease and pest (throughout cropping season).

## **Unit 6: Spray equipment and spray programme**

Types of sprayers, Uses of sprayers, Spray terminology, Sprayer maintenance and cleaning, Selecting a sprayer, Calibration, Using chemicals: agitation, clean up and disposal, Basic first aid with chemical pesticides, Response to liquid or powder spills, Keeping records, Misters, Dusters, Blowers, drones, Pesticides and the environment. The water quality, Water acidity, Water mineral content, Turbidity, How to solve water quality problems, Spray calculations –

active ingredients, application rates, sprayer volume, speed selection of pesticides – considerations, Planning in advance, Additional properties of the pesticide that should be considered, precautions during application, health hazards.

**Practicals:**

Methods of diagnosis and detection of various insect pests, and plant diseases, Methods of insect pests and assessment of crop yield losses Identification and nature of damage of important insect pests, diseases and their management, Identification of biocontrol agents, different predators and natural enemies, Mass multiplication of *Trichoderma*, *Pseudomonas*, *Trichogramma* and NPV, dusters, sprayers, drones, preparation of tank mixtures, Crop (agro-ecosystem) dynamics of a selected insect pest and diseases, Plan & assess preventive strategies (IPM module) and decision making. Crop monitoring attacked by insect, pest and diseases; Field Visits

### III. Certificate Course in GAP for basmati farming

**Location:** IARI main campus/Other centers.

**Lead Division:** Genetics

**Collaboration:**

- Agronomy, Plant Pathology, Entomology, Soil Science and Agricultural Chemistry
- Basmati rice mills and progressive farmers.

#### Course structure

S. No.	Topics	No. of Credits	Offered by
1.	Basmati rice varietal improvement	2+0	Genetics
2.	Rice Pests and their Management	2+1	Entomology
3.	Rice Diseases and their Management	2+1	Plant Pathology
4.	Seed Production Techniques in Basmati rice	2+1	Seed Science and Technology (IARI RS, Karnal)
5.	Commercial Basmati rice production	0+2	Agronomy
6.	Basmati Grain Quality Analysis	2+2	Genetics
7.	Exposure visits to the farmers' fields, markets and industries	1+1	Genetics
8.	Internship in Basmati rice Industries (3 months)	0+6	Genetics

### IV. Certificate Course in Greenhouse Hydroponic and Aeroponic Farming

**Location:** IARI main campus/Other centers.

Name of the lead division CPCT

**Collaboration:** Divisions: of Agricultural Engineering

List of collaborating industries/private sector

- Barton & Breeze, Gurgaon ([www.bartonbreeze.com](http://www.bartonbreeze.com))
- URBAN GRO, DELHI([www.smarturbanfarmingexpo.com](http://www.smarturbanfarmingexpo.com))



- Aeroganic Pvt Ltd Noida [www.aeroganics.in](http://www.aeroganics.in)
- Greenhack Pvt Ltd, Delhi
- Ponics Greens, Gurgaon
- Elecsol Technology Pvt Ltd, Raipur ([www.automationgroup.in](http://www.automationgroup.in))
- Aggragannya Skills Pvt Ltd, Bangalore, Karnataka
- Agricare Corporation Noida Delhi ([www.agricarecorp.com](http://www.agricarecorp.com))

**Background:** Smart urban farming is now prevalent among growers/farmers mainly in and around the big cities. Its core principle is to grow high-value horticultural crops in some protected structures with the hydroponics / soilless / Aeroponic system integrated with efficient irrigation and fertigation system. This type of farming is full of modern technologies involving Greenhouse / Hydroponics / Sensors / Automation / Fertigation / Light etc. It requires knowledge, skill, training, exposure, demonstration and hands-on experience to successfully adopt it as business venture. Hydroponics-based urban farming has huge potential for entrepreneurship and business model for farmers/youths in present era. Thus, there is vast scope in this modern farming full of popular technologies related to Automation, Sensors, IoT, Machine Learning, Artificial light, climate control, fertigation etc. This type of farming is popular throughout the world mainly among young professionals from varied sectors like farming, engineering, business etc. Due to the continuous requirement of high-value nutritious horticultural crops throughout the year mainly in and around the big cities, hydroponics-based farming is very popular as it has the potential to achieve it. Many start-ups related to hydroponics-based farming are coming up, covering entire supply chain for providing quality horticultural produce to common citizens. Hydroponics based farming has two important components dealing with engineering and plant biology. Knowledge and skill in both components are integral to its success. Detail information and skill required related to structure, irrigation and fertigation management, Light, IPM and GAP, micro climate for its success. Broadly it can be classified as the following types.

1. Soilless based farming
2. Hydroponics based Farming
3. Aeroponic based farming

It can be practiced in single or multiple layers as required in Vertical farming. Commercially this type of farming is done in the following protected structures.

- Climate Controlled Greenhouse
- Naturally Ventilated Greenhouse
- Insect Proof Nethouse
- Shade Net House

Centre for Protected Cultivation Technology has infrastructures and Research projects ongoing related to Hydroponics/Soilless/Aeroponic and Vertical farming and the expertise required for related certificate course.

### **Course Contents**

Greenhouse farming concepts, Types of Greenhouses and other protected structures, Drip Fertigation, Concepts of soilless farming, Types of Hydroponics farming, Aeroponic Farming Technology, Water & nutrient management for Hydroponics & Aeroponic farming, IPM & GAP, Light Management, Business Models, Industry exposure.

### **PG Diploma Courses**

- I. Post Graduate Diploma in Soil Testing and Nutrient Management

**Location:** IARI main campus

**Lead Division:** Division of Soil Science and Agricultural Chemistry

**Collaboration:** Fertilizer industries (IFFCO, KRIBHCO, IPL, UPL, Mahindra Agro etc.)

**Background:** The soil testing service in India constantly expanded over the years, having presently a network of about 1750 soil testing labs. Despite the large network of STLs and personnel engaged therein, the service could not gain desired mass acceptability. As a result, the demand for soil testing is low, as even innovative and resource-rich farmers are often not enthusiastic about testing their soil for fertilizer use decisions. This is due to a lack of awareness regarding the advantages of soil testing. Soil testing, therefore, continues to be a government-driven service rather than a farmer demand-driven one. Ideally, in 70 years of its existence, the service should have become much demanded by the farmers. The fertilizer industries are constantly recruiting a workforce with soil testing and fertilizer recommendation duties in every corner of the country. Apart from the Govt. sponsored laboratories, many soil testing facilities are developed in the country by different private sector companies/NGOs etc. Soil testing is a specialized service that requires the involvement of a subject matter specialist with a thorough understanding of soil problems, soil test methods, data interpretation and formulation of recommendations, nutrient management protocols, the chemistry of fertilizers and manures application. Unfortunately, human resource deployed in several STLs possesses inadequate knowledge and skill essential for the service. There are enormous demands for experience and skilled personnel to be deployed in the soil testing labs across the country run by the government and private sectors. There is no specialized diploma course available for this purpose. Training courses on soil testing are also very few in the country.

#### **Course structure**

New courses have been developed with appropriate contents for PG Diploma and faculty of SS&AC have given their consent to take-up the new courses for PG Diploma, and approved by BOS, SS&AC.

Course No.	Name of the course	Credits	Offered by	Name of Faculty
Semester -I				
STNM-1	Introduction to Soil	2+1	SSAC	Dr Nayan Ahmed, Dr VK Sharma, Dr Ranjan Bhattacharyya, Dr MC Meena, Dr Sunanda Biswas, Dr Shrila Das
STNM-2	Principles of Soil Fertility and Plant Nutrition	2+1	SSAC	Dr SP Datta, Dr KM Manjaiah, Dr TJ Purakayastha, Dr Mandira Barman, Dr Prasenjit Ray, Mrs. Ankita Trivedi
STNM-3	Methods for Soil, Plant and Water Analysis	1+2	SSAC	Dr DR Biswas, Dr Sarvendra Kumar, Dr Indu Chopra, Mr Kapil Chobhe, Dr Abir Dey, Dr Debarup Das
Semester -II				
STNM-4	Fertilizers, Manures and Bio-fertilizers	2+1	SSAC	Dr DR Biswas, Dr KM Manjaiah, Dr Ranjan Bhattacharyya, Dr Archana Suman (Division of

				Microbiology), Dr Sarvendra Kumar, Dr Sunanda Biswas, Mr Kapil Chobhe, Dr Debarup Das, Mrs. Ankita Trivedi,
STNM-5	Principles and Practices of Nutrient Management	2+1	SSAC	Dr SP Datta, Dr Nayan Ahmed, Dr TJ Purakayastha, Dr VK Sharma, Dr MC Meena, Dr Mandira Barman, Dr Prasenjit Ray, Dr Abir Dey, Dr Shrila Das
STNM-6	Field Experience Training (15 days)	5	SSAC	Dr MC Meena and Dr Abir Dey  Details are given at the point S.No. 7 of the proposal
STNM-7	Internship in Industry (15 days)	5	SSAC	Dr MC Meena and Dr Abir Dey  Details are given at the point S.No. 8 of the proposal
	Total credits	25		

## Syllabus

### 1. Introduction to Soil [3(2L+1P)]

Soil as a natural body, Pedological and Edaphological concepts of soil; processes and factors of soil formation; Soil Profile, components of soil; Soil physical properties: soil-texture, structure, density and porosity, soil colour, consistence and plasticity, soils of India; soil water retention, movement and availability; Soil air and temperature; silicate clays: constitution and properties; sources of charge; soil organic matter: composition, properties and its influence on soil properties; humic substances - nature and properties; soil organisms: macro and micro organisms, their beneficial and harmful effects; soil enzymes; soil pollution - behaviour of pesticides and inorganic contaminants, prevention and mitigation of soil pollution. Soil erosion: types and processes, management of soil erosion;

#### **Practicals**

Study of soil profile in field. Study of soil sampling tools, collection of representative soil sample, its processing and storage; determination of soil density, moisture content and porosity; determination of soil texture by feel and Bouyoucos Methods; determination of water holding capacity of soil, determination of soil colour. Determination of soil pH and electrical conductivity. Determination of cation exchange capacity of soil. Determination of microbial biomass and enzyme activities.

### 2. Principles of Soil Fertility and Plant Nutrition [3(2L+1P)]

Soil fertility and soil productivity; History of soil fertility and plant nutrition, criteria of essentiality, role, deficiency and toxicity symptoms of essential plant nutrients, nutrient movement in soils; nutrient absorption by plants; mechanistic approach to nutrient supply and uptake by plants, factors affecting nutrient availability to plants. Laws governing in plant growth and nutrition. Chemistry and cycle of soil nitrogen, phosphorus, potassium, calcium,

magnesium, sulphur and micronutrients. Critical levels of different nutrients in soil. Forms of nutrients in soil and plant, Indicator plants. Soil organic carbon, its function, different carbon pools in soil and their role in maintaining soil quality and productivity.

### ***Practicals***

Pot study involving indicator plants for development and identification of nutrient deficiency and toxicity; correction of nutrient deficiency in controlled and field conditions.

## **3. Methods for Soil, Plant and Water Analysis [3(1L+2P)]**

Principles of quantitative inorganic analysis, principles of colorimetry, flame-photometry, atomic emission and atomic absorption spectroscopy. Principles of volumetric analysis, preparation of solutions for standard curves, analytical reagents, qualitative reagents, indicators and standard solutions for acid-base, oxidation- reduction and complexometric titration analysis. Principles and methods of analysis for macro- and micronutrients in soils and plants. Digesting techniques for plant materials. Quality of irrigation water and its suitability.

### ***Practicals***

Introduction of analytical instruments and their principles, calibration and applications, colorimetry and flame photometry. Estimation of soil organic carbon, estimation of alkaline hydrolysable N in soils. Estimation of soil extractable P in soils. Estimation of exchangeable K; Ca and Mg in soils. Estimation of soil extractable S in soils. Estimation of DTPA extractable Zn, Fe, Cu and Mn in soils. Estimation of N in plants. Estimation of P in plants. Estimation of K in plants. Estimation of S in plants. Estimation of B in plants. Estimation of Zn, Cu, Fe and Mn in plants. Assessment of irrigation water quality.

## **4. Fertilizers, Manures and Bio-fertilizers [3(2L+1P)]**

Fertilizers, manures and biofertilizers: Indian and global scenario of production and consumption. Introduction and importance of organic manures, properties and methods of preparation of bulky and concentrated manures, mechanisms of decomposition with variable C/N ratio materials, enriched and concentrated manures - their preparation, preservation and usages. Green/leaf manuring. Non-conventional sources of plant nutrients: agricultural, municipal and industrial wastes and effluents. Chemical fertilizers: classification, composition and properties of major nitrogenous, phosphatic, potassic fertilizers, secondary & micronutrient fertilizers, customized and complex fertilizers, slow release and nano-fertilizers, Fertilizer Storage, Fertilizer Control Order. Bio-fertilizers - definition, classification and their nutrient potential, mechanisms, production, usage and constraints; strategies for popularizing biofertilizers in India.

### ***Practicals***

Determination of moisture, total nitrogen, total phosphorus and total potassium in manures and fertilizers, determination of ammoniacal and nitrate nitrogen in manures and fertilizers, di-acid and tri-acid digestion of manures, determination of biuret in urea, determination of total and organic carbon in manures, determination of mineralization rates of manures, determination of urea-N by hydrolytic method, determination of water soluble, citrate soluble and citrate insoluble P in fertilizers, determination of chloride other than  $\text{NH}_4\text{Cl}$  in ammonium chloride fertilizer, determination of Ca, Mg and S in manures and single superphosphate, determination of micronutrients in manures and micronutrient fertilizers. Identification of impurities in fertilisers.

## **5. Principles and Practices of Nutrient Management [3(2L+1P)]**

Interpretation of soil test data; soil test summaries and soil fertility maps; Fertilizer recommendation approaches; critical nutrient concept; targeted yield and multiple regression techniques in soil test crop response studies; formulation of fertilizer dose for different types of crops and cropping systems including cereals, vegetables, ornamental and horticultural crops on normal and problem soils; fertilizer recommendations for rain-fed conditions, integrated plant nutrient supply systems; nutrient management in protected agriculture. Factor influencing nutrient use efficiency (NUE), problem soils and their management, soil amendments. Site-specific nutrient management; decision support systems for fertilizer recommendations; DRIS approach of fertilizer recommendation; Sensor-based soil fertility analysis and real-time nutrient management; Advanced soil testing kits for rapid soil testing and fertilizer recommendation.

### **Practicals**

Use of leaf colour chart, SPAD meter and GreenSeeker for real-time N management; Development of fertilizer prescriptions through different approaches, Fertilizer recommendations through Nutrient Expert; soil testing and fertilizer recommendation through Pusa STFR meter. Determination of lime and gypsum requirement of soil. Field exposure to precision agriculture facilities.

**7. Field Experience Training (15 days):** One village will be assigned to each student for assessing the soil related problems, and develop management strategies. Students will collect the soil samples, processing, analysis the samples for fertility parameters, develop the fertilizer recommendation for the crops, and develop the soil fertility maps of the allotted villages. They will be associated with KVKs etc.

**8. Internship in Industry (15 days):** Students will be taken their internship in the soil testing and nutrient management related laboratory/industries/institute *etc.* Student will be associated with soil testing laboratories of the fertilizer industries like IFFCO, KRIBHCO, Mahindra, Godaraj etc. for understanding the functioning of their soil testing lab, and work independently to fulfil the lab requirement as trained man power. Industry will give a certificate for successful completion of the internship.

### **Budget requirements**

S. No.	Item	Estimated cost (Rs.)
1.	Computers, projector and accessories	3.0 Lakhs
2.	Nitrogen distillation set	15 Lakhs
3.	Centrifuge	2.0 lakhs
4.	High precision balance	2.5 lakhs
5.	TA/DA for faculty	1.0 lakh



6.	Chemicals, glassware, plastic wares and consumable items	10 lakhs
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## II. Post Graduate Diploma in Fruit Production Practices and Nursery Management.

**Location:** IARI main campus/Other centers.

**Name of the lead division:** FHT, ICAR- IARI, New Delhi

**List of collaborating Divisions:**

- ICAR- IARI, Jharkhand.
- WTC, ICAR- IARI, New Delhi.
- SSAC, ICAR- IARI, New Delhi.
- Agronomy, ICAR- IARI, New Delhi.
- FSPHT, ICAR- IARI, New Delhi.
- CPCT, ICAR- IARI, New Delhi.
- Plant Pathology, ICAR- IARI, New Delhi.

**Background:** Over the years, horticulture has emerged as one of the potential agricultural enterprises in accelerating the growth of economy. Its role in the country's nutritional security, poverty alleviation and employment generation programmes is becoming increasingly important. It offers not only a wide range of options to the farmers for crop diversification, but also provides ample scope for sustaining large number of agro-industries which generate huge employment opportunities. As a result of a number of thoughtful research, technological and policy initiatives and inputs, horticulture in India, today, has become a sustainable and viable venture for the small and marginal farmers. This sector has started attracting entrepreneurs for taking up horticulture as a commercial venture. In order to prepare the youth ready to meet the requirement of fruit industries /service sector and to inculcate entrepreneurship and start up among them ICAR- IARI, New Delhi offers Post-graduate Diploma programme in the area of 'Fruit Production Practices and Nursery Management'.

### Course structure

Course No.	Name of the course	Credits (T+P)	Offered by	Faculty for Teaching (Tentative)
<b>Semester -I</b>				
FSC 501 (Existing)	Tropical Fruit Production	2+1	FSC	Dr O.P. Awasthi, Dr V.B. Patel, Dr Kanhaiya Singh, Dr A. Nagaraja and Dr Amit Kumar Goswami
FSC 503 (Existing)	Propagation and Nursery Management of Fruit Crops	2+1	FSC	Dr Kanhaiya Singh, Dr R.M. Sharma, Dr (Ms.) Vartika Srivastava, Dr Chavlesh Kumar
FSC 510 (Existing)	Organic Fruit Culture	2+1	FSC	Dr V.B. Patel, Dr (Ms.) K. Usha, Dr A.K. Shukla, Dr Bikash Das
<b>Semester -II</b>				
FSC 502 (Existing)	Sub-Tropical and Temperate Fruit Production	2+1	FSC	Dr AK Dubey, Dr RM Sharma, Dr MK Verma and Dr AK Shukla
FSC 515 (New)	Tissue Culture of Fruit Crops	1+2	FSC	Dr Sanjay Kumar Singh, Dr Manish Srivastav, Dr Vartika Srivastava, Dr Nimisha Sharma

FSC 516 (New)	Protected Cultivation of Horticultural Crops	2+1	FSC	Dr RM Sharma, Dr Jai Prakash, Dr Murtaza Hasan (CPCT), Dr MC Singh (CPCT), DR PK Singh (CPCT)
FSC 517	Exposure Visits to Hi-Tech Nurseries/ Centre of Excellence (15 days)	5	FSC	Dr Kanhaiya Singh, Dr Manish Srivastav, Dr (Mrs.) Madhubala Thakre, Mr. Nayan Deepak G.
FSC 518	Internship with Industry (15 days)	5	FSC	Dr Kanhaiya Singh, Dr Manish Srivastav, Dr Jai Prakash, Dr Amit Kumar Goswami
	<b>Total</b>	<b>28</b>		

## Syllabus

### 1. FSC 501 Tropical Fruit Production (2+1)

#### Theory

##### Block 1:

Introduction Unit I: Importance and Background: Importance, origin and distribution, major species, rootstocks and commercial varieties of regional, national and international importance, eco-physiological requirements.

##### Block 2: Agro-techniques

Unit I: Propagation, Planting and Orchard Floor Management: Asexual and sexual methods of propagation, planting systems and planting densities, training and pruning methods, rejuvenation, intercropping, nutrient management, water management, fertigation, use of bio-fertilizers, role of bio-regulators, abiotic factors limiting fruit production.

##### Block 3:

Crop Management Unit I: Flowering, Fruit-Set and Harvesting: Physiology of flowering, pollination management, fruit set and development, physiological disorders – causes and remedies, crop regulation, quality improvement by management practices; maturity indices, harvesting, grading, packing, storage and ripening techniques; insect and disease management. Crops: Mango, Banana, Guava, Pineapple, Papaya, Avocado, Jackfruit, Annonas, Aonla, Ber, etc.

**Practicals** • Distinguished features of tropical fruit species, cultivars and rootstocks; • Demonstration of planting systems, training and pruning; • Hands on practices on pollination and crop regulation; • Leaf sampling and nutrient analysis; • Physiological disorders-malady diagnosis; • Physico-chemical analysis of fruit quality attributes; • Field/ Exposure visits to tropical orchards; • Project preparation for establishing commercial orchards.

### 2. FSC 502 Sub-Tropical and Temperate Fruit Production (2+1)

#### Theory

##### Block 1:

Introduction Unit I: Importance and Background: Origin, distribution and importance, major species, rootstocks and commercial varieties of regional, national and international importance, eco-physiological requirements.

##### Block 2:

Agro-Techniques Unit I: Propagation, Planting and Orchard Floor Management: Propagation, planting systems and densities, training and pruning, rejuvenation and replanting, intercropping, nutrient management, water management, fertigation, use of bio-fertilizers, role of bio-regulators, abiotic factors limiting fruit production.

Block 3: Crop Management Unit I: Flowering, Fruit-Set and Harvesting: Physiology of flowering, pollination management, fruit set and development, physiological disorders-causes and remedies, crop regulation, quality improvement by management practices; maturity indices, harvesting, grading, packing, storage and ripening techniques; insect and disease management. Crops Citrus, Grapes, Litchi, Pomegranate, Apple, Pear, Peach, Plum, Apricot, Cherries, Berries, Persimmon, Kiwifruit, Nuts- Walnut, Almond, Pecan, etc.

**Practicals** • Distinguished features of fruit species, cultivars and rootstocks; • Demonstration of planting systems, training and pruning; • Hands on practices on pollination and crop regulation; • Leaf sampling and nutrient analysis, Physiological disorders-malady diagnosis; • Physico-chemical analysis of fruit quality attributes; • Field/ Exposure visits to subtropical and temperate orchards; • Project preparation for establishing commercial orchards.

### **3. FSC 503 Propagation and Nursery Management of Fruit Crops (2+1)**

#### **Theory**

Block 1:

Introduction Unit 1: General Concepts and Phenomena: Introduction, understanding cellular basis for propagation, sexual and asexual propagation, apomixis, polyembryony, chimeras. Factors influencing seed germination of fruit crops, dormancy, hormonal regulation of seed germination and seedling growth. Seed quality, treatment, packing, storage, certification and testing.

Block 2:

Propagation Unit I: Conventional Asexual Propagation: Cutting– methods, rooting of soft and hardwood cuttings under mist and hotbeds. Use of PGR in propagation, Physiological, anatomical and biochemical aspects of root induction in cuttings. Layering – principle and methods. Budding and grafting – principles and methods, establishment and management of bud wood bank. Stock, scion and inter stock relationship – graft incompatibility, physiology of rootstock and top working.

Unit II: Micropropagation: Micro-propagation – principles and concepts, commercial exploitation in horticultural crops. Techniques – in-vitro clonal propagation, direct organogenesis, embryogenesis, micrografting, meristem culture, genetic fidelity testing. Hardening, packaging and transport of micro-propagules.

Block 3:

Nursery Unit I: Management Practices and Regulation: Nursery – types, structures, components, planning and layout. Nursery management practices for healthy propagule production. Nursery Act, nursery accreditation, import and export of seeds and planting material and quarantine.

**Practical** • Hands on practices on rooting of dormant and summer cuttings; • Anatomical studies in rooting of cutting and graft union; • Hands on practices on various methods of budding and grafting; • Propagation by layering and stooling; Micropropagation- explant preparation, media preparation, culturing – meristem tip culture, axillary bud culture, micro-grafting, hardening; • Visit to commercial tissue culture laboratories and accredited nurseries;

### **4. FSC 510 Organic Fruit Culture (2+1)**

#### **Theory**

Block 1:

General Aspects Unit I: Principles and Current Scenario: Organic horticulture, scope, area, production and world trade, definition, principles, methods and SWOT analysis.

Block 2:

Organic Culture Unit I: Farming System and Practices: Organic farming systems including biodynamic farming, natural farming, homa organic farming, rishi krishi, EM technology, cosmic farming; on-farm and off-farm production of organic inputs, role of bio-fertilizers, bio enhancers, legumes, inter cropping, cover crops, green manuring, zero tillage, mulching and their role in organic nutrition management. Organic seeds and planting materials, soil health management in organic production, weed management practices in organic farming, biological management of pests and diseases, trap crops, quality improvement in organic production of fruit crops.

Block 3:

Certification Unit I: Inspection, Control Measures and Certification: Inspection and certification of organic produce, participatory guarantee system (PGS), NPOP, documentation and control, development of internal control system (ICS), Concept of group certification, constitution of grower group as per NPOP, preparation of ICS manual, internal and external inspection, concept of third party verification, certification of small farmer groups (Group Certification), transaction certificate, group certificate, critical control points (CCP) and HACCP, IFOAM guidelines on certification scope and chain of custody, certification trademark – The Logo, accredited certification bodies under NPOP. Constraints in certification, IFOAM and global scenario of organic movement, postharvest management of organic produce. Economics of organic fruit production.

**Practicals** • Design of organic orchards/ farms management (1); • Conversion plan (1); • Nutrient management and microbial assessment of composts and bio-enhancers(2); • Preparation and application of composts, bio-enhancers and bio-pesticides(2); • Organic nursery raising (1); • Application of composts, bio-enhancers, bio-fertilisers and bio-pesticides, green manure, cover, mulching (2); • Preparation and use of neem based products(1); Biodynamic preparations and their role in organic agriculture, EM technology and products, biological/ natural management of pests and diseases(2); • Soil solarisation (1); • Frame work for GAP(1); • Documentation for certification(1).

## **5. FSC 515 Tissue Culture of Fruit Crops (1+2)**

### **Theory**

UNIT I Basic principles of plant tissue-culture and commercial exploitation in horticultural crops.

UNIT II Micro-propagation Techniques – in-vitro clonal propagation, direct organogenesis, embryogenesis, micrografting, meristem culture, genetic fidelity testing.

### **Practicals**

General acquaintance with a tissue culture laboratory; Methods of aseptic culture and sterilization procedure; Stock solutions and preparation of culture media; In vitro culture establishment and plant regeneration, clonal fidelity testing- DNA isolation and RAPD/ SSR analysis; Techniques of low temperature germplasm storage, cryo-preservation and visit to cryobank.

## **6. FSC 516 Protected Cultivation of Horticultural Crops**

### **Theory**

UNIT I Importance and scope of protected cultivation; principles and structures used in protected cultivation including hotbed, cold frame, polyhouse, low tunnel etc effect of temperature, light, humidity and CO<sub>2</sub> on growth, flowering and production

UNIT II Hi-tech nursery raising technology and propagation of fruit crops; production technology and economics of production of high value crops; like strawberry, raspberry etc.

UNIT III Micro-irrigation, fertigation and soil-less culture; problems associated with growing of horticultural crops in greenhouse and their remedies; use of growth regulators in protected cultivation.

#### **Practicals**

Layout and installation of different protected structures; Climatic requirements maintenance for protected cultivation of horticultural crops; Hi-tech nursery management for fruit crops; Fertigation technology for horticultural crops; Soilless cultivation of horticultural crops.

**7. Exposure Visits to Hi-Tech Nurseries/ Centre of Excellence(15 days):** Exposure visits of Hi-Tech Nurseries in NCR, Centre of Excellence, KVKs will be undertaken for students.

**8. Internship in Industry (15 days):** Students will be taken their internship in Hi-Tech Fruit Cultivation, Hi-Tech Nursery Management at Centre of Excellence (State Govt.), Pvt. Industries (Jain Irrigation, Reliance Ltd., VNR Raipur etc. for having hands on experience about Hi-Tech Fruit Cultivation and Nursery Management. Industry may be asked to give a certificate for successful completion of the internship.

#### **Budgetary Requirements**

S. No.	Item	Estimated cost (Rs.)
1.	Computers, projector and accessories	3.0 Lakhs
2.	Creation of Field Lab.	15.0 Lakhs
3.	Contingency grant for conducting practical, activities, preparation of teaching aids, learning resources, consumables (chemicals, glass wares, plastic wares, etc.).	10.0 Lakhs
4.	Travel- TA/DA for faculty, exposure visits of students', excursion of students to different places/ facilities.	5.0 Lakhs

#### **III. Post Graduate Diploma in Seed Production, Processing and Quality Control**

**Location:** IARI main campus/Other centres.

**Collaboration of other Divisions/ institutions/ industry & their specific role:** *Lead*

**Division:** Division of Seed Science and Technology, ICAR-IARI, New Delhi

**List of Collaborating Institutes/Divisions:**

ICAR-IARI Regional Station, Karnal

ICAR-IARI Regional Station, Katrain

Div. of Agri. Engineering, ICAR-IARI, New Delhi

Div. of Vegetable Science, ICAR-IARI, New Delhi

**List of collaborating industries:**

National Seeds Corporation (NSC)

Public and Private Seed Industries

**Background :**Seed is the most important input for sustainable crop production and food security. Availability of quality seed is crucial for higher yield and productivity. At present more than 500 private seed companies are operating along with national /state seed corporation(s)to fulfil the seed requirement of farming community and for export purposes. In the significant advances India made in agriculture during the last five decades, the role of



the Seed Industry is substantial. It is a well established fact that the success of the green revolution in India was a combination of seeds of high yielding varieties and improved agronomic packages. Globally this is an exciting time to be in agriculture, particularly in the Seed Industry. The demand for quality seeds of improved varieties is fast growing and farmers' adoption of new technologies is happening at an amazing pace. Therefore, producing and supplying high-quality seeds of improved varieties to the tiller of the land is a high priority in agricultural growth and development. In light of the above, young agricultural graduates should be trained in the area of seed production, processing and quality control to make available a trained workforce and upscale the available human resources for the seed industry. The PG Diploma degree holders may produce seeds on their own farmland and obtain higher income as self-employed one. Alternately they can develop FPO with seed production as an important activity providing training to fellow farmers. Further, for the seed industry personnel, this course will benefit their skill enhancement and knowledge upgradation, improving their work efficiency.

### **Course structure**

<b>Course No.</b>	<b>Name of the course</b>	<b>Credits (L+P)</b>	<b>Offered by; collaborator</b>
<b>Semester -I</b>			
<b>SST 401</b>	Principles and Techniques of Seed Production	2+1	DSST
<b>SST 402</b>	Seed Production in Field Crops	2+1	DSST; IARI Reg. Station, Karnal
<b>SST 403</b>	Seed Production in Vegetable Crops	2+1	DSST; D Veg Sc. and IARI Reg station Katrai
<b>SST 404</b>	Seed business and Entrepreneurship Development	2 +0	DSST
	<b>Total credits</b>	<b>8+3</b>	
<b>Semester –II</b>			
<b>SST 405</b>	Seed Processing and storage	2+1	DSST; D Ag.Engg.
<b>SST 406</b>	Seed Legislation and Plant Variety Protection	2+1	DSST
<b>SST 407</b>	Seed Quality Testing	2+1	DSST
<b>SST 408</b>	One month Industrial attachment	0+2	DSST
	<b>Total credits</b>	<b>6+5</b>	

	<b><u>OVERALL CREDIT LOAD</u></b>	<b><u>14 + 8</u></b>	
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### **Course Contents**

#### **SST 401: Principles and Techniques of Seed Production (2L+1P)**

[Faculty:Dr SK Chakrabarty, Dr Sudipta Basu, Dr Sandeep K Lal, Div. of Seed Science and Technology, ICAR-IARI, New Delhi]

#### **Theory**

1. UNIT I: Seed as a basic input in agriculture, seed quality concept; factors affecting seed production; generation system of seed multiplication - classes of seed; stages of seed multiplication; seed multiplication ratio (SMR); seed replacement rate (SRR); varietal replacement rate (VRR);
2. UNIT II: Steps in the development, evaluation, release, notification and maintenance of varieties; life span of varieties and factors responsible for their deterioration; classification of crop plants in relation to the mode of reproduction.
3. UNIT III: Principles of hybrid seed production viz. isolation, synchronization of flowering, field inspection, rogueing etc.; special agronomical practices for seed production; role of insect pollinators and their management for hybrid seed production; effect of environment on seed quality;
4. UNIT IV: Seed quality control system and organization; suitable seed production areas; seed village concept and participatory seed production; custom seed production; agencies responsible for seed production; seed industry in India.

#### **Practicals**

1. Seed production of varieties/ hybrids of rice, maize, pearl millet, pulses and vegetable crops.
2. Isolation distance and border rows in hybrid seed production field - space and barrier isolation; modifying isolation based on border rows; emasculation and pollination practices for hybrid seed production; methods for achieving synchronization in rice, maize, bajra and vegetable crops; supplementary pollination in rice; rogueing in seed production plots
3. Visit to seed production plots; visit to seed production companies, certification agencies and seed processing units.

#### **SST 402: Seed Production in Field Crops (2L+1P)**

[Faculty:Dr Monika A Joshi, Dr Vijayakumar H.P from Div. of Seed Science and Technology, ICAR-IARI, New Delhi and Dr. R.N. Yadav from ICAR-IARI Regional Station, Karnal]

#### **Theory**

1. UNIT I: Basic principles of seed production & importance of quality seed, Floral structure, breeding and pollination mechanism in self and cross-pollinated crops, factors influencing seed production; generation system of seed multiplication - classes of seed, stages of seed multiplication in varieties and hybrids
2. UNIT II: Methods and techniques of seed production in varieties and hybrids of important cereals and millets - wheat, barley, rice, maize, sorghum and pearl millet; UNIT III: Methods and techniques of varietal seed production in major pulses - black gram, green gram, cowpea, chickpea, soybean and lentil - varietal and hybrid seed production in red gram.

3. UNIT IV: Methods and techniques of seed production in major oil seed crops - groundnut, sesame - varietal and hybrid seed production in sunflower and mustard; varietal and hybrid seed production in cotton - varietal seed production in jute.
4. Unit V: Seed production planning for varieties and hybrids of major crops; participatory seed production - seed hubs, seed village concept and community seed bank.

### **Practicals**

1. Planning of seed production in field crops, sowing and nursery management techniques
2. Seed production of self- and cross-pollinated crops, Isolation distance and border rows in hybrid seed production field - space and barrier isolation; modifying isolation based on border rows in maize
3. Study on methods of achieving synchronization, Practicing supplementary pollination Study on foliar nutrition and influence on seed yield
4. Practicing roguing operation - identification of off-types, pollen shedders, shedding tassels, partials, selfed bolls, Pre and post harvest sanitation operations - cereals, millets and pulses
5. Visit to seed production fields, Seed production planning and economics of seed production - varieties

### **SST 403: Seed Production in Vegetable Crops (2L +1P)**

[Faculty: Dr. Sudipta Basu, Dr. Sandeep K. Lal, Dr. R.Y. Vishwanath, Div. of Seed Science and Technology, ICAR-IARI, New Delhi in association with Dr. B.S. Tomar, JD(Extn.) and Head, Div. of Veg Sc. and IARI Reg station Katrain]

### **Theory**

1. UNIT-I: Importance and present status of vegetable seed industry; factors influencing vegetable seed production; Principles of seed production; floral biology, pollination systems and breeding techniques related to vegetable seed production, agronomic practices for vegetable seed production; environmental factors affecting flowering/bolting in vegetable crops, seed production planning and economics of hybrid seed production.
2. Unit II: Seed production in major solanaceous vegetables - tomato, brinjal, chilli; malvaceous vegetable crop - bhendi; cucurbitaceous vegetables - gourds and melons,
3. Unit III: Seed production in cole crops - cauliflower, cabbage, knol-khol, root vegetables - carrot, radish and other temperate / hilly vegetable crops.
4. Unit IV: Seed production in major leguminous vegetables - peas and beans; leafy vegetables - amaranthus, palak, spinach, and lettuce.
5. Unit V: Seed production in tuber crops - potato, seed-plot technique in potato - true potato seed (TPS) production; seed production in bulb crops - onion, garlic.
6. Unit VI: Vegetative and clonal multiplication - methods, merits and demerits; clonal multiplication - potato.

### **Practical**

1. Identification of vegetable seeds; studying floral biology of vegetable crops, sex forms in cucurbitaceous crops and their modification
2. Seed production technology of cucurbits, solanaceous vegetables and cole crops under open and net/poly-house conditions; emasculation and pollination methods for hybrid seed production in vegetable crops. planting designs for hybrid seed production
3. Roguing in seed production - identification of true to type, off-type and selfed fruits; harvesting methods - single and multiple harvesting method; seed extraction
4. Visit to vegetable seed production fields and seed companies.

### **SST 404: Seed Business and Entrepreneurship Development (2L +0P)**

[Faculty: Mr. Manjunath P., Dr. Sandeep K. Lal and Dr. R.Y. Vishwanath, Div. of Seed Science and Technology, ICAR-IARI, New Delhi ]

### **Theory**

1. UNIT-I: Seed systems and food security, Seed industry: history, present status, organization setup, and major constraints, Seed enterprise and entrepreneurship development
2. Unit II: Seed production, distribution and supply systems, Economics of seed production: production costs and returns, Seed certification: concept and procedure, Post-harvest management of seed crop
3. Unit III: Seed Replacement Rate (SRR) and Seed Multiplication Ratio (SMR) and its importance, Basic concepts of seed marketing, Demand forecasting and its importance, Concept of price fixation and seed pricing policy
4. Unit IV: Market intelligence: Concept & importance, Product development and sales promotion, Seed distribution and communication channels, Product marketing: costs, margins & cost benefit ratio
5. Unit V: National and international organizations for facilitating seed trade, Provisions under Seed Act pertinent to seed companies and dealers, Recent developments in seed regulations and policies, Marketing laws and consumer rights, Export-Import policies for seed trade
6. Unit VI: Plant quarantine and phytosanitary requirements, OECD varietal certification and seed trade, Statutory requirements for operating seed business, Custom seed production and contract seed production, Seed hubs, Seed village concept and farmer participatory seed production

### **SST 405: Seed Processing and storage (2L+1P)**

[**Faculty: Dr D Vijay**, Dr Sangita Yadav, Mr Manjunath P. , Div. of Seed Science and Technology, ICAR-IARI, New Delhi; Dr Ashwini Kumar from ICAR-IARI Regional Station, Karnal and One faculty from D Ag. Engg. to be identified]

### **Theory**

1. UNIT-I: Classification of seeds based on storage behaviour; Types of storage; kinds of storage, Factors effecting seed storability- biotic and abiotic factors, pre-and post-harvest factors
2. Unit II: Seed equilibrium moisture content, hysteresis, thumb rules, prediction of storability and longevity of seeds, Concept of seed ageing and deterioration- causes, symptoms and mechanisms, Application of physiological and biochemical techniques for evaluation of seed ageing
3. Unit III: Seed viability and vigour, importance, testing, and influence on crop performance,
4. Mid storage corrections and other amelioration techniques to reduce seed deterioration, Storability of coated, pelleted, and primed seed
5. Unit IV: Storage methods and storage structures, Important storage insects and fungi and their control including seed treatment, fumigation, and other safe storage measures.
6. Unit V: Seed drying principle and different types and procedures and recent advances, Principles of seed processing and its importance in seed quality maintenance, Seed cleaning and processing equipment and their functions, processing efficiency, quality enhancement, seed blending and its relevance
7. Unit VI: Seed packaging, types, and its influence on seed longevity, Seed labelling and its statutory requirements

### **Practicals:**

1. Estimation of seed moisture content, Effect of storage environment on seed viability

2. Effect of packaging material on seed quality , Seed treatment, Prediction of storability
3. Accessing physiological and biochemical changes during seed storage
4. Effect of drying on seed storability, Estimation of drying loss, Use of psychrometric chart to identify suitable temperature and RH for seed storage
5. Handling of seed processing equipment lab models, Estimation of processing efficiency of different equipment, Detection of mechanical injury during processing
6. Visit to seed store and processing plant

#### **SST 406 Seed Legislation and Plant Variety Protection (2L+1P)**

[Faculty: Dr Shiv K Yadav, Dr S. K. Chakrabarty, Dr Monika A Joshi and Dr Arun Kumar MB, Div. of Seed Science and Technology, ICAR-IARI, New Delhi]

##### **Theory**

1. UNIT I: Introduction to quality seed and its importance, Historical development of Seed Industry in India, Regulatory mechanisms of seed quality control and organizations involved in seed quality control programmes
2. UNIT II: Legislations and policies for quality assurance, Seed Act (1966), Seed Rules (1968), Seed Control Order (1983), EXIM Policy regarding seeds
3. UNIT III: New Policy on Seed Development (1988), National Seed Policy (2002), Seed Bill 2019, Plant Quarantine Act, regulations and plant quarantine set up in India
4. UNIT IV: Seed certification and OECD seed certification schemes, PPV & FR Act (2001) and Rules (2003), Introduction to Concepts of PVP, Understanding Criteria for PVP Registration, IP Management – A Conceptual Overview, Technology Life cycle, Technology Licensing
5. UNIT V: Criteria for protection of new varieties of plants, Principles and procedures of Distinctness, Uniformity and Stability (DUS) testing, Test guidelines, planting material, duration, testing options, Varieties of common knowledge, reference collection
6. UNIT VI: Assessment of DUS characters based on morphological, biochemical and molecular markers, Grouping of varieties, Types and categories of characters, Impact of PVP on growth of seed industry

##### **Practicals**

1. Morphological description of plant parts and plant, Character expression and states, Recording observation and interpretation of data
2. Genetic purity assessment based on seed characters, Genetic purity assessment based on seedling growth tests, anthocyanin pigmentation , Genetic purity assessment based on secondary compounds, phenol, peroxidase
3. DUS testing based on morphological descriptors of plant – cereals\* and millets\*, pulses\* and oil seeds\* , vegetable crops\* (\*will be decided on basis of crops raised in the particular semester)
4. Chemical and biochemical test applicable for DUS testing, Visit to DUS test centers

#### **SST 407: SEED QUALITY TESTING (2L+1P)**

[Faculty: Dr Sandeep K Lal, Dr Atul Kumar, Dr Arun Kumar MB and Dr Nagamani S from Div. of Seed Science and Technology, ICAR-IARI, New Delhi]

##### **Theory**

1. UNIT I: Evolution of seed testing at national and international level, Seed lot, types of samples, sampling intensity, devices and methods, Receipt and registration of submitted samples in the laboratory and sub sampling, including storage of guard samples

2. UNIT II: Seed structure and morphology in monocot and dicot seeds, Physical purity analysis - objectives, components and procedure, Determination of other distinguishable varieties (ODV) and test weight determination
3. UNIT III: Application of heterogeneity tests, Determination of moisture content: Principles and procedures, Determination of test weight, Germination test: requirements, media and procedures, Seedling evaluation, Use of tolerances in seed testing
4. UNIT IV: Seed viability testing: principle, procedure and evaluation, Seed vigour testing: concept, types and methods, Genetic purity testing- concept, objectives and laboratory methods, Field plot tests for genetic purity testing – Grow-out test (GOT), Testing of GM seeds and trait purity, load of detection (LOD)
5. UNIT V: Seed health testing - principles and methods, Testing of coated/pelleted seeds, Advances in seed quality testing
6. UNIT VI: Maintenance of records, registers, preparation and dispatch of seed testing reports, their interpretation and uses, Establishment and Management of a seed testing laboratory, Accreditation of a seed testing laboratory in India and ISTA accreditation

#### **Practicals:**

1. Seed testing equipment and handling of seed sample in STL, Seed sampling and obtaining a submitted/ working sample, Calibration of seed testing equipment and their maintenance
2. Physical purity analysis in monocot and dicot crop seeds, Identification of weeds seeds and crops, Determination of seed moisture content - Hot air oven method and moisture meter
3. Determination of seed moisture content - Hot air oven method and moisture meter, Preparation of substrate/media (BP, TP and Sand) for standard germination tests and sowing of seeds under different substrata, Evaluation of seed germination under different substrates, Testing of quality/specifications of the seed germination media, Methods of breaking seed dormancy and testing of seeds
4. Assessment of seed viability in monocotyledonous and dicotyledonous seeds (TZ test), Assessment of seed viability in monocotyledonous and dicotyledonous seeds (TZ test), Preparation of seed samples and estimation of seed vigour
5. Genetic purity testing using chemical and biochemical methods, Genetic purity testing using chemical and biochemical methods, Genetic purity testing using molecular methods for hybrids and parental lines, Testing of coated/pelleted seeds
6. Seed health testing (Standard blotter and Agar plate methods), Seed health testing - Embryo count method, Analysis and reporting of seed testing results, use of tolerance tables and reason/s for variation in seed quality testing

#### **SST 408:One-month Industrial attachment (0+2)**

[Faculty: Mr Manjunath P. and Dr Vishwanath Y. from Div. of Seed Science and Technology, ICAR-IARI, New Delhi]

- Need-based attachment
- Project report submission

#### **IV. Post Graduate Diploma in Organic Farming**

**Location:** IARI main campus/Other centres.

**Name of the lead division:** Division of Agronomy, ICAR-IARI, New Delhi 110 012

#### **List of collaborating Divisions:1.**

- Division of Entomology, ICAR-IARI, New Delhi.
- Division of Plant Pathology, ICAR-IARI, New Delhi.
- Division of Post-harvest Technology, ICAR-IARI, New Delhi.



- Division of Agricultural Economics, ICAR-IARI, New Delhi.
- ICAR-Indian Institute of Organic Farming, Sikkim or National Centre of Organic Farming (NCOF), Ghaziabad, UP

#### **List of collaborating private sectors**

- APEDA, Govt. India.
- Organic farming certification agencies.
- Padam Shree awardee Bharat Bhusan Tyagi organic farm, Bulandshahar, UP

**Background:** India has an inherent advantage in organic farming because of its diverse geography and climatic conditions. India has a great potential to increase its area under organic farming, particularly in rainfed/ dryland/ hill regions. Many such areas are organic by default and have low productivity as well. Research results have conclusively proved that these lands respond very well to organic management. Hence, more of these areas should be used for organic cultivation, particularly in light of the increase in drought frequency.

In recent years, organic farming has emerged as one of the potential agricultural enterprises in accelerating the growth of the Indian economy. Its role in the country's nutritional security, poverty alleviation, farmers' doubling income, and employment generation programmes is becoming increasingly important. It offers not only a wide range of options to the farmers for crop diversification, but also provides ample scope for sustaining the large number of agro-industries that generate huge employment opportunities. As a result of a number of thoughtful research, technological, and policy initiatives and inputs, organic farming in India, today, has become a sustainable and viable venture for the small and marginal farmers. This sector has started attracting entrepreneurs for taking up organic farming as a commercial venture.

A huge potential is also seen in the export and marketing of organic inputs and outputs (organic products). The opportunities for export are also expanding in the country. Simultaneously, the local demand for organic food is also growing. Organic products, which until now were mainly exported, are now finding consumers in the domestic market as well.

A great employment opportunity also exists in the organic sector. Unemployed people can find employment by producing and marketing the organic seed, organic manures (composts, vermicomposts), organic fertilizers, biofertilizers and organic pesticides. One can easily set up the units for production of vermicompost, biofertilizers and organic pesticides and find self-employment.

In order to prepare the youth ready to meet the requirement of organic products /service sector (accreditation & certification) and to inculcate entrepreneurship and start up among them ICAR-IARI, New Delhi offers Post-graduate Diploma programme in the area of 'Organic Farming'.

#### **Course structure**

<b>Course No.</b>	<b>Name of the course</b>	<b>Credits</b>	<b>Offered by</b>	<b>Possible course instructors</b>
<b>Semester -I</b>				
PGDOF 201	Fundamentals of Organic Farming	3+0	Agronomy	Dr. Dibakar Mahanta Dr. Dinesh Kumar Dr. Shiva Dhar Dr. Y.S. Shivay
PGDOF 202	Organic Production Technologies / Organic Crop	3+2	Agronomy	Dr. Raj Singh Dr. Y.V. Singh Dr. Dinesh Kumar

	Production Systems			Dr. Shiva Dhar
PGDOF 203	Plant Health Management	3+2	Agronomy / Entomology / Pathology	Dr. Raj Singh/ Dr. Ramanjit Kaur <b>Dr. (Mrs.) Debjani Dey (Entomology)</b> <b>Dr. Rashmi Aggarwal (Pathology)</b> <b>Dr. Harender Kumar Sharma (Nematology)</b>
PGDOF 204	Post-Harvest- handling of Organic Produce	3+2	Post-harvest technology / Agronomy	Dr. Ram Ashreay Dr. Dinesh Kumar
<b>Semester -II</b>				
PGDOF 205	Organic Certification, Standards, and Regulations	3+2	Agronomy / APEDA	Dr. Dinesh Kumar Dr. Y. S Shivay
PGDOF 206	Marketing	2+1	Economics /Agronomy	Dr. Alka Singh Dr. Dinesh Kumar
PGDOF 509	Project Report	10	Agronomy	Dr. Dinesh Kumar Dr. Y. S Shivay

### Syllabus

**Course No:** PGDOF 201 Credit hour: (3+0)

**Course title:** Fundamentals of Organic Farming

**Objective:** To impart knowledge on the basic concept of organic farming

### Theory

**Unit I. Concepts and principles of organic farming** - History and evolution of organic farming in the world and India. Scenario of organic farming in India and world, global market for organic products, IFOAM's Guiding principles of organic farming, conversion to organic agriculture, advantages and limitations.

**Unit II Definitions and types of organic farming** - Definitions of organic farming, types of organic farming such as natural farming, zero chemical natural farming, bio dynamic farming, biological farming, compost farming, Natueco culture, integrated farming, homa farming, permaculture etc., traditional farming systems in India and evolving indigenous knowledge systems

**Unit III Conventional vs. Organic farming** - Philosophy of two farming systems, fundamental differences, productivity issues, management protocols, food quality, nutritional differences and impact of conventional practices on soil fertility, natural resources, environment and overall social perception. Myths and realities about organic farming in addressing nutritional security and food safety need vis-à-vis national food security.

**Unit IV. Advocacy, Ethics, health and social issues in organic farming** – Advocacy for organic farming with sustainability, resource conservation and food safety issues. Advocacy through overall farm productivity under diversified cropping systems. Spirituality values and ethics in organic farming. Socio economic importance of organic farming: concept measurements and issues. Need for ethical practices and values across the organic agriculture value chain including trading and reaching to consumers.

**Unit V. Organic farming for sustainability, resource conservation, climate change issues and safe and healthy food** – General concerns on sustainability, climate change issues threatening sustainability, potential of organic farming practices in addressing sustainability and climate change. Resource conservation through organic farming, rainwater conservation and preservation of native seeds and germplasm an essential component of organic farming,

Consumers concerns on food quality and safety, organic farming for safe and healthy food, ITKs potential and role in sustainability of modern organic farming practices

**Teaching methods/activities:** Classroom teaching with AV aids, group discussion, assignment and class discussion

Learning outcome: Basic knowledge on organic farming so as to be an organic trainer, promoter and grower.

**Reading materials:**

- 1) Basics of Organic Farming: by Mamta Bansal. Kindle Edition 2.
- 2) The Complete book of Organic farming and products of organic compost: NPCS Board of consultants and Engineers.
- 3) ABC of Organic Farming: Amitava Rakshit and H.B. Singh. Published by Jain Brothers
- 4) Basics of Organic Farming: Deshpande, WR, 2009, All India Biodynamic and Organic Farming Association, Indore, MP, India P-306.
- 5) Eyhorn, F., Heeb M. and Weidmann, Gilles IFOAM Training Manual for Organic Agriculture in the Tropics, FiBL and IFOAM

**Course No:** PGDOF 202 Credit hour: (3+2)

**Course title:** Organic Production Technologies / Organic Crop Production Systems

**Objectives:** To provide knowledge on organic crop production technologies

Theory

**Unit I. Fundamentals of organic farm management and conversion** – Salient features of organic farm management, strategies for conversion to organic, step-by-step planning, integration of contamination control measures, planning for on-farm input production and supplementary off-farm inputs, planning for rain water harvesting and water conservation approaches including efficient irrigation systems and moisture preservation techniques, visit to organic farms and study on farmer's best practices for conversion.

**Unit II. Management of diversity and cropping systems** – Importance of diversity, installation of diversity through the plantation of utility trees, nitrogen-fixing tree hedges, habitat management for friendly insects and birds, and nitrogen-fixing crops as intercrops. Importance of cropping systems management with long-term planning, crop rotations, intercropping, multi-cropping, relay cropping, and multi-layered cropping.

Seeds/planting material – use of the certified seed, conventional untreated seed, use of non GMO seeds

Conversion period – annuals/biennials/perennials, reduction in conversion period, synergy between NPOP and PGS

**Unit III. Nutrient management** – Components of nutrient management in organic crop production, assessment of crop nutrient requirements, calculation of nutrient credits from on-farm practices and resources such as intercrops, cover crops, biomass mulching, calculating additional input requirements. Managing nutrient needs through use of organic manures viz., FYM, compost, Vermicompost, oil cakes, in-situ and ex-situ green manuring, crop residue management, use of restricted organic nutrient sources, liquid organic manures and dung urine slurries, methods of manuring and biomass application, measures to prevent accumulation of heavy metals & other pollutants and over manuring, split application of manures, foliar feeding as replacement of top dressing, ITKs and farmers innovations in nutrient management

**Unit IV. Integration of microbial and mineral inputs** Importance of bio fertilizers, types of biofertilizers, nutrient potential, methods of application, enriching manures/ composts with biofertilizers, identifying the need for use of supplementary mineral sources and their integration in nutrient management package.

**Unit V. Weed management** - Prevention of weeds through cropping systems management, crop geometry, stale seedbed technique, summer ploughing, soil solarisation, cover crops, mulching, flooding, biological weed management, selection of suitable physical and mechanical approaches and biological and plastic mulches

**Unit VI. Water and Irrigation Management** – Soil-water relation, theories of water availability, water use efficiency management, soil and water conservation, methods of irrigation and automation in irrigation systems, irrigation scheduling in different crops.

**Unit VII. Modelling of agronomic practices and nutrient management protocols for some important agricultural and horticultural crops** – Identification of compatible associate and intercrops/ companion crops, placing trap crops and insectary plants in cropping geometry, making provisions for nutrient credits from biomass mulching, intercrops and green manures, making provisions for nutrient credits from microbial enrichment with microbial/ liquid manure inputs, balance nutrient requirement modelling and identification of inputs and planning for quantity and time of application

**Unit VIII. Crop growth and yield analysis** - Crop growth expressions in plants, growth measurements, important growth indices and forms of growth analysis in field crops. Factors determining yield. Use of growth analysis technique to study variation in yield due to planting season, planting density, fertilizer treatment, other agronomic practices, light, temperature, water, growth substances, varietal differences. Crop response curves. Dynamics of crop growth and modelling.

**Unit IX. Success stories of effective crop management with optimum yields of practicing organic farmers (one in irrigated systems and one in rainfed systems)** – Field visit, documentation of farming system with inputs and outputs, identification of practices important for organic systems, nutrient management practices, pest management protocols, yields and economics. Salient features for success and for further replication in crop production modelling

#### **Practicals**

- 1) Visit to organic farms and study general nutrient management practices, documentation of farming system with inputs and outputs and crop growth analysis using crop growth analysis techniques
- 2) Getting acquainted with different tilling methods and rain water harvesting and water conservation techniques
- 3) Production of liquid manures and dung-urine slurries
- 4) Production of customized composts using FYM/ Compost, mineral nutrients and biofertilizers, assessment of nutrient profiles in enriched composts
- 5) Methods of application for biofertilizers
- 6) Weed management practices, tools and efficacy of different approaches
- 7) Modelling of agronomic practices for a given cropping system with use of available resources

**Teaching methods/activities:** Classroom teaching with AV aids, group discussion, assignment and class discussion

**Learning outcome:** Basic knowledge on organic crop production system

#### **Reading materials**

1. Basics of Organic Farming: by Mamta Bansal. Kindle Edition
2. The Complete book of Organic farming and products of organic compost: NPCS Board of consultants and Engineers.
3. ABC of Organic Farming: AmitavaRakshit and H.B. Singh. Published by Jain Brothers

**Course No.** PGDOF 203 (3+2)

**Course title:** Plant Health Management

**Objectives:** To provide knowledge on plant health management for optimization of crop yield due to organic farming

### **Theory**

**Unit I. Classification of pest organisms** – Classification of pests viz. weeds, bacteria, nematodes, fungi, insects, viruses, vertebrates, etc., identification of pests and beneficial organisms,

**Unit II. General principles of plant health management in organic farming** - Principles of pest management in organic crop production; Pest surveillance and pest population estimation; concept of economic injury levels (EILs) and economic threshold levels (ETLs), principles of Agro Eco-System Analysis (AESAs) based pest management, estimation of Pest : Defender (P:D) ratio, understanding AESA methodology

**Unit III. Biology of pests and population dynamics** - Population dynamics in relation to environment, distribution, identification; Life cycle of key pests of cereals, pulses, vegetables, stored grains, fruit crops and protected cultivation

**Unit IV. Ecological strategies for pest management** - Proper sanitation, appropriate fertilization, necessary pruning, timing of planting to escape infection, crop rotation, avoidance of endemic sites, space management for sunlight and air, plant quarantine, etc.

**Unit V. Cultural and physical control strategies** – Importance and use of traps, coloured plates, pheromones, use of insectary plants, trap crops and planning for diversity plant integration as border crops, hedge rows, intercrops etc.

**Unit VI. Biological control** - Conservation of natural enemies, classical biological control systems, important beneficial insects and their integration and use in different cropping systems

**Unit VII. Biopesticides** – Biopesticides, types, mode of action, production, methods of application and impact assessment on crops and pest load  
**Unit VIII. Botanical pest management** – Using different plants for management of different pests, methods for using such plants and active ingredient extraction methodologies, formulation of usable solutions and methodologies for application. Integrated strategies, development of crop specific integrated management modules, importance and need for chemical alternatives permitted in organic farming, methods for use and application.

**Unit IX. Indigenous practices and their importance in plant protection** – Indigenous practices of avoiding pests, managing pests, important plants being used since ages and innovative botanical and fermentation inputs developed by farmers for pest management

**Unit X. Pest control of produce in storage** – Physical, mechanical and biological approaches, modified environment, management of hygiene and phyto-sanitary approaches, use of organically acceptable fumigants such as carbon dioxide and nitrogen

Use of approved off farm inputs for pest and disease management

### **Practicals**

1. Collection and Identification of major/key pests and plant diseases,
2. Estimation of pest population, nature of damage, assessment of crop losses,
3. Familiarization with important crop pests & diseases and their biological control agents,
4. Demonstration/familiarization with various tools of insect-pest & disease management,
5. Mass rearing techniques of important biological control agents,
6. Preparation of organic/natural formulations for insect-pest & disease management,
7. Evaluation of organic formulations for determining their pesticidal properties and field efficacy.
8. Preparation and validation of traditional formulations.

**Teaching methods/activities:** Classroom teaching with AV aids, group discussion, assignment and class discussion

**Learning outcome:** Plant health will be taken care of for optimization of higher crop yield due to organic farming

**Course No:** PGDOF 204 (3L+2P)

**Course title:** Post Harvest-handling of Organic Produce

**Objectives:** To provide knowledge on post-harvest handling of organic produce for optimization of crop yield due to organic farming

### **Theory**

**Unit I .Pre/Postharvest Factors for Post-harvest Losses of Organic Produce** - Pre and post-harvest factors responsible for causing organic produce losses. Principles and practices responsible for losses of organic agricultural produce. Qualitative, quantitative, nutritional and socioeconomic losses. Loss assessment and estimation techniques and their limitations and methods for reducing postharvest losses

**Unit II. Introduction to Value Chain and Handling of Fresh Organic Products for Processing-** Management of hygiene and phyto-sanitary measures, measures to reduce field heat, cleaning and washing, control of enzymatic and non-enzymatic changes, transportation, sorting, grading, peeling, sampling and size reduction, packaging, labelling; handling methods for fresh fruits, vegetables and flowers.

**Unit III. Organic Food Processing and Preservation** – Fundamental principles for food processing in organic farming, parallel processing, ingredients to be used, acceptable processing techniques, use of preservatives, processing aids, flavouring agents and nutrient supplement in organic food and feed processing, process flow and product recipe, single ingredient and multi ingredient products.

**Unit IV. Food Standards and Residue Analysis/Toxicology** – Fundamental principles of food standards, HACCP system, US and European Export/Import standards for different crops, MRLs for conventional food, sources of contamination, assessment and management of residues and toxins in food, critical control points, heavy metals and pesticide residue analysis, analytical methods and tools. Interpretation of residue analysis reports, analysis protocols and GMO report analysis.

**Unit V. Principles of Packaging** – Characteristics of packaging materials for organic food, packaging requirements for fresh and processed organic food for local and international markets, labelling requirements for fresh and processed organic food

Labeling of organic products (NPOP) – Organic, made with organic, ingredients as organic, use of India Organic logo, certification mark and approval of label

### **Practicals**

- 1) Study of maturity indices for harvest of organic fruits, vegetables, spices and plantation crops.
- 2) Determination of physiological loss in weight and respiration rate in fruits and vegetables.
- 3) Determination of chemical constituents like sugar, starch, pigments, vitamin C, carotenes, acidity during maturation and ripening in fruits/vegetables.
- 4) Protective skin coating with organic wax emulsion to extend the shelf life of fruits and vegetables.
- 5) Study of effect of precooling on shelf-life and quality of fresh fruits, vegetables and flowers.
- 6) Study of packages-bulk and consumer packs for different fruits, vegetables, flowers and spices.



- 7) Study of construction and working of zero energy cool chamber. Study of storage behaviour of different fruits and vegetables in zero energy cool chamber.
- 8) Preparation and preservation of fruit-based beverages and blended products from fruits and vegetables.
- 9) HACCP analysis, residue analysis in organic products. Visit to packaging centres, local markets, cooperative organisations, super markets dealing with marketing of organic perishables.

**Course No:** PGDOF 505 (3L+2P)

**Course title:** Organic Certification, Standards and Regulations

**Objectives:** To provide knowledge Organic Certification, Standards and Regulations Theory

**Unit I. National and international regulations on quality assurance and certification** – National Programme for Organic Production (NPOP), National Standards for Organic Production (NSOP), USDA NOP Programme and Standards, EU Organic standards Regulation, JAS, Codex Alimentarius, Canada Organic Regulation and important differences between NPOP and international standards. FSS Act 2006 for organic food and 2017 Notification, basic requirements, enforcement, standard operating procedures and verification in value chain

**Unit II. ISO systems for quality assurance (ISO 17065, ISO 17011, ISO 19011 etc.) and accreditation processes** – What is ISO, salient features and functions of ISO, ISO systems for auditing, ISO 17065 for auditing and certification agencies, ISO 19011 Inspection protocols, ISO 17011 Accreditation requirements, ISO 17025 Accreditation of quality analysis laboratories. Accreditation procedure and policies under NPOP, Essential requirements and competence for making an organic certification body, Conflict of interest management

**Unit III. Types of certification systems (NPOP and PGS), standards and procedures**

**NPOP** – A third party certification systems, Certification bodies operational policies and functions, National standards for crop production, livestock, Aquaculture, Processing and handling and other miscellaneous systems. Tracenet the online data management tool and traceability management **PGS – Participatory Guarantee Systems** – Evolution of PGS Systems, Guiding principles, PGS Standards, International scenario on PGS development Procedure for organic guarantee under PGS systems, PGS-India programme, operation of PGS-India programme, institutional structure, PGS-India Data management platform, management of traceability.

**Unit IV. On-field management of standard compliance and documentation** – Issues for implementation of standards on field such as conversion period, contamination control, fertility management, living condition requirement for livestock, management of integrity in processing and handling, Fundamental policy for inspections, step-by-step inspection protocols, Development of inspection formats and inspection checklists. Documentation requirements such as organic system plan, field operation register, input and cultural practices record, processing record, purchase and sales records and product flow in processing.

**Unit V. Individual and grower group certification management** – Basic requirements for certification management by (a) Individual producer and (b) Grower/ producer groups. Applicability and types of systems covered

**Unit VI. Inspection (under NPOP) and peer review (under PGS) systems** – Fundamental principles of inspection, checklists and inspection parameters, general policy frame work

**NPOP** – Third party inspection procedure, risk assessment, documentation and record keeping review, physical verification of facilities, fields and stables, production facilities, estimated yield/production assessment, tracking the product flow throughout the process, chain of custody. Review of inspection forms and checklists and certification decisions.

**PGS-India** – Peer review principles, making of peer review committees and peer review checklists, analysis of peer review checklists and certification decisions. Submission of summary sheets to Regional councils and assessment and endorsement of certification decisions.

**Unit VII. Certification of crop, livestock, aquaculture and other systems** – Standards, their implementation in production systems, measures for contamination control, integrity management, sanitation and hygiene, input evaluation procedures, development of process tracking checklists

**Unit VIII. Certification of processing, handling, trading and management of traceability** - Standards, their implementation in production/ processing and handling systems, processing method, use of approved food additives and processing aids, pest control measures, measures for contamination control, integrity management, sanitation and hygiene, packaging and labelling, development of process tracking checklists

**Unit IX. Internal control system management in large farmer group under NPOP** – Large farmer groups, essential requirements, internal control systems, development of ICS operating manual, management of ICS, internal inspections, risk assessment, external inspection including assessment of internal inspections and certification decisions, additional documentation for groups, produce/ output management and sale record management

**Unit X. PGS Group development and PGS certification management** – Essential requirements for local groups, development of local group operating manuals, requirements of group meetings and trainings, decision making by farmers, operational policies for Regional Councils, developing operating manual for Regional councils, assessment of summary sheets and decisions of local groups, procedure for decision endorsement and certification granting

#### **Practical themes**

- 1) Documentation of certification procedures, acquaintance with record keeping, handling, labelling and preparation of farmers IDs for developing ICS.
- 2) Visit to certification bodies, certified farms, certified processing and handling operations
- 3) Development of organic system plan for specific production system
- 4) Development of inspection format and checklists for specific production system
- 5) Development of operating procedures on specific aspects
- 6) Risk assessment on organic farms and possible mitigating measures
- 7) Running of audit trails in certified operations
- 8) Mock inspections of different production systems
- 9) Exercise on inspection report/ peer evaluation checklist review and certification decision
- 10) Exercise on methods of yield assessment

**Teaching methods/activities:** Classroom teaching with AV aids, group discussion, assignment and class discussion

**Learning outcome:** Educating to become a real organic grower

**Course No:** PGDOF 506 (2L+1P)

**Course title:** Marketing

**Objectives:** To provide knowledge on the marketing of organic produce for economic profit of the grower

Theory

**Unit I. What is marketing?**–Face-to-face marketing, Facilitating functions of a market, what's special about agricultural markets? Pricing policy and Role of prices

**Unit II. Basics of Supply and Demand** – Demand, Aggregate demand, Supply and Aggregate supply

**Unit III. Food Marketing Channel**– Understanding the food marketing channel, Scenario Analysis Unit, requirement of certified operators in supply chain, verification of chain of custody, product flow and traceability, role of handler and trader, trade of packed products, domestic trade, export of organic products, requirements of importing country(ies), recognition facilitation through agreements, handling of rejections/detections/irregularities in export consignments

**IV. Market intelligence**– Market research, Production cost assessment, Projecting Revenues, Accounting, and Market Selection, Compliance to National Regulations, Demand for bulk and retail products, analysis of product category,

**Unit V. Organic production and domestic market size, Institutional context and regulations** (such as NPOP, NSOP, APGMC Act, PGS, FSSAI, Jaivik Bharat)

**Unit VI. Organic Food Distribution System** – Domestic market structures, and classification framework, urban organic retail models, Organic specialty stores, markets and health food stores. Direct marketing and Community Supported Agriculture

**Unit VII. Market potential for organic foods** – Consumer preferences and perceptions (organic sensitivity, building awareness on organic foods and consumer needs, shopping Behaviour, factors influencing purchases of new foods), general trade and organized retail,

**Unit VIII. e-Marketing and e-consumer perceptions and Behaviour** – Why organic food, source and perception of organic foods, uses of organic food, resistance to use organic products, source of awareness, organic food-is it a fad?, On-line retail and home delivery services, role of advertising and choice of media, understanding the role of quality in marketing, perception of health benefits and assurance/certification

**Unit IX. Accessibility of organic foods, premiums and willingness to pay premiums, role of retailer**

**Unit X. Efficient supply chains and retail channels, sustainability of supply chain**

**Unit XI. Consumer purchase Behaviour and habits** – Shopping Behaviour, role of influencer in decision making, concern over adulteration, chemicals, loss of nutrients and vitamins during processing and manufacturing and its impact on marketing and sale

**Unit XII. Challenges and success stories** – Success stories in organic marketing, organizational models, their advantages, challenges, limitations and legal context.

**Teaching methods/activities:** Classroom teaching with AV aids, group discussion, assignment and class discussion

**Learning outcome:** Basic knowledge on marketing to get higher prices in organic produces.

**Budget Requirements**

S.No.	Item	Amount (Rs.in lakhs)	Remarks
1.	Renovation of the lecture hall	13	The existing lecture hall is in bad condition and needs to be repaired
2.	Creation of a new lecture hall	40	To accommodate more students/ trainees
3.	Creation of organic	30	To conduct practical and hands-on learning

	farming lab		
4.	Contingency	10/year	For conducting PG diploma-related practical activities, theory/ practical classes, preparation of training manuals/e-resources
5.	Travel	5 /year	For undertaking visits, excursion tours of trainees to different places /facilities

#### V. Post Graduate Diploma in Integrated Farming System

**Location:** IARI main campus/Other centres.

**Lead Division:** Division of Agronomy, ICAR-IARI, New Delhi 110 012

##### Collaboration

- ICAR-Indian Institute of Farming System Research, Modipuram
- National Dairy Research Institute, Karnal
- Indian Veterinary Research Institute, Bareilly
- APEDA
- Division of Entomology, ICAR-IARI, New Delhi.
- Division of Plant Pathology, ICAR-IARI, New Delhi.
- Division of Horticulture, ICAR-IARI, New Delhi.
- Division of Post-Harvest Technology, ICAR-IARI, New Delhi
- Division of Agricultural Economics, ICAR-IARI, New Delhi.

**Background :** Agriculture has long been recognized as the backbone of the economy of the India as it supports almost 18 per cent human and 15% livestock population of the world from 2.3 per cent of geographical area and 4.0 per cent of water of the globe. Indian agriculture has achieved tremendous goal in the food grain production during last 7 decades. The food grain production has increased from 50.82 million tonnes in 1950-51 to all time highest 310 million tonnes in 2021-22, while the increase of net cultivated area was only from 97.32 million ha during 1950-51 to 140 million hectare during 2020-21. But the total food grain production during this period increased nearly six fold. Increase area under irrigation, use of high yielding varieties, industrial inputs (fertilizers, pesticides and others), mechanization, popularization of technologies and government policies played vital role not only in achieving self-sufficiency in food grains, but also country is earning precious foreign exchange from the export of food grains. But the achievements in increasing the production of food grains have been realized with the high cost of natural resources and environment and as a result, Indian agriculture is facing many challenges. Degradation of land, decrease in soil fertility, water level and factor productivity, increased resistance of various pests to many pesticides, appearance of new pests, increase in small and marginal land holdings, decrease in income and employment of farmers, and above all the harmful effects on climate change on agriculture are the important factors, which are posing a serious threat to the sustainable agricultural production in the country. Under such condition, execution of a series of reform measures is need to solve these problems of sustainable agriculture. Among others factors, the development and implementation of integrated farming systems are of special importance for a sound management of farm resources to enhance farm productivity and reduce environmental degradation, improve quality of life of resource poor farmers and maintain sustainability. Integrated farming

system is a strategy of harmonization by joint management of land, water, vegetation, livestock and natural resources. This can lead to sustainable productivity and also ensure better livelihood securities for the people.

Farming system is quite effective to provide the opportunities for generating employment and income. It can be a very good source of income for the unemployed people by producing high value crops and producing livestock, fish, duck, poultry, honey, mushroom, very-compost and biogas. To prepare the youth to meet the need of organic products/services sector (accreditation and certification) and to develop and initiate entrepreneurship ICAR-IARI, New Delhi PG Diploma in the field of 'Organic Farming' program offers.

#### **Course structure**

Course No.	Name of the course	Credits	Offered by
<b>Semester –I</b>			
PGDFS 301	Concept and fundamentals of Farming Systems	3+0	Agronomy
PGDFS 302	IFS components and suitable enterprises for efficient farming system model	3+2	Agronomy
PGDFS303	Different farming system model for different agro-climatic zones of the country	3+2	Agronomy / Entomology / Pathology
PGDFS304	Diversification through different horticultural crops including fruit trees, vegetables, floriculture, protected agriculture and mushroom cultivation a.	3+2	Horticulture/vegetable science/Agronomy/CPCT
<b>Semester –II</b>			
PGDFS305	Production technologies of dairy, fishery, poultry, duckery, bee keeping, vermi-composting and biogas	3+2	Agronomy / NDRI/IVRI/ Fish Centre/Plant Pathology/Entomology division
PGDFS 306	Post-harvest technologies and Marketing	3+2	PHET/Economics /Agronomy
PGDFS 307	Project Report		Agronomy

#### **Syllabus**

**Course No:PGDFS 301 Credit hour: (3+0)**

**Course title: Concept and Fundamentals of Farming systems**

**Objective:** To impart knowledge on the basic concept and fundamentals of farming systems

#### **Theory**

History and development of farming systems models in the world and India. Challenges of Indian agriculture, philosophy and Need of farming system approach, merits and limitations of farming systems, scenario of farming system approach in India, Definitions of farming systems, differences between conventional farming and integrated farming system approach.

**Course No. PGDFS 302 credit hour (3+2)**

**Course title: components and enterprises of farming system**

**Objective:** To understand about different components and enterprises of farming systems

**Theory-** Definitions of components and enterprises, Maintenance of different components of farming systems, identification of different enterprises and their importance in farming systems, types of farming systems such as farming systems for rainfed and irrigated ecology, farming system for hilly regions, allocation of area to different enterprises, assessment of need of food grains and other commodities for food, nutritional and economic security, dynamics of farming system models, importance of organic farming in farming systems, scope and limitations of organic farming system models.

**Practical**

- 8) Visit to farming systems models at farm and off farm and documentation of different components and enterprises of farming system models with area, inputs and outputs and growth analysis using growth analysis techniques.
- 9) Getting acquainted with different cultivation and management practices of different components and enterprises of farming systems.
- 10) Visit to vermi-composting and FYM management units, bio gas and mushroom Production unit and understand the process of production and management.
- 11) Visit to the microbiology division to understand the importance and uses of biofertilizers and estimation techniques of soil microflora.
- 12) Calculations of different inputs like fertilizers, pesticides, water requirement and other related inputs.
- 13) Weed management practices, tools and efficacy of different approaches
- 14) Study of agronomic practices for a given cropping system, agri-horti systems, intercropping and crop rotation with the use of available resources

**Course No. PGDFS 303 credit hour (3+2)**

**Course title: Development of different farming systems models for different agro-climatic conditions.**

**Objective:** To provide knowledge of development of different farming system models for different agro-climatic conditions of the country.

**Theory:** Study and refinement of existing farming system models, merit and demerits of existing farming system models, Selection of suitable crops for improved farming system models, Efficient cropping systems and their evaluation, assessment of energy, water and nutrient requirements for different enterprises, Recycling of farm produce, mitigation of climate change impact, analysis of soil fertility build-up and resource use efficiency, conservation of natural resources and improvement in environmental quality, Development of suitable farming system models for different production systems and ecology,

**Practical**

- 10) Understanding the basic fundamentals of developing different farming systems models
- 11) Assessment of allocation of the area for different enterprises of farming systems
- 12) Determination of cropping intensity and other indices
- 13) Assessment of crop residue and nutrient addition
- 14) Analysis of organic carbon and available nutrients in soil and uptake of nutrients
- 15) Analysis of energy and water budgeting
- 16) Soil moisture, soil temperature and microbial population assessment of the soil

**Course No. PGDFS 304 credit hour (3+2)**

**Course title: Diversification through different horticultural crops including fruit trees, vegetables and flower cultivation.**

**Objective: To impart the knowledge about diversification through fruit, vegetable and flower crops**

**Theory–** Importance of crop diversification and intensification, feasibility of diversification for resource conservation, higher production, and income, and employment generation,



Advocacy diversified cropping systems and food, nutritional and economic security, Adoptability and suitability of different enterprises, improved cultivation practices of different arable crops, vegetable crops, horticultural crops and flower crops.

**Practical**

1. Methods of adjusting diversified fruit, vegetable and flower crops in different cropping systems with arable crops.
2. Weed management practices, tools and efficacy of different approaches for managing weeds of arable crops, fruit crops, vegetables and flower crops.
3. Calculation of various indices like cropping intensity, yield equivalent, land equivalent ratio, harvest index,
4. Assessment of nutritional quality of fruits, vegetables and other crop produces
5. Study the effect of main crops on component crops on water, nutrient, soil fertility, carbon sequestration.
6. Suitability of different enterprises for efficient farming system models.
7. Assessment of the efficient farming system models on production, income and employment generation.

**Course No. PGDFS 305 credit hour (3+2)**

**Course title:** Production technologies of dairy, fishery, poultry, duckery, bee keeping, mushroom cultivation, vermi-composting and biogas

**Objective: To provide the knowledge about the improved production technologies of dairy, fishery, poultry, duckery, bee keeping, mushroom cultivation, vermi-composting and biogas.**

**Theory:** Importance of allied enterprises in farming systems, improved production technologies of dairy, fishery, poultry, duckery, bee keeping, vermi-composting and biogas and mushroom cultivation, Assessment of crop nutrient requirements, Organic/integrated Nutrient management in Farming system, Effect of organic nutrient management on the water and nutrient use efficiency, soil fertility and crop production, Integration of suitable enterprises for recycling of resources, Economical analysis of different enterprises.

**Practical**

9. Familiarization with important breed/species of cattle, poultry, duck, fish and honey bees
10. Mass rearing techniques of cattle, poultry, duck, fish and honey bees
11. Preparation of concentrate/feed for cattle, poultry, duck, fish and honey bees
12. Knowledge of insect/disease management in cattle, poultry, duck and fish
13. Estimation of daily water/concentrate/feed requirement of cattle, poultry, duck and fish.
14. Demonstration/familiarization with different techniques of milking, egg collection and fish harvesting.
15. Demonstration on preparation of vermin-composting, enriched FYM, and efficient use of biogas plant slurry.
16. Demonstration on preparation of compost, pasteurization of compost, spawning, casing, sowing of spawn, and growing techniques of spawn, harvesting, washing, packing of mushroom.
17. Demonstration on efficient management techniques of milk, egg, biogas plant, honey bee's box, honey, vermin-compost and harvested fish.

**Course No. PGDFS 306 credit hour (3+2)**

**Course title:** Post-harvest technologies and Marketing

**Objective: To impart the knowledge of post-harvest technologies and marketing process**

**Theory:** Role of post-harvest technologies in vegetable, fruit production and mushroom cultivation, Causes of post-harvest losses, Stage of harvesting and different methods for safe harvesting and grading, Different packing methods of fruits, vegetables and mushroom,

principals and methods of safe storage, transportation and marketing standards, fundamental of value addition, management and value addition of different flower items like cut flowers, garlands, bouquet, flower basket etc. preservation and methods of food processing like jam, pickles, jellies, candies, dried and dehydrated fruit and vegetables, food safety standards and marketing of different products, Demand, Aggregate demand and Supply, understanding the food marketing channel, **e-Marketing and e-consumer perceptions and Behaviour**, trade of packed products, domestic trade, export of different products, handling of rejections/detections/irregularities in export consignments.

### **Practical**

1. Different method of grading of different produces
2. Demonstration of techniques to prolonged storage life of different produces.
3. Demonstration of types of packing and different packing methods to keep produce in good condition till marketing
4. Identification and operational techniques of different equipment and machinery used in preservation of different farming system produces
5. Demonstration on drying and dehydration of various farming system produces.
6. Preparation of ketchup, sauce, Jam, Pickles, juice, jelly, candy and other products from the milk, honey and mushroom
7. Determination of physiological loss in weight and respiration rate in fruits, vegetables, mushroom.
8. Determination of chemical constituents like sugar, starch, pigments, vitamin C, carotenes, acidity during maturation and ripening in fruits/vegetables.
9. Study of construction and working of zero energy cool chamber. Study of storage behaviour of different fruits and vegetables in zero energy cool chamber.
10. Demonstration of types of packing and different packing methods to keep produce in good condition till marketing.

**Teaching methods/activities:** Classroom teaching with AV aids, group discussion, assignment and class discussion

**Learning outcome:** Knowledge about the different aspects of farming systems including concept and fundamentals, different components and enterprises, different farming system models, production practices of different enterprises, post-harvest technologies and marketing and economics during the period.

### **Suggested Readings:**

1. Ananthakrishnan TN. (Ed.) 1992. Emerging Trends in Biological Control of Phytophagous Insects. Oxford & IBH.
2. Balasubramanian P & Palaniappan SP 2006. Principles and Practices of Agronomy. Agrobios.
3. Joshi M & Parbhakarasetty TK. 2005. Sustainability through Organic Farming. Kalyani.
4. Lampin N. 1990. Organic Farming. Farming Press Books.
5. Palaniappan SP & Anandurai K. 1999. Organic Farming - Theory and Practice. Scientific Publ.
6. Panda SC. 2004. Cropping systems and Farming Systems. Agribios.
7. Reddy MV. (Ed.). 1995. Soil Organisms and Litter Decomposition in the Tropics. Oxford & IBH.
8. Sharma AK. 2001. A Hand Book of Organic Farming. Agrobios.
9. Singh SP. (Ed) 1994. Technology for Production of Natural Enemies. PDBC, Bangalore.
10. Trivedi RN. 1993. A Text Book of Environmental Sciences. Anmol Publ.

11. Veeresh GK, Shivashankar K & Suiglachar MA. 1997. Organic Farming and Sustainable Agriculture. Association for Promotion of Organic Farming, Bangalore.
12. Venkata Rao BV. 1995. Small Farmer Focused Integrated Rural Development: Socio-economic Environment and Legal Perspective. Publ. 3. Parisaraprajna Parishtana, Bangalore.

#### VI. Post Graduate Diploma in Data Science and Analytics

**Location:** IARI main campus/Other centers.

**Name of the lead division:** ICAR-IASRI

**Collaboration:** There may be guest teachers arranged from private sector.

**Background:** Under National Education Policy – 2020 (NEP 2020), it is intended to provide opportunity to large number of students to undertake higher education of various types namely a certificate course, a diploma, a degree or a post graduate or a Ph.D. It has been proposed in NEP 2020 to revamp the academic program structure with an innovative system of multiple entry and exits with options to award certificate, diploma, UG degree general, or degree research, and one or two years of Master's degree. The residential requirements of UG, and PG programmes will be relaxed so that the students wishing to exit/enter may be able to do so irrespective of any time limit. Most importantly, NEP-2020 has indicated that "THE DESIGN OF AGRICULTURAL EDUCATION WILL HAVE TO BE STRENGTHENED TOWARDS DEVELOPING PROFESSIONALS" with the ability to understand and use local knowledge, traditional knowledge and emerging technologies, while being cognizant of critical issues of declining profitability and/or productivity but enhanced economic aspirations of farmers, climate change, food sufficiency etc.

Data Science is a buzzword in the tech industry and everyone seems to be talking about it. Data science is an integrated combination of knowledge of various tools, software, packages, algorithms, and statistics that can be leveraged to unearth various patterns, trends and insights which could be of great use for businesses. Data Science is revolutionizing the way businesses use their data to find actionable insights that could help a great deal in making their operations efficient and more profitable.

The field is relevant because of the exponential growth of data in recent years. As a society, we are producing large volumes of data each day. This data is the new fuel that drives businesses and industries today. Businesses and industries need professionals who are well equipped with the knowledge of handling, managing, analyzing and understanding trends in data, thus making it one of the most lucrative jobs in today's time.

In view of the above, formulation of PG Diploma, and Certificate Course in Data Science and Analytics was prepared. These courses are based on emerging technologies in the field of Statistics, Data Analytics and Data Science and are in huge demand as one of the essential skill for data scientists working in various private and public enterprises. These courses will enable candidates to be industry-ready.

Course No.	Name of the course	Credits	Offered by
Semester -I			
PGDSA 1	Basic Concepts and Exploratory Data Analysis	1L + 1P	ICAR-IASRI
PGDSA 2	Software	1L + 1P	ICAR-IASRI
PGDSA 3	Database Handling and	1L + 1P	ICAR-IASRI

	Management		
PGDSA 4	Estimation and Hypothesis Testing	2L + 1P	ICAR-IASRI
PGDSA 5	Optimization Techniques	2L + 1P	ICAR-IASRI
Semester -II			
PGDSA 6	Statistical Predictive Modelling	2L + 1P	ICAR-IASRI
PGDSA 7	Forecasting, Segmentation and Multivariate analysis	2L + 2P	ICAR-IASRI
PGDSA 8	Machine Learning, Neural Network and Deep Learning	2L + 2P	ICAR-IASRI
PGDSA 9	Case Studies	1P	ICAR-IASRI

## Syllabus

### PGDSA 1 Basic Concepts and Exploratory Data Analysis

Introduction to matrix algebra

- Basic Concepts of Calculus
- Concepts of statistical theory and machine learning analytics
- Introduction to random experiments and random variable
- Descriptive Statistics and Exploratory Data Analysis
- Graphs & Charts for data visualization
- Sampling theory and Methods
- Probability and Distributions

### PGDSA 2 Software

- R, RStudio and Python
- Data Management in R and Python
- Statistical computations in R and Python
- Data presentation and visualization techniques

### PGDSA 3 Database Handling and Management

- Database and Big Data
- MySQL
- SQL and NoSQL queries
- Handling queries in R/Python

### PGDSA 4 Estimation and Hypothesis

- Formulating hypotheses in real-life scenarios
- Estimation and hypothesis Testing
- Estimation of parameters in different circumstances and their usages in analytics
- Test for means, variances, proportions, odds ratios, and relative risks
- Correlation and Regression, Scatter plot, Mean Plot, and Scatter plot smoothing

### PGDSA 5 Optimization Techniques

- Gradient and search-based optimization
- Linear, quadratic, nonlinear, and mixed integer programming

- Multi-objective and multi-criteria decision-making

### **PGDSA 6 Statistical Predictive Modelling**

Multiple linear regressions, Stepwise and Best Subset Regression, Model selection criteria (AIC, BIC, etc.), Regularized Linear Modeling and Controlled Variable Selection

- Ridge, Poisson Regression and Logistic regression
- Concepts of cross-validation – usage of validation set, k-fold cross-validation, LOOCV, and bootstrapping
- Classification and Assessment of classification models using performance metrics such as precision, recall, f-measure, ROC, AUC etc.
- Classification and Regression Tree including concepts of bagging and boosting, random forests, fitting, and validating tree-based models

### **PGDSA 7 Forecasting, Segmentation and Multivariate analysis**

Forecasting Models, exponential smoothing (Holt and winters model) and ARIMA

- Dimensionality Reduction, PCA and Factor Analysis
- Cluster analysis, hierarchical and non-hierarchical clustering techniques
- Linear and Quadratic Discriminant Analysis
- Support Vector Machines

### **PGDSA 8 Machine Learning, Neural Network and Deep Learning**

Bayesian Methodology – Naïve Bayes classifier; Monte Carlo Markov Chain (MCMC), Bayesian regression trees

- Probabilistic Learning: Classification Using Naive Bayes
- Artificial Neural Networks, Deep Learning and Reinforcement Learning
- Lazy Learning: Classification Using Nearest Neighbors
- Association rule mining (Market Basket) analyses
- Image Analysis

#### **Case Studies**

VII. Post Graduate Diploma in Abiotic Stress Management in Field and Horticultural Crops

**Location:** ICAR-NIASM, Baramati.

**Name of the lead division:** School of Water Stress Management (SWSM)

#### **Collaboration**

- School of Soil Stress Management
- School of Social Science and Policy Support
- School of Atmospheric Stress Management
- KVK, ADT, Baramati
- Agrotoursim, Maharashtra
- Pani Foundation
- Sugarcane Factory
- Grape Growers Association
- Pomegranate Association

#### **Vasant Dada Sugarcane Institute**

**Background :** The manifestation of abiotic stress in terms of yield loss in field and horticultural crops will accelerate with occurrence of extreme events predicted due to climate change. Hence, a great deal of efforts has been diverted now to translate basic information into practical solutions for management of abiotic stresses. With limited

awareness about abiotic stresses at present, the management of abiotic stresses such as drought, salinity and high temperature in crop plants is not as much systematic and scientific as expected to make the agriculture climate smart. Hence, a systematic training in this aspect is essential. At present this aspect is not covered exclusively but as a part of the existing course curriculum. Taking into the gravity of problem and need for knowledge and skills, the present diploma course is being proposed for management of abiotic stresses in field and horticultural crops.

#### Course structure

Course No.	Name of the course	Credits	Offered by
Semester -I			
SWSM 101	Introduction to Abiotic stress in agriculture	1+0	SWSM
SWSM 102	Water stress management in field and horticultural crops	2+1	SWSM
SWSM 103	Temperature stress management in field and horticultural crops	2+1	SWSM
Semester -II			
SWSM 104	Phenomics and precision agriculture for crops responses to inputs	1+2	SWSM
SWSM 105	Post-Harvest opportunities to reduce water and temperature stress impact	1+1	SWSM
SWSM 106	Data Analysis Documentation and Effective Presentation	0+1	SWSM
SWSM 107	Assignment	0+1	SWSM
SWSM 110	Industrial Training	0+1	SWSM

## 6. Evaluation pattern and marks

able. 4 Evaluation pattern and marks

S.NO.	Type of exam	
1.	Mid-term theory	20% to 50%
2.	Final theory	20%-50%
3.	Final Practical	10%-30%



4.	Assignment	5-50%
5.	Quiz	5-30%

Minimum attendance (%) for appearing in exam: 85%



IARI  
New Delhi

## MEMORANDUM OF AGREEMENT

Between

**State Agricultural University**

("SAU")

And

**ICAR- Indian Agricultural Research Institute (herein after, IARI)**

**Pusa Campus, New Delhi – 110 012**

("ICAR-IARI, New Delhi")

### ***for facilitating Students' Training/Postgraduate Research***

This Memorandum of Understanding (MoU) is made on this .....day of the month of-----in the year -----by and between the **State Agricultural University** having its headquarters at ..., [herein after called as "SAU"/First party] and the **ICAR-Indian Agricultural Research Institute (IARI), Pusa Campus, New Delhi** herein after called "IARI"/Second party, a constituent Research Institution of the Indian Council of Agricultural Research, Krishi Bhavan, New Delhi-110001.

The parties, having discussed fields of common research interests and allied activities between the two institutions have decided to enter into long term collaboration for promotion of agricultural students' training and quality postgraduate research in cutting edge areas.

WHEREAS, it has been considered expedient to agree in writing to participate jointly in the projects requiring expertise and logistics from both the parties.

This as an opportunity for the students to benefit from the knowledge and skills of qualified teachers and researchers, whose academic studies are relevant to its fields of work and practical experience required to excel in research and development. The SAU and IARI agree to:

#### **Article 1: Scope**

- 1.1** The First party will recognize the Second party as an Institute for conducting part of research related to the thesis requirement of the research students for **Ph.D.** The First party will recognize Scientists of the IARI as recommended by its Director in accordance with the University rules and regulations for guiding students working for the said degree.

("SAU")

And  
**ICAR- Indian Agricultural Research Institute (herein after, IARI)**  
**Pusa Campus, New Delhi – 110 012**  
(“ICAR-IARI, New Delhi”)  
***for facilitating***  
***Students’ Training/Postgraduate Research***

This Memorandum of Understanding (MoU) is made on this .....day of the month of-----in the year -----by and between the **State Agricultural University** having its headquarters at ..., [herein after called as “SAU”/First party] and the **ICAR-Indian Agricultural Research Institute (IARI), Pusa Campus, New Delhi** herein after called “IARI”/Second party, a constituent Research Institution of the Indian Council of Agricultural Research, Krishi Bhavan, New Delhi-110001.

The parties, having discussed fields of common research interests and allied activities between the two institutions have decided to enter into long term collaboration for promotion of agricultural students’ training and quality postgraduate research in cutting edge areas.

WHEREAS, it has been considered expedient to agree in writing to participate jointly in the projects requiring expertise and logistics from both the parties.

This as an opportunity for the students to benefit from the knowledge and skills of qualified teachers and researchers, whose academic studies are relevant to its fields of work and practical experience required to excel in research and development. The SAU and IARI agree to:

**Article 1: Scope**

- 1.1** The First party will recognize the Second party as an Institute for conducting part of research related to the thesis requirement of the research students for **Ph.D.** The First party will recognize Scientists of the IARI as recommended by its Director in accordance with the University rules and regulations for guiding students working for the said degree.
- 1.2** Operational details of research effort and collaboration will be made in common research programmes and/or projects restricted to specific mandated domain of the IARI.
- 1.3** Research instrumentation facility and library facilities available with the First party and the Second party will be made available to the faculty and research scholars. However, the costs of operational /services specific consumables will be borne by the user.
- 1.4** There shall be an exchange of students for academic, research and training purposes. Accommodation in the Hostel shall be arranged, wherever possible, as per extant rates. The duration of exchange visits will be determined by mutual consent between both the parties.

**Article 2: Management**

- 2.1** Joint Working group will be responsible to work out operational details of co-operation between the two organizations and ensure proper and effective implementation of this MoU.

- 2.2** Second party shall decide the location and sharing quantum of research work with the consultation of PME Cell of the second party.
- 2.3** The number of student(s) at any particular time will be subjected to the availability of research facilities and scientists' time to facilitate thesis research at the both party.
- 2.4** The student's Advisory Committee along with collaborating scientist/ bench space provider will monitor the progress.

### **Article 3: Exchange of Information**

- 3.1** The term "information" relates to exchange of ideas, scientific or technical data, results and/or methods of investigation, and other information intended to be provided, exchanged, or arising under the approved research programme of student/trainee from the either of the party.
- 3.2** Each party in student research programme shall be given the equal rights to use, disclose, publish or disseminate such information in mutually agreed terms.

### **Article 4: General Provisions**

- 4.1** It is understood that the First party and the Second party subscribe to the principle of equal opportunity and do not discriminate on the basis of race, sex, age, caste or religion. Both the Institutions shall abide by these principles in the administration of this agreement and neither party shall impose criteria for exchange of scholars or students, which violate principles of non-discrimination.
- 4.2** Both parties understand that all financial agreements will have to be negotiated separately and will depend on the availability of funds.
- 4.3** Both parties acknowledge that exchange of students from one party to the other shall be subject to the availability of funds and shall comply with the regulations and policies of the First party and the Second party.
- 4.4** Any research publications arising will be jointly published.
- 4.5** All questions related to this MoU arising during its term will be settled by the parties by mutual agreement. Disagreements at the operating level shall be forwarded to respective higher officials for appropriate resolution failing which an arbitrator of mutual acceptance may be identified for the settlement of dispute, if any.
- 4.6** All questions not foreseen related to this MoU will be handled by the parties by mutual agreement.
- 4.7** Nothing in this MoU is intended to affect other cooperation or collaborations between the parties.

### **Article 5: Intellectual Property Rights**

- 5.1** The First party will be expected to ensure protection of the Intellectual Property Rights generated or likely to be generated during the student's research work. The SAU, ...as the first applicant and the Second party shall be the joint applicants for IPRs and the students and involved scientific staff shall be included as the inventor/breeder/author. The 'ICAR Guidelines for Intellectual Property Management and Technology Transfer/Commercialization' as amended from time to time shall be the reference for exploitation of the generated intellectual property, whose management and benefits sharing shall be mutually decided in each case.

### **Article 6: Entry into effect, modification and termination**

- 6.1** This MoU shall become effective on the date it is signed by the parties and shall be valid for three years and extendable up to five years. Both parties shall review the

status of the MoU at the end of three years to determine any modification, if necessary. This MoU may be amended by mutual written agreement and may be terminated at any time by either party upon written notification signed by the competent authority of the party initiating termination. Such notification must be given to the other party at least six months in advance from the effective date of termination.

**6.2** No amendment or modification of the MoU shall be valid unless the same is made in writing by both the parties or their authorized representatives and specifically stating the same to be amendment of the MoU. The modifications/changes shall become part of the MoU and shall be effective from the date on which they are made/executed, unless otherwise agreed to.

This MoU has been executed in two originals, one of which has been retained by the First party and the other by the Second party.

IN WITNESS WHEREOF, the parties have executed this MoU and represent that they approve, accept and agree to terms contained herein.

Signed: \_\_\_\_\_

Signed: \_\_\_\_\_

For and on behalf of the ICAR-Indian  
Agricultural Research Institute, New Delhi

Name:

Title: Director

Address: ICAR-Indian Agricultural Research  
Institute New Delhi 110 012

E-mail:

Telephone:

Date: \_\_\_\_\_

Witness

Name:

Title :

Address: ICAR-Indian Agricultural Research  
Institute New Delhi 110 012

E-mail:

Telephone:

**MoU OF IRRI WITH INDIAN AGRICULTURAL RESEARCH INSTITUTE (IARI), NEW DELHI**  
**WITHIN THE PURVIEW OF EXISTING MEMORANDUM OF AGREEMENT BETWEEN INDIAN COUNCIL OF AGRICULTURAL SCIENCES (ICAR) AND INTERNATIONAL RICE RESEARCH INSTITUTE (IRRI) OF 1974**

The IARI originally established in 1905 at Pusa (Bihar), was relocated to New Delhi in 1936, is an autonomous academic institution of repute engaged in imparting education, at PG level and conducts research in different branches of Agricultural Sciences. It was accorded a “Deemed-to-be University status in 1958 by UGC. The PG students are required to undertake need based and applied / basic research for their thesis work, which should be useful to solve the regional and/or national problems related with various disciplines of Agricultural Sciences. IARI is the seat of green revolution. The basmati varieties bred by IARI account for 98% area under basmati crop of the country. Similarly, more than 60 % area under wheat and more than 50 per cent area under mustard is covered by IARI bred varieties. The IARI bred basmati variety accounts for export earning to the tune of Rs 3500 crores.

As is known, way back in 1974 Director Generals M.S. Swaminathan and N.C. Brady of ICAR and IRRI, respectively, signed the Memorandum of Understanding (MOU). Under this overall MOA ICAR and IRRI have developed and have been implementing India's extensive partnership with IRRI, involving about 250 institutions all over the country and the collaboration between India and IRRI is being further expanded and strengthened from time to time.

In the process, IRRI has been working with a range of NARES institutions in India under the MoA including with:

- ICAR institutes (that includes IARI, NRRI, IIRR, CSSRI, ICAR-RCER, NIASM, and CIWA etc.)
- State Agricultural Universities
- Department of Agriculture, Cooperation and Farmers Welfare
- State Departments of Agriculture
- Department of Biotechnology
- NGO and Private Sector

The above IRRI collaboration in particular with ICAR-IARI over the period, has contributed immensely to improving rice production and productivity in India. Having delivered this, both the institutions now aim at accelerating research in frontier areas to develop resource use efficient integrated crop management technologies for sustainable agricultural production systems; serve as the center for academic excellence in the areas of post-graduate, doctorate, and human resources development in agricultural science; and provide national leadership in agricultural research, education, extension and technology assessment and transfer by developing new concepts and approaches and serving as a national reference point for quality and standards.

IRRI is now duly recognized as such by international agreement and also by the Government of India through a Memorandum of Agreement between IRRI and the Department of Agriculture & Farmers Welfare (then DAC&FW), Ministry of Agriculture, Cooperation & Farmers Welfare (MOA&FW), dated August 2, 2017 and through



Gazette notification F. No. D-II/451/16(7)/2017 dated October 4, 2017 in the Gazette of India to establish the IRRI South Asia Regional Centre (ISARC), Varanasi and other offices and activities in India. This is in addition to the above-mentioned existing agreement (MoA) between IRRI and the Department of Agricultural Research and Education (DARE), Indian Council of Agricultural Research (ICAR).

1. It is therefore imperative that recognizing their distinct and respective strengths and interests, seek to continue to collaborate in the following more expansive areas through the instrumentality of this intended Memorandum of Understanding(MoU):

- Promote academic collaboration for agricultural research and education.
- Jointly explore the prospects of mutually rewarding educational collaboration in the field of agriculture education, training and research.
- Jointly evolve collaborative research projects and funding in the areas of common interest.
- Exchange of relevant academic and scientific information, literature and methodology.
- Exchange of scientists and students for training and research.
- Facilitate access to research laboratories and field facilities for joint research programs.
- Use of scientific equipment as available and required in programs of shared interests as may be mutually agreed upon.
- Development and implementation of joint research and/or development projects subject to IPR arrangements under the ICAR MoA of 1974.
- Capacity development of different stakeholders.

### **Joint Working Group**

2. A Joint Working Group will be set up with representatives from both Parties to meet once in two years, alternately in New Delhi and Varanasi, for implementation of the execution of this MoU and suggest necessary measures for its development to name a few among others include:

- IRRI-IARI will seek to establish mechanisms that can be rapidly implemented to address these complex issues.
- IRRI-IARI will designate appropriate persons to manage and coordinate activities under this instrument.
- IRRI-IARI will enter into Agreements detailing the terms and conditions governing the above-mentioned areas of collaboration and dealing with the Intellectual Property Rights of the Parties.
- This Letter of Intent shall come into force from the date of its signature and remain in force throughout the period of ICAR-IRRI signed MoA of 1974 is in operation.
- With this Letter of Intent, IRRI-IARI recognizes that collaboration between them can contribute significantly towards increasing global food security, improving nutritional outcomes for rice consumers and more sustainable agriculture in India, South Asia and Sub-Saharan Africa as we.
- For implementation, the ICAR-IARI and IRRI may name one or more members of their staff, as needed, to work out the practical details of cooperation between the

two organizations and in general, to ensure proper and effective implementation of this MoU.

### **Financial Arrangements**

3. In the case of the exchange of scientists and students for study visits on the basis of reciprocity, the sending Party will meet the to- and fro- travel costs, whereas the receiving side will meet the costs of boarding, lodging and internal transport. Both the Parties shall mutually decide the financials for such exchange visits of scientists and students.

In case such exchanges of scientists are part of an R&D project, the entire cost may be met by the project subject to the availability of funds and as mutually decided upon by both the Parties.

For Training and consultancy of Scientists, financial arrangements will be decided by mutual consent of both the Parties.

### **Publication & Intellectual Property Rights**

5. Issues related to this aspect are being implemented as per various agreements under the ICAR-IRRI MoA of 1974 and successive Work Plans from time to time will be followed.

Now, therefore, the ICAR-IARI and IRRI are inspired by their common objectives to promote and accelerate the progress of international academic and research linkages, mutual support access to research, education and training in various disciplines of agricultural research as enumerated above, have decided to enter into this MoU with the intention to strengthen the collaboration forward.

IN CONFIRMATION OF ABOVE, the two Parties hereto have signed this MoU on the dates indicated below:

**FOR AND ON BEHALF OF  
ICAR-INDIAN AGRICULTURAL  
RESEARCH INSTITUTE**

**FOR AND ON BEHALF OF  
INTERNATIONAL RICE RESEARCH  
INSTITUTE**

Dr. A.K. Singh  
Designation: Director & Vice Chancellor

Date:

Date:

Place:

Place:

## Appendix-V

### **Recommendation of the Committee for Revision in guidelines of (i) Best Women Scientist Award, (ii) NABARD Researcher of the Year Award, (iii) Dr. H.K. Jain Memorial Young Scientist Award, (iv) Dr. A.B. Joshi Memorial Award and (v) Guidelines for the institution of Divisional level Gold Medal Awards to Masters /PhD students**

#### **Committee:**

1. Dr. Rashmi Aggarwal, Dean and JD (Edn.): Chairperson
- Members:
2. Dr. C. Viswanathan, JD (Res.)
3. Dr. Sanjay Kumar Singh, Head, Fruits and Horticulture Technology
4. Dr. Prameela Krishnan, Head and Professor, Agricultural Physics
5. Dr. Pramod Kumar, PS and Incharge, PME
6. Dr. Anil Dahuja, Professor, Biochemistry
7. Dr. K.M. Manjaiah, Associate Dean (Member-Secretary)

**The Committee met on 16.06.2022 at 11.00 AM in the Board Room of Directorate and recommended the followings:**

#### **Allocation of marks (Best Women Scientist Award)**

<b>Sl. No.</b>	<b>Existing Criteria/Revised Criteria</b>	<b>Marks</b>
1	<b>Research achievements:</b> (i) Products/ variety/Technology (ii) New Concept / Methodology/ Process/ Model developed/ Novel Omics data (iii) Patents granted (iv) Copyright/software/database/app	25
2	Student Guidance and Teaching achievements	15
3	Publications	25
5	External funded projects handled as PI	10
6	Leadership role in institution building	15
7	Awards/Recognitions	10
	<b>Total Marks</b>	<b>100</b>

#### **Research achievements (Maximum 25 Marks):**

- (i) Developer of a commercialized product or technology/Gazette Notified plant variety (CVRC/SVRC) (5 marks each); Genetic stock registered (1 Mark each); new record of pathogen/pest/microbe/bio-agent along with accession No. (2 Marks each).
- (ii) New Concept / Methodology/ Process/ Model developed/Novel omics data. All claims in this category should be supported by research publications in peer reviewed journals

with citations  $\geq 10$  (excluding self-citations) (3 Marks each)

(iii) Copyright/software/database/app developed (3 marks each)

(iv) Patents granted with details of Patent No. (5 marks for each patent).

Developer shall be awarded 100% marks; Co-developer shall be awarded 75% marks.

Documentary evidence should be enclosed for all claims.

### **Teaching achievements (Maximum 15 Marks):**

(i) Courses taught and number of classes taken in each course (Maximum 5 marks): *Full marks, if taken at least 30 classes in a year, for a minimum of 5 years.*

(ii) M.Sc. /M.Tech/ Ph.D. Students (Full time) Guided as Chairperson (Maximum 4 marks): *Give thesis titles. 1 mark for each M.Sc./M.Tech. and 2.0 marks for each Ph.D. student guided as Chairperson.*

(iii) Development of e-course/training module (one mark each; Maximum 2 marks)

(iv) Success of students guided in academics (in terms of their recognition for Awards) (Maximum 2 marks): *Institute level Medals, ICAR/ Institutional Awards (1 mark each).*

(v) Organization of Training /Summer or Winter school/ CAFT for a duration of minimum 10 days as Course Coordinator/Course Director (2.0 marks each) (Max Marks 2).

### **Publications (Maximum 25 marks)**

(i) For 30 most important publications in the relevant discipline of the applicant: Cumulative NAAS Score  $\times 0.033$  (Maximum 20 Marks).

(ii) First / Corresponding author will get full marks in a publication and rest of the authors will be awarded 75% marks.

(iii) Other publications (Maximum 5 marks): Authored Book with ISBN No. (min. 200 pages): 2 marks each; Edited book with ISBN No. (min. 200 pages): 1 mark each; Policy paper: 1 mark each; 0.5 mark each for Scientific Review paper/Book chapter/technical bulletin; Popular article/Policy Brief: 0.25 mark each.

### **Externally funded projects including consultancy/contract research handled as PI (Maximum 10 marks)**

(i) Projects costing <10 Lakhs: 1 Marks each

(ii) Projects costing 10-30 Lakhs: 2 Marks each

(iii) Projects costing >30 Lakhs: 3 Marks each

(iv) Projects costing >100 Lakhs: 5 Marks each

Full Marks to PI and 50% marks to Co-PI

### **Leadership role in institution building (Maximum 15 marks)**

(i) Chairperson/member of International/National Level Committees (Chairperson: 2 marks each; member: 1 mark each)

(ii) Member BoM/IMC, RAC, QRT, or equivalent (One mark each)

(iii) Administrative positions (Head of the institution/university: 3 marks for each completed year; Dean/Joint Director/Director (Research): 2 marks for each completed year; Head of the Division: One mark for each completed year) (Max marks: 5)

(iv) Institute level Committees (Chairperson: 1.50 marks each) (Max marks: 3)

(v) Creation of New infrastructure/Lab/facility (above 10 Lakhs) (2 marks each)

(vi) Symposia/Seminar/Workshop/Conference as Organizing Secretary/ Convenor (National: 1 mark each; International: 2 marks each) (Max marks: 5)

**Awards/Recognitions (Maximum 10 marks)**

- (i) Awards by ICAR, CSIR, DST, DBT, NRDC, National Science Academies, etc. (full marks to Individual; 50% marks to the Associates of the Team Award) (2.5 marks each).
- (ii) Fellowship of the National Science Academies (5 marks each).
- (iii) Associateship/ Young Scientist awards of National Science Academies (2 marks each)
- (iv) Post-Doctoral fellowship for a period of minimum 6 months (2 marks each)
- (v)

The Judging Committee shall recommend the name of the recipient for the award from the eligible and shortlisted applicants who secured a minimum of 60% marks.

## Guidelines governing “NABARD Scientist of the Year Award”

### Objective of the Award

To motivate the young Agricultural Scientists by recognizing their outstanding contributions in the field of Rural Credit/Development, FPOs, Agribusiness and related issues in India.

This will help in pro-poor and pro-farmer policy formulation and move towards achieving the goal of ‘inclusive and sustainable development through credit.’

### Allocation of marks (NABARD Scientist of the Year Award)

Sl. No.	Criteria Existing/Revised	Maximum Marks
1	<b>Research achievements:</b> (i) New Concept / Methodology/ Process/ Model developed (ii) Copyright/software/database/app (iii) Development of Climate smart villages/nutria villages/rural infrastructure/seed village	20
3	Teaching achievements	20
4	Research Publications	35
5	Other publications	10
6	Awards/Recognition	05
7	External funded projects handled as PI	10
	<b>Total Marks</b>	<b>100</b>

#### Research achievements (Maximum 20 Marks):

- (i) New Concept / Methodology/ Process/ Model developed. (2 Marks each)
- (ii) Copyright/software/database/app (4 marks each)
- (iii) Development of Climate smart villages/nutria villages/rural infrastructure/seed village (2 marks each).

Developer shall be awarded 100% marks; Co-developer shall be awarded 75% marks.

Documentary evidence should be enclosed for all claims.

#### Teaching achievements (Maximum 20 Marks):

- (i) Courses taught and number of classes taken in each course (Maximum 5 marks): *Full marks, if taken at least 30 classes in a year, for a minimum of 5 years.*
- (ii) M.Sc. /M.Tech/ Ph.D. Students (Full time) Guided as Chairperson (Maximum 6 marks): *Give thesis titles. 2 marks for each M.Sc./M.Tech. and 4.0 marks for each Ph.D. student guided as Chairperson.*
- (iii) Development of e-course/training module (one mark each; Maximum 3 marks)
- (iv) Success of students in academics (in terms of their recognition for Awards) (Maximum 3 marks): *Institute level Medals, ICAR/ Institutional Awards, etc. (1 mark each).*
- (v) Organization of training /Summer or Winter school/ CAFT for a duration of minimum 10 days as Course Coordinator/Course Director (3 marks each).



**Research Publications (Maximum 35 marks)**

- (i) For 20 most important research publications in the relevant discipline of the applicant: Cumulative NAAS Score x 0.35
- (ii) First / corresponding author will get full marks in a publication and rest of the authors will be awarded 75% marks.

**Other Publications (Maximum 10 marks)**

- (i) Authored book with ISBN No. (min. 200 pages): 2 marks each; Edited Book with ISBN No. (min. 200 pages): 1 mark each; Policy Paper: 1 mark each; 0.5 mark each for scientific Review paper/Book chapter/Technical Bulletin; 0.25 Mark each for Policy Brief/Popular Article.

**Awards/Recognitions (Maximum 05 marks)**

- (i) Awards by ICAR, CSIR, DST, DBT, NRDC, National Science Academies, etc. (full marks to Individual; 50% marks to the Associates in the Team Award) (2.5 marks each).
- (ii) Fellowship of National Science Academies (5 marks each).
- (iii) Associateship/Young Scientist awards of the National Science Academies (2 Marks each)
- (iv) Post-Doctoral fellowship for a period of minimum 6 months (2 marks each)

**Externally funded projects including consultancy/contract research handled as PI (Maximum 10 marks)**

- (i) Projects costing <10 Lakhs: 2 marks each
- (ii) Projects costing 10-30 Lakhs: 3 marks each
- (iii) Projects costing >30 Lakhs: 5 marks each

Full Marks to PI and 50% marks to Co-PI

The Judging Committee shall recommend the name of the recipient for the award from the eligible and shortlisted applicants who secured a minimum of 60% marks.

## Allocation of marks (Dr. H.K. Jain Memorial Young Scientist Award)

EXISTING/Revised		
Sl. No.	Criteria	Maximum Marks
1	<b>Research Achievements:</b> (i) Products/ Variety/ Technology (ii) New Concept / Methodology/ Process/ Model developed/Novel Omics data generated (iii) Patents granted (iv) Copyright/Software/Database/ App developed	20
3	Teaching Achievements	20
4	Research Publications	35
5	Other Publications	10
6	Awards/Recognitions	5
7	External funded Projects handled as PI	10
	<b>Total Marks</b>	<b>100</b>

### Research achievements (Maximum 20 Marks):

- (i) Developer of a commercialized product or technology/Gazette Notified plant variety (CVRC/SVRC) (5 marks each); Genetic stock registered (1 Mark each); new record of pathogen/pest/microbe/bio-agent along with accession No. (2 Marks each).
- (ii) New Concept / Methodology/ Process/ Model developed/Novel omics data. All claims in this category should be supported by research publications in peer reviewed journals with citations  $\geq 10$  (excluding self-citations) (3 marks each)
- (iii) Copyright/Software/Database/App developed (3 marks each)
- (iv) Patents granted with details of Patent No. (5 marks each).

Developer shall be awarded 100% marks; Co-developer shall be awarded 75% marks.

Documentary evidence should be enclosed for all claims.

### Teaching achievements (Maximum 20 marks):

- (i) Courses taught and number of classes taken in each course (Maximum 5 marks): Full marks, if taken at least 30 classes in a year, for a minimum of 5 years.
- (ii) M.Sc. /M.Tech./ Ph.D. Students (Full time) Guided as Chairperson (Maximum 6 marks): Give thesis titles. 2 marks for each M.Sc./M.Tech. and 4.0 marks for each Ph.D. student guided as Chairperson.
- (iii) Development of e-course/training module (one mark each; Maximum 3 marks)
- (iv) Success of students in Academics (in terms of their recognition for Awards) (Maximum 3 marks): Institute level medals, ICAR/ Institutional Awards, etc. (1 mark each).
- (v) Organization of Training /Summer or Winter School/ CAFT for a duration of minimum 10 days as Course Coordinator/Course Director (3 marks each).

### Research Publications (Maximum 35 marks)

- (i) For 20 most important publications in the relevant discipline of the applicant:

Cumulative **NAAS Score x 0.175**

- (ii) First / corresponding author will get full marks in a publication and rest of the authors will be given 75% marks.

**Other publications (Maximum 10 marks)**

- (i) Authored book(s) with ISBN No. (min. 200 pages): 2 marks each; Edited book with ISBN No. (min. 200 pages): 1 mark each; Policy Paper: 1 mark each; 0.5 mark each for scientific Review/Book chapter/Technical Bulletin: 0.5 mark each; Popular Article/Policy Brief: 0.25 mark each

**Awards/Recognitions (Maximum 5 marks)**

- (i) Awards by ICAR, CSIR, DST, DBT, NRDC, National Science Academies, etc. (full marks to Individual; 50% marks to the Associates of the Team Award) (2.5 marks each).
- (ii) Fellowship of the National Science Academies (5 marks each).
- (iii) Associateship/Young Scientist awards of the National Science Academies (2 Marks each)
- (iv) Post-Doctoral fellowship for a period of minimum 6 months (2 marks each)

**Externally funded projects including consultancy/contract research handled as PI (Maximum 10 marks)**

- (i) Projects costing <10 Lakhs: 1 marks each
- (ii) Projects costing 10-30 Lakhs: 2 marks each
- (iii) Projects costing >30 Lakhs: 3 marks each

Full Marks to PI and 50% marks to Co-PI

The Judging Committee shall recommend the name of the recipient for the award from the eligible and shortlisted applicants who secured a minimum of 60% marks.

# **Guidelines governing “Dr. A.B. Joshi Memorial Award” for outstanding research contribution in the field of Agricultural Research and Education**

## **1. Name of the Award**

The name of the award shall be “Dr. A.B. Joshi Memorial Award”, which is instituted in the field of Agricultural Research and Education to commemorate the memory of late Dr. A.B. Joshi, the first Indian Dean of IARI, Director and DDG (Crop Sciences), ICAR, New Delhi.

## **2. Nature of the Award**

The Award will carry a sum of Rs.1,00,000 (Rupees one lakh only) in cash, a Medal and a Citation.

## **3. Source of Funds**

Rs. 20,00,000/- Revenue receipt Head of IARI for the year 2011-12 (code No.501/114199)

## **4. Objective of the Award**

The award shall be made for either fundamental or applied research including invention, discoveries, development of technologies, and leading to results of practical value and social impact in India and outstanding contributions to Agricultural Education.

## **5. Periodicity of the Award**

The periodicity of the award shall be biennium, commencing from the year 2011-2012.

## **6. Eligibility for the Award**

The award shall be given to Indian Nationals for their outstanding contributions in the field of Agricultural Research and Education. The award shall be made for notable and original research (both fundamental and applied) leading to results of practical value and social impact in India, and significant contributions to advancement of agricultural education.

The original contributions should be evident in the form of publications, monographs, patents, varieties and technologies developed and popularized, educational achievements, leadership in promotion of agricultural education, dissemination and adoption of technologies by the stakeholders.

The nominee should be more than 55 years of age with a standing of 25 years of outstanding contributions both in the field of Agricultural Research and Education. The period of assessment shall be life time up to the year of application/nomination.

## **7. Search cum Selection Committee**

There will be a Search cum Selection Committee consisting of at least 5 (five) members. The Chairperson of the Academic Council will nominate the Chairperson of the Committee and its members. Dean and Joint Director (Edn.), IARI will be the Member-Secretary of the Committee. The quorum of the Search cum Selection Committee for finalizing the recommendation shall be at least 4 members including Chairperson & Member- Secretary.

## **8. Criteria for Nomination/Selection**

Essential/desirable criteria

- (i) PG Teaching Experience (essential 25 years)
- (ii) Students’ guidance (essential 10 PhD students)
- (iii) RMP position (desirable 10 years)

Evaluation criteria

- (i) Significant contributions in advancement and promotion of agricultural education
- (ii) Overall contributions in the field of Agricultural Research (both fundamental and applied) leading to results of practical value and social impact in India
- (iii) National and International Recognitions

**POST GRADUATE SCHOOL**  
**INDIAN AGRICULTURAL RESEARCH INSTITUTE**  
**NEW DELHI-110012**

No. PGS-I/1-402/AC/2016

January 6, 2017

**ENDORSEMENT**

A copy of the proceedings of the 402<sup>nd</sup> meeting of the Academic Council held on 30<sup>th</sup> November, 2016 is forwarded herewith for information and necessary action. Comments, if any, may please be sent to the PG School within 15 days from the date of issue of the Proceedings.

1. All the members of the Academic Council and concerned Officers (By name) \_\_\_\_\_
2. PS to Director General, ICAR, Krishi Bhawan, New Delhi-110001
3. PS to Deputy Director General (Edn.), ICAR, KAB-II, Pusa, New Delhi-110012
4. Associate Dean, P G School
5. Master of Halls of Residences, P.G. School Hostel Office
6. Sr. Admn. Officer, IMC (35 copies for members of Board of Management)
7. Staff Officer, Director's Personal Section, IARI.
8. PS to Dean & Joint Director (Edn.), IARI./PS to Registrar/PS to Comptroller
9. Assistant Administrative Officer, Post Graduate School-II
10. Shri A. K. Tyagi, Chief Technical Officer, P.G. School
11. Dr. S.K. Tyagi, Chief Technical Officer, P G School
12. Concerned Dealing Assistants, PGS-I



**(Shashi Prabha Razdan)**  
**REGISTRAR**





**PROCEEDINGS OF THE 402<sup>nd</sup> MEETING OF THE ACADEMIC COUNCIL  
HELD ON NOVEMBER 30, 2016 AT 10.30 AM IN THE CONFERENCE HALL  
OF Prof. M.S. SWAMINATHAN LIBRARY, IARI, NEW DELHI - 110012**

The following members were present:

1. Dr.(Ms.) Ravinder Kaur, Director (Acting), IARI	Chairperson
2. Dr. R.K. Jain, Dean & Joint Director (Edn.)	Vice-Chairman
3. Dr. V.L. Chopra, Former Member, Planning Commission	Member
4. Dr. Ajit Varma, Director General, Amity Institute of Microbial Technology	Member
5. Dr.C. Ramasamy, Former Vice Chancellor, TNAU	Member
6. Dr. J. S. Samra, Former CEO, National Rainfed Area Authority	Member
7. Dr. K.V. Prabhu, Joint Director (Research)	Member
8. Dr. T.R. Sharma, Project Director, NRCPB	Member
9. Dr. P.K. Mishra, Director, IISWC, Dehradun	Member
10. Dr.Kuldeep Singh, Director, NBPGR	Member
11. Dr. V. Mahajan, Director (Acting), (IIMR)	Member
12. Dr. K.M. Manjaiah, Associate Dean, PG School	Member
13. Dr.(Ms.) Irani Mukherjee, Professor, Agricultural Chemicals	Member
14. Dr.(Ms.) Alka Singh, Professor, Agricultural Economics	Member
15. Dr. D.K. Singh, Professor, Agricultural Engineering	Member
16. Dr. R.N. Padaria, Professor, Agricultural Extension	Member
17. Dr.V.K. Sehgal, Professor, Agricultural Physics	Member
18. Dr.(Mrs.) Seema Jaggi, Professor, Agril. Statistics	Member
19. Dr. Y.S. Shivay, Professor, Agronomy	Member
20. Dr. (Ms.) Aruna Tyagi, Professor, Biochemistry	Member
21. Dr. A.R. Rao, Professor, Bioinformatics	Member
22. Dr. Sudeep Marwaha, Professor, Computer Application	Member
23. Dr. Subhash Chander, Professor, Entomology	Member
24. Dr. K.P. Singh, Professor, Floriculture and Landscape Architecture	Member
25. Dr. O.P. Awasthi, Professor, Fruits and Hort. Tech.	Member
26. Dr. Vinod, Professor, Genetics	Member
27. Dr. Sunil Pabbi, Professor, Microbiology	Member
28. Dr. R.C. Bhattacharya, Professor, MBB	Member
29. Dr. Anil Sirohi, Professor, Nematology and MOHR, PG Hostels	Member
30. Dr.(Ms.) Rekha Chaudhury, Professor, PGR	Member
31. Dr. V.K. Baranwal, Professor, Plant Pathology	Member
32. Dr. V. P. Singh, Professor, Plant Physiology	Member
33. Dr. S.K. Jha, Professor, Post Harvest Technology	Member
34. Dr. S.K. Jain, Professor, Seed Science & Technology	Member
35. Dr. R. D. Singh, Professor, SS&AC	Member
36. Dr. T.K. Behera, Professor, Vegetable Crops	Member
37. Mr.Sanchal Bilgrami, Comptroller	Member
38. Dr. B.S. Tomar, Head, Vegetable Science and Faculty Representative to the Academic Council	Member
39. Mr. Bhoopesh Punera, President, PGSSU	Member
40. Ms. Anu Kumari, Students' Representative to the A.C.	Member
41. Ms.Shashi Prabha Razdan, Registrar	Member

Leave of absence was sought and granted to the following members:

1. Dr. N.S. Rathore, Deputy Director General (Edn.)
2. Dr. J.P. Sharma, Joint Director (Extension), IARI
3. Dr. U.C. Sud, Director, IASRI
4. Dr. K.K. Singh, Director, CIAE, Bhopal

5. Dr. M.R. Dinesh, Director, IIHR
6. Dr. S.D. Singh, Head and Professor, Environmental Sciences
7. Dr. Man Singh, Professor, Water Science & Technology
8. Dr. Bhupinder Singh, Principal Scientist, CESCRA and Faculty Representative to the Academic Council
9. Ms. Usha Khemchandani, Head, Library Services

Dr. C. Viswanathan, Chairman, Examination Committee participated in the meeting as Special invitee.

Dr. R.K.Jain, Dean and Joint Director (Edn.) extended a formal welcome to the Chairperson, Academic Council for attending the meeting. Thereafter, Dr. (Ms.) Ravinder Kaur Director and the Chairperson of Academic Council warmly welcomed the outside members in the Academic Council and all the members present in the meeting. She also welcomed the following new members of the Academic Council who were attending the meeting for the first time:

#### **New members**

1. Dr. Kuldeep Singh, Director, NBPGR, New Delhi
2. Dr. V.K. Sehgal, Professor, Agricultural Physics
3. Dr. Sudeep Marwaha, Professor, Computer Application
4. Dr. A.R. Rao, Professor, Bioinformatics
5. Dr. O.P. Awasthi, Professor, Fruits and Horticultural Technology
6. Mr. Bhupesh Punera, President PGSSU
7. Ms. Anu Kumari, Students' Representative to the Academic Council

#### **Outgoing members**

The Chairperson also placed on record the valuable contributions of the following outgoing member of the Academic Council in strengthening the PG education at IARI.

1. Dr. S.C. Dubey, Former Director (Acting), NBPGR, New Delhi
2. Dr. S.K. Singh, Head and Former Professor, Fruits and Horticultural Technology
3. Dr. (Ms.) Pramila Agarwal, Former Professor, Agricultural Physics
4. Dr. H. Pathak, Former Professor, Environmental Sciences
5. Dr. Anil Rai, Former Professor, Bioinformatics
6. Mr. Bikram Jyoti, Former President, PGSSU
7. Mr. Abhijit Sarkar, Former Student Representative to the Academic Council

Thereafter, the following agenda items were taken up for consideration:

#### ***Agenda Item No. 402.1: Confirmation of the proceedings of the 401<sup>st</sup> meeting of the Academic Council held on 8.7.2016***

The Chairperson called for the comments, if any, from the members of the Academic Council on the proceedings of the 401<sup>st</sup> meeting. The Academic Council was apprised about the comment of one of the Faculty Representatives to the Academic Council on reconsideration of decision taken in its previous meeting on enhancement of tenure of Professors from 3 to 5 year to which could not be acceded to. Since no other comment was there, the proceedings of the previous meeting were confirmed.

#### ***Agenda Item No. 402.2: Report on action taken on the proceedings of the 401<sup>st</sup> meeting of the Academic Council held on 8.7.2016***

Action taken report (ATR) was presented by the Dean & Joint Director(Edn.).

**Agenda Item No. 402.3: Consideration of the proceedings of the Standing Committee on Scholarships, Financial Assistance & Academic Progress made in its meeting held on 7.10.2016**

The Academic Council approved the following recommendations made by the Standing Committee on Scholarships, Financial Assistance and Academic Progress:

**402.3.1 Award of Institute Sr. Scholarship @ Rs.13,125/- per month + Rs.10,000/- per annum as contingent grant to 132 candidates (Appendix-I).**

**402.3.2 Award of Institute Sr. Scholarship @ Rs.13,125/- per month + Rs.10,000/- per annum as contingent grant to the following 15 students admitted under IARI PG outreach programme at IIHR, Bengaluru.**

S.NO.	NAME OF THE STUDENT	ROLL NO	DISCIPLINE	DATE OF ENROL.
1.	Ms. SHIVANI SINGH	10810	FLORICULTURE & LANDSCAPE ARCH.	29-07-2016
2.	ELANGAIVENDHAN A	10811	"	29-07-2016
3.	S. VIJAYAKUMAR	10813	"	29-07-2016
4.	SIDDHAROOD MARAGAL	10899	VEGETABLE SCIENCE	29-07-2016
5.	Ms. B VANLALNEIHI	10900	"	29-07-2016
6.	SAHEB PAL	10901	"	29-07-2016
7.	Ms. NEHA YADAV	10905	"	29-07-2016
8.	Ms. MANPREET KOUR	10906	"	29-07-2016
9.	MANOJ KUMAR	10907	"	29-07-2016
10.	KOLA MUTHAIAH	10909	"	29-07-2016
11.	Ms.BABITA CHOUDHURY	10910	"	29-07-2016
12.	ARINDAM DAS	10911	"	29-07-2016
13.	KALU RAM	10816	FRUITS AND HORTICULTURAL TECHNOLOGY	29-07-2016
14.	Ms. SAJANA S	10817	"	29-07-2016
15.	Ms. SUJAYASREE.O.J	10877	POST HARVEST TECHNOLOGY	29-07-2016

**402.3.3 Award of Institute Sr. Scholarship @ Rs.13,125/- per month + Rs.10,000/- per annum as contingent grant to the following 9 students admitted under IARI PG outreach programme at CIAE, Bhopal.**

S.NO.	NAME OF THE STUDENT	ROLL NO	DISCIPLINE	DATE OF ENROL.
1	PUNEET KUMAR	10738	AGRICULTURAL ENGINEERING (APS)	29-07-2016
2	Ms. ALKA MISHRA	10739	"	29-07-2016
3	MAHANTI NAVEEN KUMAR	10740	"	29-07-2016
4	PERUGU BALACHANDRA YADAV	10741	"	29-07-2016
5	NICKHIL C	10742	"	29-07-2016
6	Ms. CHANGCHUK LAMO	10743	"	29-07-2016
7	HITESH BIJARNIYA	10746	AGRICULTURAL ENGINEERING(FPE)	29-07-2016
8	MANISH KUMAR	10747	"	29-07-2016
9	JADHAV MAHESH LAXMAN	10748	"	29-07-2016

**402.3.4 Award of Institute Sr. Scholarship @ Rs. 3,000/- per month + Rs. 10,000/- per annum as contingent grant to the following 2 students who were admitted under Faculty Up-gradation Scheme.**

S.NO.	NAME OF THE STUDENT	ROLL NO	DISCIPLINE	DATE OF ENROL.
1	Ms. BHUVANESWARI ICAR RC NEH REGION, UMIAM	10827	GENETICS AND PLANT BREEDING	29-07-2016
3	NILENDRA NARAYAN SINGH DALAPATI OUAT, BHUBANESWAR	10867	PLANT PATHOLOGY	29-07-2016

**402.3.5 Award of Contingent grant only @ Rs.10,000/- per annum to the following student who was admitted under ICAR In Service Scheme.**

S.NO.	NAME OF THE STUDENT	ROLL NO	DISCIPLINE	DATE OF ENROL.
1	VIKAS	10849	NEMATOLOGY	29-07-2016

**402.3.6 Following fourteen students who were admitted in the discipline of Agricultural Statistics and Computer Application will get their Sr. Scholarship @ Rs.13,125/- per month + Rs.10,000/- per annum as contingent grant from IASRI.**

S.NO.	NAME OF THE STUDENT	ROLL NO	DISCIPLINE	DATE OF ENROL.
1	Ms. PRIYANKA ANJOY	10762	AGRICULTURAL STATISTICS	29-07-2016
2	GOPAL SAHA	10763	"	29-07-2016
3	KULDEEP ASWAL	10764	"	29-07-2016
4	AMIT SAHA	10765	"	29-07-2016
5	SUBHRAJIT SATPATHY	10766	"	29-07-2016
6	NOBIN CHANDRA PAUL	10767	"	29-07-2016
7	Ms. SOUMYA SHARMA	10778	BIOINFORMATICS	29-07-2016
8	NALINI KANTA CHOUDHURY	10779	"	29-07-2016
9	BULBUL AHMED	10780	"	29-07-2016
10	ANUBHAV ROY	10781	"	29-07-2016
11	SANDEEP KUMAR VERMA	10782	"	29-07-2016
12	MD ASHRAFUL HAQUE	10783	COMPUTER APPLICATION	29-07-2016
13	Ms. SHBANA BEGAM	10784	"	29-07-2016
14	Ms. SONICA PRIYADARSHINI	10785	"	29-07-2016

**402.3.7 The award of Institute Sr. Scholarship to the following four in-service students was not recommended as they have already availed the benefit of Scholarship during their last admission at IARI and left the course incomplete. Further, the necessary recovery on account of Surety Bond etc. as per rule may also be made from these students, if still due. Further to avoid second time award of fellowship, a suitable undertaking to the effect that the students has not availed the benefit of Scholarship earlier from or through IARI/ICAR, may be obtained.**

S.NO.	NAME OF THE STUDENT	ROLL NO	DISCIPLINE	DATE OF ENROL.	Scheme
1	Ms. NITHYASHREE M.L.	10737	AGRICULTURAL ECONOMICS	29-07-2016	ICAR In-service
2	Ms. RAJNA S.	10792	ENTOMOLOGY	29-07-2016	ICAR In-service
3	TRIBHUWAN KISHOR UTTAMRAO	10841	MOLECULAR BIOLOGY AND BIOTECHNOLOGY	29-07-2016	Open
4	Ms. SHEPHALIKA AMRAPALI	10854	PLANT GENETIC RESOURCES	29-07-2016	ICAR In-service

**402.3.8 Award of Institute Jr. Scholarship @ 7,560/- per month + Rs. 6,000/- per annum as contingent grant to the following 30 students who were not awarded ICAR-JRF(including five students admitted for IARI, Assam and 2 students for IARI, Jharkhand).**

S. No.	NAME OF THE STUDENT	ROLL NO	DISCIPLINE	DATE OF ENROL.
1	ARKA DEB MUKHOPADHYAY	20756	AGRICULTURAL CHEMICALS	29/7/2016
2	DEBDAS CHAND	20757	"	29/7/2016
3	AJITH. M	20758	"	29/7/2016
4	Ms. SUTANWA SAHA	20759	"	29/7/2016
5	Ms. ASHA K. R.	20767	AGRICULTURAL ENGINEERING	29/7/2016
6	SUJAN ADAK	20778	AGRICULTURAL PHYSICS	29/7/2016
7	MOHAMMED SHAFEEQ P. M.	20779	"	29/7/2016
8	DEBASISH ROY	20780	"	29/7/2016
9	PARTHA PRATIM MAITY	20815	ENVIRONMENTAL SCIENCES	29/7/2016
10	Ms. MEENU MEENA	20817	"	29/7/2016
11	PRAKASH KUMAR	20818	"	29/7/2016
12	SUNIL NINGOMBAM	20842	MOLECULAR BIOLOGY AND BIOTECHNOLOGY	29/7/2016
13	VINAY K. Y.	20847	NEMATOTOLOGY	29/7/2016
14	PUNEETH G. M.	20849	PLANT GENETIC RESOURCES	29/7/2016
15	P. PRABHU	20850	"	29/7/2016
16	NAVAL KISHOR MEENA	20851	"	29/7/2016
17	DIPANKAR BARMAN	20864	PLANT PHYSIOLOGY	30/7/2016
18	SUNIL KUMAR B. L.	20872	SEED SCIENCE AND TECHNOLOGY	29/7/2016
19	DILSHAD AHMAD	20873	"	29/7/2016
20	ASHOK IRAPPA HALLI	20885	WATERSCIENCE AND TECHNOLOGY	29/7/2016
21	CHANDRA PRAKASH	20888	ENVIRONMENTAL SCIENCES	20/8/2016
22	PATOLE PRATHAMESH PRABHAKAR	20891	NEMATOTOLOGY	29/8/2016
23	MADANKUMAR K.P.	20892	AGRICULTURAL ECONOMICS	1/9/2016
24	Ms. RAKHI SALAM	50015	GENETICS AND PLANT BREEDING(IARI ASSAM)	29/7/2016
25	PADAM SINGH YADAV	50018	VEGETABLE SCIENCES (IARI ASSAM)	29/7/2016
26	HARISHA S. M.	50019	"	29/7/2016
27	KADALI VIJAY	50020	WATER SCIENCE AND TECHNOLOGY (IARI ASSAM)	29/7/2016
28	RAGHAV MAURYA	50021	"	29/7/2016
29	RAMESHWAR MEENA	60018	VEGETABLE SCIENCE (IARI JHARKHAND)	29/7/2016
30	MANJUNATH DALI	60019	WATERSCIENCE AND TECHNOLOGY (IARI JHARKHAND)	29/7/2016

**402.3.9 Award of Jr. Scholarship @ 7,560/- per month + Rs. 6,000/- per annum as contingent grant from IASRI to the following Twelve M.Sc. students admitted in the disciplines of Agricultural Statistics, Bioinformatics and Computer Application disciplines.**

S.No	NAME OF THE STUDENT	ROLL NO	DISCIPLINE	DATE OF ENROL.
1.	KAPIL CHOWDHARY	20785	AGRICULTURAL STATISTICS	29/07/2016
2.	ROHIT KUNDU	20786	"	29/07/2016
3.	Ms. SAYANTANI KARMAKAR	20787	"	29/07/2016



S. No.	Name of the Student	Roll No.	Discipline	Date
4.	DIPRO SINHA	20887	BIOINFORMATICS	19/08/2016
5.	MOHAN BABU H. S.	20800	"	29/07/2016
6.	SUBIN U.	20801	"	29/07/2016
7.	THUMMALA NIKHIL	20890	"	27/08/2016
8.	Ms. LAKSHMI SONKUSALE	20807	COMPUTER APPLICATION	29/07/2016
9.	AMIT DAS	20803	"	29/07/2016
10.	VIVEK KUMAR	20804	"	29/07/2016
11.	LOVKUSH PATEL	20806	"	29/07/2016
12.	VAIJANATH SHIVALINGAPPA KUMAS	20805	"	29/07/2016

**Agenda Item No. 402.4: Consideration of the proceedings of the meeting of the Standing Committee on Courses Curricula and Academic Affairs held on 5.10.2016**

The Academic Council approved the following recommendations made by the Standing Committee on Courses Curricula and Academic Affairs:

**402.4.1:** On the issue of consideration of the Choice Based Credit System (CBCS) and Letter Based Grading System, the Academic Council decided that the matter may be referred to the Coordination Committee of ICAR-Deemed Universities in ICAR so that the uniform system may be developed for all the four Deemed Universities.

**402.4.2** The Academic Council approved the discontinuation of Split Ph.D. Programme which shall be applicable on students admitted from 2017-18 academic session onwards.

**402.4.3.** On the issue of revision in course curricula and syllabi, the Academic Council was of the view that the Course Curricula and Syllabi may be presented School-wise before the expert committee.

**Agenda Item No. 402.5: Consideration of the proceedings of the meeting of the Standing Committee on Faculty & Discipline held on 17.10.2016 and 19.11.2016**

The Academic Council approved the following recommendations made by the Standing Committee on Faculty and Discipline:

**402.5.1 Recognition** of the following eight faculty members as Research guides for M.Sc. guidance in their respective disciplines as they met the prescribed teaching and research paper requirement for becoming the research guides.

S. No.	Name & Designation	Name of the Discipline
1.	Dr. Shailendra Kumar Jha, Scientist(SS)	Genetics
2.	Dr. Niharika Mallick, Scientist	Genetics
3.	Dr. Dhruba Jyoti Sarkar, Scientist	Agricultural Chemicals
4.	Dr. Sapna Panwar, Scientist	Floriculture and Landscape Architecture
5.	Dr. S.S. Rathore, Principal Scientist	Agronomy
6.	Dr. Bishal Gurung, Scientist	Agricultural Statistics

7.	Dr. Rajendra Singh, Senior Scientist	Water Science and Technology
8.	Dr. Shashi Bhushan Lal, Scientist	Computer Application

**405.5.2 Non-recognition** of the candidature of the following **two** faculty members as Research Guides for M.Sc. guidance as they do not meet the prescribed teaching/research paper requirement for becoming the research guides.

S. No.	Name and Designation	Name of the Discipline	Reason for declining
1.	Dr. Neeta Dwivedi Senior Scientist	Water Science and Technology	Short of one year teaching experience
2.	Dr. Mukesh Kumar Senior Scientist	Computer Application	Short of one Research Publication

**402.5.3 Approval of revision of existing guidelines for becoming a Faculty Member. The revised guidelines to be implemented with immediate effect are given below:**

**a. Scientist holding Ph.D. degree:**

- i) One year post Ph.D. research/teaching/extension experience in the relevant field of specialization as Scientist.
- ii) Should have published at least 3 research papers in professional journals with a minimum NAAS score of 5.

**b) Scientist holding M.Sc./M.Tech.degree:**

- i) Three years post M.Sc./M.Tech.research/teaching/extension experience in the relevant field of specialization as Scientist.
- ii) Should have published at least 3 research papers in professional journals with a minimum NAAS score of 5.

**402.5.4 The Academic Council approved the following guidelines for engagement of Adjunct Faculty at IARI:**

**1. REQUIREMENT:**

The Adjunct faculty shall be engaged from the active, eminent academician/scientist/engineer/manager having recognition at national and international levels with outstanding publications and rich experience in teaching and/or research organizations.

## **2. PROCEDURE FOR NOMINATION OF ADJUNCT FACULTY**

- a) The Professor and Head of the Division of the concerned disciplines shall identify specific teaching / research needs of the discipline.
- b) The proposals along with the recommendations of Board of Study (BOS) of concerned discipline should be forwarded to PG School for examination by the Standing Committee on Faculty and Discipline for further consideration of the Academic Council.

## **3. COSTs AND HONORARIUM**

- a) An honorarium of Rs. 2000/- per lecture, subject to the maximum of Rs. 30,000/- per year.
- b) The Institute may provide travel charges as per rules of GoI and accommodation at IARI guest house. In case of long distance travels, the number of visits may be kept as minimum by suitably arranging the lectures.
- c) The Adjunct Faculty shall have privileges with regard to access to library services and digital learning resources.

## **4. OTHER TERMS AND CONDITIONS**

- a) The Adjunct Faculty shall be nominated for a period of maximum 2 years only.
- b) The Adjunct Faculty shall deliver at least 10 lectures per year in the relevant discipline on issues of topical interest, which shall be coordinated by the Professor of the concerned discipline.
- c) Number of Adjunct Faculties in a discipline shall not exceed two in a given point of time.
- d) At the end of two years, nomination shall be submitted by the concerned Professor along with the 'performance report' of the Adjunct Faculty for extending the term of Adjunct Faculty. Maximum of two terms of 2 years each shall be permitted.

### **402.5.5 The Academic Council approved the following guidelines and assessment criteria for assigning the charge of Professor:**

#### **Guidelines for the Charge of Professor**

In each discipline one of the Principal Scientists will be nominated as Professor to supervise teaching and HRD activities of the discipline, as per the following criteria:

- i) The Principal Scientist should be a faculty member of the PG School and should have at least 10 years teaching experience (i.e., should have taught at least 18 lectures, per year, at least for 5 years) in the relevant discipline.
- ii) He/she should have the experience of guiding at least four M.Sc./M.Tech./Ph.D. in his/her relevant discipline subject to the condition that he/she must have the experience of guiding one Ph.D. student.
- iii) The Principal Scientist should have published at least **seven** research papers during the last 10 years of service in reputed journals with NAAS score of 6 and above. Of the seven research papers, at least **three** papers should be from his/her M.Sc./M.Tech/Ph.D. students' thesis.

**Assessment criteria for the charge of Professor:**

(Achievements in teaching, research, extension, institution building etc.: 80% & Interview: 20%)

S.No.	Activities	Marks
i	<b>Teaching</b> a. 0.5 marks per additional year (above 10 years) (Maximum 6 marks) b. 1 mark for 10 classes taken in additional years (above 10 years) (Maximum 6 marks) c. 0.5 marks for each courses taught as Course leader (Maximum 6 marks) d. 1 mark for each new initiative taken (This includes the use modern tools in class room, reference material etc. 2 marks for new course developed/course modified. (Maximum 6 marks) e. 1 mark for each training manual developed/training organized (winter school, summer school, model training, any other training of one week), 0.25 marks for lecture delivered in training programmes. (Maximum 6 marks)	30
ii	<b>Student guidance</b> 3 marks for each additional Ph.D. student guided as the Chairman and 1 mark for each additional M.Sc./M.Tech. student guided as the chairman.	20
iii	<b>Research</b> <b>A. Publication: Maximum 20 marks</b> a. 2 marks for each research paper with NAAS rating 10 and above, 1 marks for each research paper with NAAS rating 6 and above, 0.5 marks for each research paper with NAAS rating 5 and above 0.25 marks for each research paper with NAAS rating less than 5 (Maximum 12 marks) b. 0.5 marks for each review paper/popular article/technical bulletin/technical report (Maximum 4 marks) c. 3 mark for each book published, 2 marks for each book edited, 1 mark for each book chapter (Maximum 4 marks) <b>B. Research projects completed: maximum 10 marks</b> a. 2 marks for each externally funded project completed b. 0.25 marks per year per in-house/institute project	30
iv	<b>Awards/recognitions</b> 2 marks for ICAR/Academy awards/recognitions, 1 mark for other awards/recognitions including institute award/society award/ best paper award/best poster award/ recognition from institutions/paper setter/examiner; 2 marks for ICAR-Jawaharlal award to student, 1 mark for other awards received by students including institute award/best paper award/best poster award/Divisional award/ recognition received by the students	10
v	<b>Extension activities/institution building/ other activities not covered under any other items</b> 0.25 mark for each activity	7
vi	<b>Student's feedback</b>	3

**Agenda Item No. 402.6 Consideration of the proposal for Academic Calendar for the 60<sup>th</sup> Academic Session 2017-18**

The Academic Council approved the 60<sup>th</sup> Academic Calendar of the PG School for the Academic Session 2017-18 (Appendix-II).

**Agenda Item No. 402.7: Finalisation of 55<sup>th</sup> Convocation Week Programme**

The Academic Council approved the 55<sup>th</sup> Convocation Week Programme scheduled from February 06-10, 2017 (**Appendix-III**).

The process on the following items has already been completed with the approval of the Chairperson of the Academic Council to enable the P.G.School to complete all the pre-convocation requirements well in time. The action taken was approved by the Academic Council.

1.	Finalization of Chief Guest	Hon'ble Prime Minister of India
2.	Chairpersons for the various Programmes	
i)	Judging Committee for "Significant Post Graduate Students Research-2016 presentation" by the PG students for IARI Merit Medals and Best Student of the Year Award on Monday, February 06, 2017 (Convener: To be decided).	To be decided
ii)	"Presentation of Significant Educational Achievements of IARI for the year 2015." by the Professors of all the teaching disciplines on February 7, 2017 (Convener: Dr. Alka Singh).	To be decided
3.	Chairpersons for the following lectures	
	i) Shri Hari Krishna Shastri Memorial Award ii) Hooker Award iii) Rao Bahadur Dr. B. Vishwanath Memorial Award	To be decided
4.	47 <sup>th</sup> Lal Bahadur Shastri Memorial Lecture	Speaker/ Chairman to be identified
5.	Chairpersons for the following Committees	
	i) Pandal and Seating Arrangements Committee	Dr. Indra Mani, Head, Agricultural Engineering
	ii) Catering Arrangement Committee	Smt. Shashi Prabha Razdan, Registrar and Joint Director (Admn.)
	iii) Invitation Committee	Dr. (Ms.) Rashmi Aggarwal, Head, Plant Pathology
	iv) Reception Committee	Dr. B.S. Dwivedi, Head, SS&AC
	v) Cultural Programme & Invocation Song Committee	Dr. (Mrs.) K. Annapurna, Head, Microbiology
	vi) Decoration Committee	Dr. Markandey Singh, Senior Scientist, FLS
	vii) Publicity Committee	Dr. R.N. Padaria, Professor, Agricultural Extension
	viii) Transport and Accommodation Committee	Sh. Pushpender Kumar, Chief Admn. Officer

**Agenda Item No.402.8:** *Consideration of the list of the candidates who have become eligible for award of their respective degrees of Master of Science/Master of Technology and Doctor of Philosophy as on 29.11.2016*

The Academic Council approved the list of 119 candidates for the award of degree of M.Sc./M.Tech. and 50 candidates for Doctor of Philosophy who have completed all the prescribed requirements including their Final Viva Voce Examination as on 29.11.2016 (Appendix-IV).

**Agenda Item No. 402.9:** *Finalization of number of seats for admission to M.Sc./M.Tech. and Ph.D. degree programmes for the Academic Session 2017-18*

The number of seats for M.Sc./M.Tech. and Ph.D. programmes in various disciplines at IARI required for the Academic Session 2017-18 and the eligibility qualifications were approved by the Academic Council (Appendix – V).

**M. Sc./M.Tech. Programme:** Theseat requirement along with the eligibility qualifications will be sent to the Education Division of ICAR as they hold the All India Entrance Examination for admission (AIEEA – PG- 2017) and Award of ICAR-JRF to Master's degree programme of IARI, IVRI, NDRI, CIFE, CAU and SAU's.

**Ph. D. Programme:** The all India Entrance Examination to the Ph.D. degree programmes at IARI is conducted by the Post Graduate School with the assistance of Examination Committee constituted by the Chairperson, Academic Council. The following schedule and other points were approved by the Academic Council.

**Date of Entrance Examination** : April 23, 2017 (Sunday)

**Name of the Examination Centres:** *Anand, Bengaluru, Ludhiana, Cochin, Coimbatore, Delhi, Dharwad, Guwahati, Jabalpur, Hyderabad, Patna/Ranchi, Kolkata, Pune, Udaipur and Varanasi.*

In addition to the seats finalized for open stream, seats for admission to M.Sc. & Ph.D. programmes under other streams are detailed below:

Faculty Up-gradation Scheme	-	10 seats for Ph.D. only
ICAR-In-Service Nominee Scheme	-	10 seats for Ph.D. only
Departmental (Scientific Cadre)	-	10 seats (Provisional) for Ph.D. only
Departmental (Technical Cadre)	-	26 seats for M.Sc. & Ph.D.
Foreign Students	-	30 seats for M.Sc. & Ph.D.

**Agenda Item No. 402.10:** *Consideration of the recommendations of the Examination Committee*

1. The Academic Council discussed the recommendation of the examination Committee in detail. On the issue of less number of applications for admission to Ph.D. degree programme, the Academic Council authorised the Chairperson, Examination Committee to analyze the last 5 year's data and submit the report in the next Academic Council Meeting. However the proposal for relaxation of existing eligibility requirement for Ph.D. degree programme may be kept in abeyance.



2. The Academic Council approved the recommendation of Examination Committee on the existing procedure of transfer of unfilled seats from one discipline to another under different categories with a conditions that not more than two seats per category in one discipline shall be adjusted as transferred seats.

**Agenda Item No. 402.11: Renewal of all the 4 Standing Committees' composition of the Academic Council for the period of two years i.e. January 2017 to December 2018.**

The Academic Council approved the re-composition of all the four Standing Committees for the term of two years (January, 2017 to December, 2018)

**I STANDING COMMITTEE ON COURSES CURRICULA & ACADEMIC AFFAIRS**

1.	Dr. Seema Jaggi, Professor, Agricultural Statistics	Chairman
2.	Dr. Alka Singh, Professor, Agricultural Economics	Member
3.	Dr. V.K. Baranwal, Professor, Plant Pathology	Member
4.	Dr. V.K. Sehgal, Professor, Agricultural Physics	Member
5.	Dr. Bhupinder Singh, Principal Scientist, CESCRA and Faculty Representative to the Academic Council	Member
6.	Ms. Anu Kumari, Student's Representative to the Academic Council	Member
7.	Dr. K.M. Manjaiah, Associate Dean, P.G. School	Member Secretary

**II STANDING COMMITTEE ON FACULTY & DISCIPLINE**

1.	Dr. T.R. Sharma, Project Director, NRCPB	Chairman
2.	Dr. Subhash Chander, Professor, Entomology	Member
3.	Dr. A.R. Rao, Professor, Bioinformatics	Member
4.	Dr. R. Bhattacharya, Professor, MBB	Member
5.	Dr. B.S. Tomar, Head, Vegetable Science & Faculty Representative to the Academic Council	Member
6.	Dr. K.M. Manjaiah, Associate Dean, P.G. School	Member Secretary

**III STANDING COMMITTEE ON SCHOLARSHIPS, FINANCIAL ASSISTANCE AND ACADEMIC PROGRESS**

1.	Dr. S.K. Jain, Professor, Seed Science and Technology	Chairman
2.	Dr. S.K. Jha, Professor, Post Harvest Technology	Member
3.	Dr. (Ms.) Irani Mukherjee, Professor, Agricultural Chemicals	Member
4.	Dr. K.P. Singh, Professor, Floriculture and Landscaping	Member
5.	Mr. Bhupesh Punera, President, PGSSU	Member
6.	Ms. Anu Kumari, Student's Representative to the Academic Council	Member
7.	Ms. Shashi Prabha Razdan, Registrar	Member Secretary

**IV STANDING COMMITTEE ON STUDENT'S PROBLEMS, DISCIPLINE, WELFARE BOARD AND RESIDENCES**

1.	Dr. Sunil Pabbi, Professor, Microbiology	Chairman
2.	Dr. Sudeep Marwaha, Professor, Computer Application	Member
3.	Dr. Y.S. Shivay, Professor, Agronomy	Member
4.	Dr. O.P. Awasthi, Professor, FHT	Member
5.	Dr. Anil Sirohi, MOHR, P.G. Hostels	Member
6.	Mr. Bhupesh Punera, President, PGSSU	Member
7.	Ms. Anu Kumari, Student's Representative to the Academic Council	Member
8.	Ms. Shashi Prabha Razdan, Registrar	Member Secretary

**Agenda Item No.402.12: To consider the cases of Ph.D. students to allow thesis submission beyond seven years as a very special cases.**

The Academic Council showed deep concern on the following five cases of Ph.D. students to allow thesis submission beyond seven /six years as a very special cases. The Academic Council opined that in future such individual cases should not be brought to the house as the Academic Council is responsible for advising on broad policy matters on academic issues rather than dealing with individual cases. These cases need to be examined by the Chairperson, Academic Council based on the existing administrative guidelines of PG School.

S.No.	Name of the student/ Roll No./Discipline	Date of Admission	Completion of five years	Date of relief	Last date of submission of thesis (Five Year + extended time of 2 years=total 7 years)	Remarks
1.	Mr. Biswajit Mondal (9684) Genetics	6/8/2009	5/8/2014	30/6/2014	5/8/2016 (granted 2 years extension, as special case)	Removed from roll on 27/8/2016 due to non-submission of thesis within the extended time.
2.	Ms. Aditi Srivastava(9641) Agricultural Physics	6/8/2009	5/8/2014	2/2/2015	5/8/2016 (granted 2 years extension, as special case)	Removed from roll on 27/8/2016 due to non-submission of thesis within the extended time.
3.	Mr. Ingle Vishal Kesharao (9630) Agricultural Engineering	6/8/2009	5/8/2014	11/9/2012	5/8/2016 (granted 2 years extension, as special case)	Removed from roll on 27/8/2016 due to non-submission of thesis within the extended time.

4.	Ms. ChinpilhingKipgen (9701) Vegetable Science	6/8/2009	5/8/2014	11/12/2014	5/8/2016 (granted 2 years extension, as special case)	Removed from roll on 27/8/2016 due to non-submission of thesis within the extended time.
5.	Sandeep Kr. Duhan (9897) PHT	6/8/2010	5/8/2015	Student on roll	5/8/2016 ( granted extension of 6 months on two occasions, as special case)	Under consideration


**Agenda Item No. 402.13: Consideration of the recommendations of the Committee constituted for the establishment of IARI Foundation**

The Academic Council agreed the recommendation of the Committee in principle. However the Council opined that a working group may be constituted and the approval of BOM of IARI and ICAR may also be taken as several aspects are involved in the case.


**Agenda Item No. 402.14: Consideration of the recommendations of the Committee constituted for Integrated M.Sc./Ph.D. Programme.**

The Academic Council approved the initiation of Integrated M.Sc./Ph.D. programme at IARI after obtaining necessary approval from BOM, ICAR and UGC. During Phase I, integrated Ph.D. programme could be taken up in one of the Basic Science disciplines, namely Molecular Biology & Biotechnology.

The meeting ended with the vote of thanks to the Chair.

  
(Shashi Prabha Razdan)  
Member-Secretary

  
(Ravinder Kaur)  
Chairperson

  
(R.K. Jain) 5/1/17  
Vice Chairman

## APPENDIX - I

LIST OF STUDENTS ENROLLED AT IARI, NEW DELHI IN PH.D PROGRAMME IN THE ACADEMIC YEAR 2015-16 ELIGIBLE FOR IARI FELLOWSHIP @ Rs. 13125/- p.m. WITH CONTINGENCY @ Rs. 10000/- p.a.				
Sr. No.	NAME OF THE STUDENT	ROLL NO	DISCIPLINE	DATE ENROL
1	Ms. ANINDITA PAUL	10726	AGRICULTURAL CHEMICALS	29-07-2016
2	DINESH KUMAR YADAV	10727	AGRICULTURAL CHEMICALS	29-07-2016
3	NIRANJAN KUMAR	10728	AGRICULTURAL CHEMICALS	29-07-2016
4	Ms. SHANNON N SANGMA	10729	AGRICULTURAL CHEMICALS	29-07-2016
5	SUBHAM YADAV	10730	AGRICULTURAL CHEMICALS	29-07-2016
6	JOBIN SEBASTIAN	10732	AGRICULTURAL ECONOMICS	29-07-2016
7	CHIKKATHIMME GOWDA H R	10733	AGRICULTURAL ECONOMICS	29-07-2016
8	RAGHAVENDRA K J	10734	AGRICULTURAL ECONOMICS	29-07-2016
9	RAVINDRA	10736	AGRICULTURAL ECONOMICS	29-07-2016
10	RAJESHWAR SANODIYA	10744	AGRICULTURAL ENGINEERING	29-07-2016
11	VAIBHAV CHAUDHARY	10745	AGRICULTURAL ENGINEERING	29-07-2016
12	Ms. ARTI KUMARI	10750	AGRICULTURAL ENGINEERING	29-07-2016
13	REETESH KUMAR PYASI	10751	AGRICULTURAL ENGINEERING	29-07-2016
14	Ms. TRUPTIMAYEE SUNA	10752	AGRICULTURAL ENGINEERING	29-07-2016
15	CHANNAVEERESH R MOTAGI	10757	AGRICULTURAL EXTENSION	29-07-2016
16	SUNIL KUMAR	10758	AGRICULTURAL EXTENSION	29-07-2016
17	BRIJESH YADAV	10760	AGRICULTURAL PHYSICS	29-07-2016
18	KOUSHIK BANERJEE	10761	AGRICULTURAL PHYSICS	29-07-2016
19	Ms. SHANTI DEVI BAMBORIYA	10768	AGRONOMY	29-07-2016
20	Ms. KAVITA KUMARI	10769	AGRONOMY	29-07-2016
21	Ms. ANITA KUMAWAT	10770	AGRONOMY	29-07-2016
22	BHARAT RAJ MEENA	10771	AGRONOMY	29-07-2016
23	ANKIT	10772	AGRONOMY	29-07-2016
24	Ms. POORNIMA S	10773	AGRONOMY	29-07-2016
25	SANDEEP KUMAR	10774	BIOCHEMISTRY	29-07-2016
26	ASHOK KUMAR	10775	BIOCHEMISTRY	29-07-2016
27	SACHIDANAND TIWARI	10776	BIOCHEMISTRY	29-07-2016
28	MAHESH KUMAR SAMOTA	10777	BIOCHEMISTRY	29-07-2016
29	SUKHWINDER SINGH	10786	ENTOMOLOGY	29-07-2016
30	PADALA VINOD KUMAR	10787	ENTOMOLOGY	29-07-2016
31	Ms. LANEESHA M	10788	ENTOMOLOGY	29-07-2016
32	Ms. RAMYA N	10789	ENTOMOLOGY	29-07-2016
33	KEERTHI M C	10790	ENTOMOLOGY	29-07-2016
34	RAJGOPAL N N	10791	ENTOMOLOGY	29-07-2016
35	SOURAV SARKAR	10795	ENTOMOLOGY	29-07-2016
36	VARUN SAINI	10796	ENTOMOLOGY	29-07-2016
37	SATYAPRIYA SINGH	10797	ENTOMOLOGY	29-07-2016
38	RAMESH K B	10798	ENTOMOLOGY	29-07-2016
39	Ms. CHAITRA H S	10799	ENTOMOLOGY	29-07-2016
40	Ms. ANJALI M S	10800	ENTOMOLOGY	29-07-2016
41	SUNIL NAIK H	10801	ENTOMOLOGY	29-07-2016
42	SUNIL	10802	ENTOMOLOGY	29-07-2016

43	JAYANTA THOKDAR	10803	ENVIRONMENTAL SCIENCES	29-07-2016
44	PAWAN KUMAR LONI	10804	ENVIRONMENTAL SCIENCES	29-07-2016
45	RANJEET KUMAR CHAURASIYA	10805	ENVIRONMENTAL SCIENCES	29-07-2016
46	CHANDRA SHEKARA T.K.	10806	ENVIRONMENTAL SCIENCES	29-07-2016
47	RAVI GANGWAR	10807	ENVIRONMENTAL SCIENCES	29-07-2016
48	Ms. SHISA ULLAS P	10808	FLORICULTURE & LANDSCAPE ARCH.	29-07-2016
49	VARUN MALLAIAH HIREMATH	10809	FLORICULTURE & LANDSCAPE ARCH.	29-07-2016
50	Ms. TANUSHREE SAHOO	10814	FRUITS AND HORTICULTURAL TECHNOLOGY	29-07-2016
51	KULDEEP SINGH	10815	FRUITS AND HORTICULTURAL TECHNOLOGY	29-07-2016
52	PREM CHAND GYANI	10818	GENETICS AND PLANT BREEDING	29-07-2016
53	NITISH RANJAN PRAKASH	10819	GENETICS AND PLANT BREEDING	29-07-2016
54	SHYAM SUNDAR D	10820	GENETICS AND PLANT BREEDING	29-07-2016
55	YANKAPPA UPPAR	10821	GENETICS AND PLANT BREEDING	29-07-2016
56	Ms. MANISHA SAINI	10823	GENETICS AND PLANT BREEDING	29-07-2016
57	GANESH MEENA	10824	GENETICS AND PLANT BREEDING	29-07-2016
58	BHARATH KUMAR ALAM	10825	GENETICS AND PLANT BREEDING	29-07-2016
59	SUBHASH CHAND	10826	GENETICS AND PLANT BREEDING	29-07-2016
60	AALOK SHIV	10828	GENETICS AND PLANT BREEDING	29-07-2016
61	Ms. SNEHA NYAMAGOUD	10829	GENETICS AND PLANT BREEDING	29-07-2016
62	Ms. SWATI SAGAR	10831	MICROBIOLOGY	29-07-2016
63	DEEPAK KUMAR KOLI	10832	MICROBIOLOGY	29-07-2016
64	AJAY KUMAR	10833	MICROBIOLOGY	29-07-2016
65	Ms. NIVETHA	10834	MICROBIOLOGY	29-07-2016
66	SHEKHAR KUMAR	10835	MICROBIOLOGY	29-07-2016
67	Ms. SHARANI CHOUDHURY	10836	MOLECULAR BIOLOGY AND BIOTECHNOLOGY	29-07-2016
68	Ms. PARICHITA PRIYADARSHINI	10837	MOLECULAR BIOLOGY AND BIOTECHNOLOGY	29-07-2016
69	Ms. JYOTSANA TILGAM	10838	MOLECULAR BIOLOGY AND BIOTECHNOLOGY	29-07-2016
70	Ms. SREESHMA N	10839	MOLECULAR BIOLOGY AND BIOTECHNOLOGY	29-07-2016
71	Ms. ALKA BHARATI	10840	MOLECULAR BIOLOGY AND BIOTECHNOLOGY	29-07-2016
72	KULDEEP KUMAR	10842	MOLECULAR BIOLOGY AND BIOTECHNOLOGY	29-07-2016
73	DEEPANSHU JAYASWAL	10843	MOLECULAR BIOLOGY AND BIOTECHNOLOGY	29-07-2016
74	MAHENDRA C	10844	MOLECULAR BIOLOGY AND BIOTECHNOLOGY	29-07-2016
75	DASH MANORANJAN PITABAS	10845	NEMATOLOGY	29-07-2016
76	VINAYKUMAR B K	10846	NEMATOLOGY	29-07-2016
77	DEVARAJA K.P.	10847	NEMATOLOGY	29-07-2016
78	VINOD S	10848	NEMATOLOGY	29-07-2016
79	Ms. MAYA PATIL	10850	NEMATOLOGY	29-07-2016
80	HARI PRASATH S	10851	PLANT GENETIC RESOURCES	29-07-2016
81	KUWARDADRA SAHADEO INDALDAS	10852	PLANT GENETIC RESOURCES	29-07-2016
82	JAGDISH GOYANKA	10853	PLANT GENETIC RESOURCES	29-07-2016
83	SHIVAM KUMAR	10855	PLANT GENETIC RESOURCES	29-07-2016
84	Ms. BHARGAVI H A	10856	PLANT GENETIC RESOURCES	29-07-2016
85	SHYAM KUMAR	10857	PLANT GENETIC RESOURCES	29-07-2016
86	Ms. VEENA K H	10858	PLANT PATHOLOGY	29-07-2016
87	Ms. RAMYASHREE DEVI G S	10859	PLANT PATHOLOGY	29-07-2016
88	SAURABH KUMAR DUBEY	10860	PLANT PATHOLOGY	29-07-2016
89	N.S. KALAIVANAN	10861	PLANT PATHOLOGY	29-07-2016

90	Ms. MUSHINENI ASHAJYOTHI	10863	PLANT PATHOLOGY	29-07-2016
91	RUBIN DEBBARMA	10864	PLANT PATHOLOGY	29-07-2016
92	Ms. SHAZIA TASNEEM	10865	PLANT PATHOLOGY	29-07-2016
93	Ms. SHWETA MESHRAM	10866	PLANT PATHOLOGY	29-07-2016
94	RUDRAPPA K BANNIHATTI	10868	PLANT PATHOLOGY	29-07-2016
95	NITIN SHARMA	10869	PLANT PHYSIOLOGY	29-07-2016
96	MILAN KUMAR LAL	10870	PLANT PHYSIOLOGY	29-07-2016
97	Ms. SHAMIMA PARVEEN	10871	PLANT PHYSIOLOGY	29-07-2016
98	Ms. LAKSHMI RAJ	10872	PLANT PHYSIOLOGY	29-07-2016
99	MAHESH MEENA	10873	PLANT PHYSIOLOGY	29-07-2016
100	GAJANAN GUNDEWADI	10874	POST HARVEST TECHNOLOGY	29-07-2016
101	Ms. SMRUTHI JAYARAJAN	10875	POST HARVEST TECHNOLOGY	29-07-2016
102	Ms. ARCHANA T. JANAMATTI	10876	POST HARVEST TECHNOLOGY	29-07-2016
103	Ms. SHAGHAF KAUKAB	10879	POST HARVEST TECHNOLOGY	29-07-2016
104	SANJAY KUMAR	10880	SEED SCIENCE AND TECHNOLOGY	29-07-2016
105	PRAVEEN S PATTED	10881	SEED SCIENCE AND TECHNOLOGY	29-07-2016
106	RAJESH KUMAR SHARMA	10882	SEED SCIENCE AND TECHNOLOGY	29-07-2016
107	DHANUSH K S	10883	SEED SCIENCE AND TECHNOLOGY	29-07-2016
108	RAVI BHUSHAN PRASAD	10884	SEED SCIENCE AND TECHNOLOGY	29-07-2016
109	Ms. DHANYA V G	10885	SEED SCIENCE AND TECHNOLOGY	29-07-2016
110	DAMODAR DAS	10886	SEED SCIENCE AND TECHNOLOGY	29-07-2016
111	AVIJIT GHOSH	10888	SOIL SCIENCE & AGRIL. CHEMISTRY	29-07-2016
112	AMRESH CHAUDHARY	10889	SOIL SCIENCE & AGRIL. CHEMISTRY	29-07-2016
113	CHIRANJEEV KUMAWAT	10890	SOIL SCIENCE & AGRIL. CHEMISTRY	29-07-2016
114	ANIL KUMAR VERMA	10891	SOIL SCIENCE & AGRIL. CHEMISTRY	29-07-2016
115	RAVI KUMAR MEENA	10892	SOIL SCIENCE & AGRIL. CHEMISTRY	29-07-2016
116	DIBAKAR ROY	10893	SOIL SCIENCE & AGRIL. CHEMISTRY	30-07-2016
117	ATUL BHAGWAN PAWAR	10894	SOIL SCIENCE & AGRIL. CHEMISTRY	29-07-2016
118	SUNIL B H	10895	SOIL SCIENCE & AGRIL. CHEMISTRY	30-07-2016
119	ARUNKUMAR B.	10896	VEGETABLE SCIENCE	29-07-2016
120	Ms. SHILPA DEVI	10897	VEGETABLE SCIENCE	29-07-2016
121	JAYANTA JAMATIA	10898	VEGETABLE SCIENCE	29-07-2016
122	RAJASHEKHAR GOWDA R	10902	VEGETABLE SCIENCE	29-07-2016
123	GURURAJ MATHPATI	10903	VEGETABLE SCIENCE	29-07-2016
124	PRADEEP KUMAR JATAV	10904	VEGETABLE SCIENCE	29-07-2016
125	HEMANT GHEMERAY	10908	VEGETABLE SCIENCE	29-07-2016
126	RAGHUKUMAR A S	10912	WATER SCIENCE AND TECHNOLOGY	29-07-2016
127	VIKASH KUMAR	10913	WATER SCIENCE AND TECHNOLOGY	29-07-2016
128	Ms. RICHA PANDEY	10914	WATER SCIENCE AND TECHNOLOGY	29-07-2016
129	VENKATESH Y.N.	10921	ENTOMOLOGY	16-08-2016
130	HARISH D.	10922	GENETICS AND PLANT BREEDING	16-08-2016
131	Ms. MENAKA KANNAIYAN	10923	ENTOMOLOGY	19-08-2016
132	BHAGWAN SINGH DHAKED	10924	MICROBIOLOGY	19-08-2016





**ACADEMIC CALENDER FOR 60<sup>th</sup> ACADEMIC SESSION 2017-18****Admission Process for the Academic Session 2017-18****2017**

February 11-12	Saturday & Sunday	Advertisement for inviting on line applications for Ph.D. admission will be published in all the leading national news papers
February 13	Monday	Receipt of online applications for Ph.D. admission starts
March 06	Monday	Last date for receipt of online applications for admission to Ph.D. Programme
March 13	Monday	Last date for receipt of through proper channel applications and documents submission
April 23	<b>Sunday</b>	<b>Entrance Examination for admission to Ph.D. Programme</b>
May 06	Saturday	Declaration of result of Written Test for admission to Ph.D. programme
June 19	Monday	Last date for submission of thesis by IARI M.Sc. students who have applied for admission to the Ph.D. Programme
July 01	Saturday	Last date for receipt of mark sheet from the candidates who are studying in M.Sc. final year
July 03	Monday	<b>Interview for admission to Ph.D. Programme in the respective disciplines</b>
July 07	Friday	Academic Council meeting for finalization of results for M.Sc. & Ph.D. admissions 2017-18
July 27 & 28	Thursday & Friday	Verification of original documents and online Registration of newly admitted M.Sc. and Ph.D. Programmes 2017-18
July 29	Saturday	Orientation Programme: Newly admitted students to be addressed by Dean and Director, IARI

**I – Trimester**

July 31	Monday	First Trimester begins, payment of fees and online registration of continuing students
August 01	Tuesday	Commencement of Class Work
August 16	Wednesday	Last date for adding/dropping of course
September 05	Tuesday	Teacher day celebration and lecture
November 11	Saturday	National Agricultural Education day celebration and lecture
<b>November 13 to November 18</b>	<b>Monday to Saturday</b>	<b>Final Examination of I Trimester</b>

**II – Trimester**

November 20	Monday	Online Registration of students
November 21	Tuesday	Commencement of Class Work
December 03	Sunday	Agricultural Education Day
December 05	Tuesday	Last date for adding/dropping of courses

**December 17,  
2017  
to December  
31, 2017**

**Sunday to  
Sunday**

**Winter Break**

**2018**

January 30	Tuesday	Last date for holding of Final Viva- Voce Examination for consideration for award of IARI Merit Medals and award of degree in the 56 <sup>th</sup> Convocation, 2018
February 05	Monday	<b>Commencement of 56<sup>th</sup> Convocation Week Programme</b>
February 08	Thursday	<i>48<sup>th</sup> Lal Bahadur Shastri Memorial Lecture</i>
February 09	Friday	56 <sup>th</sup> Convocation
February 24 to February 26	Saturday to Monday	Annual Sports Meet (Tentative)
<b>March 26 to March 31</b>	<b>Monday to Saturday</b>	<b>Final Examination of II Trimester</b>

**III - Trimester**

April 02	Monday	Online Registration of students
April 03	Tuesday	Commencement of Class Work
April 17	Tuesday	Last date for adding/dropping of course
<b>May 27 to June 17</b>	<b>Sunday to Sunday</b>	<b>Summer Vacation</b>
<b>July 16 to July 21</b>	<b>Monday to Saturday</b>	<b>Final Examination of III Trimester</b>
<b>July 22 to July 29</b>	<b>Sunday to Sunday</b>	<b>Trimester Break</b>

**55<sup>th</sup> CONVOCAATION WEEK PROGRAMME****Venue: Dr. B.P. Pal Auditorium****Monday, February 06, 2017**

09.30-18.00 hrs.

Presentation of "Significant Post Graduate Students Research" by M.Sc. &amp; Ph.D. students for "Merit Medals" and "Best Student of the Year" award

**Tuesday, February 07, 2017****Presentation of Significant Educational Achievements for the year 2016 by the Professors representing different schools of the teaching disciplines**

09.30-11.15 hrs.

Session I – Crop Improvement

11.30-13.00 hrs.

Session II – Crop Protection

14.00-15.45 hrs.

Session III – Resource Management

16.00-17.00 hrs.

Session IV – Basic Sciences

17.15-18.30 hrs.

Session V – Horticultural Sciences

**Wednesday, February 08, 2017****Presentation of Significant Educational Achievements for the year 2016 by the Professors representing different schools of the teaching disciplines**

09.30-10.45 hrs.

Session VI – Social Sciences

**Award Lectures**

11.30-13.00 hrs.

Lecture by the Recipient of Harikrishna Shastri Memorial Award

14.00-15.30 hrs.

Lecture by the Recipient of Hooker Award

15.45-16.45 hrs.

Lecture by the Recipient of Rao Bahadur B. Vishwanath Memorial Award

**Thursday, February 09, 2017****Venue: Conference Hall, IARI Library**

09.30-10.30 hrs.

403<sup>rd</sup> Meeting of the Academic Council, IARI**Venue: Dr. B.P. Pal Auditorium**

11.00-13.00 hrs.

47<sup>th</sup> Lal Bahadur Shastri Memorial Lecture**Venue: Conference Hall, IARI Library**

14.00-15.00 hrs.

Meeting of Board of Management, IARI

**Venue: Lawns of Dr. B.P. Pal Auditorium**

15.30-16.30 hrs.

Full Dress Rehearsal

**Friday, February 10, 2017****Venue: Lawns of Dr. B.P. Pal Auditorium**

12.00-13.30 hrs.

**55<sup>th</sup> Convocation**

15.00 hrs.

Farewell to outgoing students at their respective Divisions

**Venue: Dr. B.P. Pal Auditorium**

18.00 hrs.

Cultural Programme by P. G. Students

Convocation Dinner



List of candidates who have successfully completed all the requirements including final viva-voce examination for the award of degree of Master of Science as on 29/11/2016

No.	ROLL NO	NAME OF THE STUDENT	Title of Thesis
<b>AGRICULTURAL CHEMICALS</b>			
1	20493	DINESH KUMAR YADAV	IMPACT OF TURMERIC TERPENOIDS ON BIOAVAILABILITY OF CURCUMIN
2	20494	NIRANJAN KUMAR	MOLECULARLY IMPRINTED POLYMERS AS CLEANUP TOOL FOR SELECTIVE DETECTION OF CHLORPYRIFOS AND IMIDACLOPRID
3	20495	SAMEER RANJAN MISRA	EFFECT OF OZONATION ON THE PHYTOCHEMICALS DURING PESTICIDE DECONTAMINATION IN CITRUS FRUITS
4	20496	Ms. ANINDITA PAUL	EXTRACTION OF ELLAGITANNINS FROM POMEGRANATE RIND AND THEIR ANTIOXIDANT ACTIVITY
5	20497	Ms. SHANNON N SANGMA	PERSISTENCE AND MOBILITY OF TETRACYCLINE AND OXYTETRACYCLINE IN SOIL AND MANURES
<b>AGRICULTURAL ECONOMICS</b>			
6	20498	JOBIN SEBASTIAN	IMPACT OF CREDIT ON ADOPTION OF HIGH VALUE CROP: A CASE OF BANANA CULTIVATION
7	20499	Ms. PRIYANKA UPRETI	PRODUCTION EFFICIENCY AND PRICE BEHAVIOUR OF SUGAR IN INDIA
8	20500	RAGHAVENDRA K J	AN ANALYSIS OF RISK MANAGEMENT IN RAINFED AGRICULTURE: A CASE OF SOYBEAN IN MADHYA PRADESH
9	20501	RAVINDRA	AN ECONOMIC STUDY OF FARMERS PREFERENCE OF RICE VARIETAL TRAITS AND IMPACT OF IMPROVED RICE VARIETIES IN NORTH EASTERN PLAIN ZONE OF UTTAR PRADESH
10	20608	EMAL SHEGIWAL	ECONOMICS OF CONTRACT FARMING: A CASE STUDY OF BASMATI RICE
<b>AGRICULTURAL ENGINEERING</b>			
11	20502	VAIBHAV CHAUDHARY	DESIGN AND DEVELOPMENT OF ERGONOMIC VARIABLE HEIGHT PLATFORM FOR TRAINING AND HARVESTING OF TOMATO CROP IN GREENHOUSE
12	20503	Ms. ARTI KUMARI	STUDY OF SOIL MOISTURE SENSORS' SUITABILITY FOR IRRIGATION SCHEDULING IN A COLE CROP AT FIELD LEVEL
13	20504	Ms. ALKA MISHRA	DEVELOPMENT OF SOLAR POWERED PNEUMATIC SEED CLEANING SYSTEM
14	20505	HITESH BIJARNIYA	DESIGN OF FOLIAR APPLICATOR FOR UREA AMMONIUM NITRATE
15	20506	Ms. SHRADDHA AHIRWAR	SIMULATION OF WATER UPTAKE BY CAPSICUM IN SOILLESS MEDIA UNDER GREENHOUSE FOR IRRIGATION SCHEDULING
16	20610	HASAN MIRZAKHANINAFCHI	STUDY ON FEASIBILITY OF SOIL NITROGEN DETECTION USING ELECTRICAL CONDUCTIVITY FOR SITE-SPECIFIC NITROGEN APPLICATION



No.	ROLL NO	NAME OF THE STUDENT	Title of Thesis
<b>AGRICULTURAL EXTENSION</b>			
17	20507	CHANNAVEERESH R MOTAGI	COMPREHENSIVE NUTRITION MISSION PROGRAM IN INDIA-A MULTIDIMENSIONAL STUDY
18	20508	RABEESH KUMAR VERMA	EMPOWERMENT OF WOMEN THROUGH INFORMATION AND COMMUNICATION TECHNOLOGY: A CASE ANALYSIS OF CONNECTING DREAM FOUNDATION
19	20509	ALOK KUMAR SAHOO	ANALYSIS OF FUNCTIONAL MECHANISM AND IMPACT ASSESSMENT OF IARI-POST OFFICE LINKAGE EXTENSION MODEL
20	20510	KRISHNA D KARJIGI	EMPOWERMENT OF RURAL HOUSEHOLDS THROUGH COMMUNITY RADIO STATIONS: AN ANALYTICAL STUDY
21	20511	SUNIL KUMAR	CRITICAL ANALYSIS OF KNOWLEDGE MANAGEMENT IN AGRICULTURE: A CASE OF RICE KNOWLEDGE MANAGEMENT PORTAL (RKMP)
<b>AGRICULTURAL PHYSICS</b>			
22	20512	Ms. ALKA RANI	MODELLING EVAPOTRANSPIRATION AND NITROGEN UPTAKE IN WHEAT CROP UNDER TILLAGE, RESIDUE AND NITROGEN MANAGEMENT
23	20513	BRIJESH YADAV	EFFECT OF REDUCED SOLAR RADIATION ON GROWTH AND YIELD OF WHEAT
24	20514	KOUSHIK BANERJEE	THERMAL IMAGE ANALYSIS OF WHEAT CROP GROWN UNDER MOISTURE STRESS CONDITION
<b>AGRICULTURAL STATISTICS</b>			
25	20515	Ms. PRIYANKA ANJOY	WAVELET METHODS FOR FORECASTING VOLATILE AGRICULTURAL COMMODITY PRICES
26	20516	KULDEEP ASWAL	DESIGNS FOR DIALLEL CROSS EXPERIMENTS INCORPORATING NEIGHBOUR EFFECTS
27	20517	GOPAL SAHA	DETECTION OF OUTLIERS IN LINEAR TIME SERIES IN AGRICULTURAL DATA
28	20518	AMIT SAHA	INTEGRATION OF SIMPLE EXPONENTIAL SMOOTHING WITH STATE SPACE FORMULATION
29	20519	SUBHRAJIT SATPATHY	SPLICE SITE PREDICTION IN AGRICULTURAL ORGANISMS BASED ON pre-mRNA SECONDARY STRUCTURE INFORMATION AND SEQUENCE BASED FEATURES
30	20520	NOBIN CHANDRA PAUL	STATISTICAL TECHNIQUES FOR DISCRIMINATION AND ACREAGE ESTIMATION OF FRUIT CROPS USING HYPERSPECTRAL SATELLITE DATA
<b>AGRONOMY</b>			
31	20523	Ms. KAVITA KUMARI	DETERMINING NITROGEN STATUS IN MAIZE (Zea mays L.) USING PLANT SENSORS UNDER VARIABLE NITROGEN AND SOIL MOISTURE REGIMES
32	20524	Ms. SHANTI DEVI BAMBORIYA	PLANTING AND NITROGEN MANAGEMENT IN PEARLMILLET UNDER CONSERVATION AGRICULTURE BASED PEARLMILLET MUSTARD CROPPING SYSTEM
33	20525	Ms. ANITA KUMAWAT	WATER AND NITROGEN MANAGEMENT IN DIRECT-SEEDED RICE
34	20526	BHARAT RAJ MEENA	NITROGEN MANAGEMENT UNDER CONSERVATION AGRICULTURE IN MAIZE (Zea mays L.)
35	20628	ROHULLAH	INTEGRATED CROP MANAGEMENT MODULES FOR ENHANCING PRODUCTIVITY AND PROFITABILITY OF SOYBEAN (Glycine max L.)

No.	ROLL NO	NAME OF THE STUDENT	Title of Thesis
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## BIOCHEMISTRY

- |    |       |                      |  |
|----|-------|----------------------|--|
| 36 | 20399 | SANDEEP KUMAR        | BIOCHEMICAL AND MOLECULAR STUDIES FOR ELUCIDATION OF THE ROLE OF ISOFLAVONES IN THE IMPROVEMENT OF FLAVOUR QUALITY OF SOYBEAN                                  |
| 37 | 20527 | ASHOK KUMAR          | EXPLORING RUBISCO ACTIVASE (RCA) GENE FROM WHEAT FOR AUGMENTING CARBON ASSIMILATORY PROCESS UNDER HEAT STRESS  |
| 38 | 20528 | SACHIDANAND TIWARI   | IDENTIFICATION, CLONING AND CHARACTERIZATION OF HEAT-INDUCED MAPK GENE(S) IN WHEAT ( <i>Triticum aestivum</i> L.) UNDER TERMINAL HEAT STRESS                   |
| 39 | 20529 | MAHESH KUMAR SAMOTA  | BIOTIC ELICITOR INDUCED BIOCHEMICAL AND MOLECULAR MANIFESTATIONS OF DROUGHT TOLERANCE IN CONTRASTING RICE ( <i>Oryza sativa</i> L.) GENOTYPES                  |
| 40 | 20530 | DAMALE RAHUL DEVIDAS | DROUGHT-INDUCED BIOCHEMICAL AND EPIGENETIC CHANGES AND THEIR ASSOCIATION WITH DROUGHT STRESS TOLERANCE IN CONTRASTING RICE ( <i>Oryza sativa</i> L.) GENOTYPES |

## BIOINFORMATICS

- |    |       |                        |  |
|----|-------|------------------------|--|
| 41 | 20531 | Ms. SOUMYA SHARMA      | IDENTIFICATION AND CHARACTERIZATION OF ENHANCED DISEASE SUSCEPTIBILITY1 (EDS1) IN <i>Solanum melongena</i> BY USING In silico ANALYSIS |
| 42 | 20532 | NALINI KANTA CHOUDHURY | AN IN-SILICO STUDY ON SYNTENY BETWEEN CATTLE AND BUFFALO GENOME  |
| 43 | 20533 | ANUBHAV ROY            | STUDY ON CHANGE-POINTS IN GENOMIC SEQUENCES  |
| 44 | 20534 | SANDEEP KUMAR VERMA    | DECIPHERING GENES ASSOCIATED WITH ROOT WILT BY TRANSCRIPTOMIC APPROACH IN COCONUT ( <i>Cocos nucifera</i> )                            |
| 45 | 20535 | BULBUL AHMED           | DEVELOPMENT OF TRANSCRIPTOME SIGNATURE OF DIFFERENT STAGES OF LAC INSECT ( <i>Kerria lacca</i> )                                       |

## COMPUTER APPLICATION

- |    |       |                          |  |
|----|-------|--------------------------|--|
| 46 | 20536 | MD ASHRAFUL HAQUE        | MOBILE APP FOR INFORMATION RETRIEVAL ON PEST AND DISEASE IN CROPS      |
| 47 | 20537 | Ms. SHBANA BEGAM         | WEB BASED INFORMATION SYSTEM OF GROUNDWATER RESOURCES                  |
| 48 | 20538 | PARVEZ MALLICK           | MOBILE APPLICATION FOR PLANT QUARANTINE REGULATIONS TO IMPORT IN INDIA |
| 49 | 20539 | Ms. SONICA PRIYADARSHINI | MOBILE APPLICATION FOR CHLOROPHYLL CONTENT ESTIMATION IN RICE          |

## ENTOMOLOGY

- |    |       |                    |  |
|----|-------|--------------------|--|
| 50 | 20541 | Ms. RAMYA N        | TAXONOMIC STUDIES OF THE GENUS MAIESTAS (Hemiptera:Cicadellidae) FROM INDIA  |
| 51 | 20542 | PADALA VINOD KUMAR | TAXONOMIC STUDIES ON WHITE GRUB SPECIES (Coleoptera:Scarabaeidae) ASSOCIATED WITH GROUNDNUT AND POTATO ECOSYSTEMS  |
| 52 | 20543 | Ms. LANEESHA M     | EFFECT OF THERMAL STRESS ON HOST INSECT PAPAYA MEALYBUG, <i>Paracoccus marginatus</i> WILLIAMS AND GRANARA DE WILLINK (Hemiptera: Pseudococcidae) ON ITS PARASITOID <i>Acerophagus papayae</i> NOVES AND SCHAUFF |
| 53 | 20544 | SOURAV SARKAR      | CHARACTERIZATION OF NATIVE BACILLUS THURINGIENSIS STRAINS AGAINST SPODOPTERA LITURA AND SPODOPTERA EXIGUA (Lepidoptera: Noctuidae)   |

No.	ROLL NO	NAME OF THE STUDENT	Title of Thesis
<b>ENVIRONMENTAL SCIENCES</b>			
54	20545	SOUMEN BHAR	YIELD AND PHOSPHORUS STATUS IN SOIL AND PLANT WITH ELEVATED CARBON DIOXIDE AND DIFFERENT PHOSPHORUS LEVELS IN TRANSPLANTED AND DIRECT-SEEDED RICE
55	20546	RANJEET KUMAR CHAURASIYA	STABILIZATION OF LEAD (Pb) IN CONTAMINATED SOIL USING ORGANIC AND INORGANIC AMENDMENTS
56	20547	JAYANTA THOKDAR	SIMULATING GROWTH AND DEVELOPMENT OF INDIAN SPINACH USING A DYNAMIC MODEL
57	20548	PAWAN KUMAR LONI	QUANTIFICATION OF AMMONIA VOLATILIZATION LOSSES FROM RICE UNDER DIFFERENT TEMPERATURE REGIMES
58	20614	SHAHABUDEN KHWAHANY	N <sub>2</sub> O EMISSION IN WHEAT WITH INTEGRATED USE OF BIOGAS SLURRY AND FERTILIZERS
59	20621	CHANDRA SHEKARA T.K.	GROWTH AND YIELD RESPONSE OF RICE TO DEPOSITION OF PARTICULATE MATTER
<b>FLORICULTURE AND LANDSCAPE ARCHITECTURE</b>			
60	20559	VARUN MALLAIAH HIREMATH	REGULATION OF LEAF AND PETAL SENESCENCE BY NON-ENZYMATIC ANTIOXIDANT ASCORBIC ACID IN CHRYSANTHEMUM [Chrysanthemum x morifolium Ramat.(Pro sp.)]
61	20561	ASHOK KUMAR PAIKARAY	PHENOTYPING OF MARIGOLD GENOTYPES FOR SALT TOLERANCE
62	20562	Ms. SHISA ULLAS P	PROFILING OF PIGMENTS AND THEIR ANTIOXIDANT ACTIVITIES IN CHRYSANTHEMUM(Chrysanthemum morifolium RAMAT.)
<b>FRUITS AND HORTICULTURAL TECHNOLOGY</b>			
63	20556	Ms. TANUSHREE SAHOO	EVALUATION OF GRAPE HYBRIDS AND THEIR PARENTS FOR MORPHO-PHYSICAL, NUTRACEUTICAL AND ANTIOXIDANT TRAITS
64	20557	KULDEEP SINGH	PERFORMANCE OF CITRUS ROOTSTOCK GENOTYPES AGAINST PHYTOPHTHORA NICOTIANAE
65	20563	KALU RAM	MORPHOLOGICAL AND MOLECULAR CHARACTERIZATION OF PAPAYA GENOTYPES
<b>GENETICS</b>			
66	20550	YANKAPPA UPPAR	GENETIC AND MOLECULAR MARKER ANALYSIS OF THERMOSENSITIVE MALE STERILITY IN RICE
67	20551	PRAHLAD NARAYAN SHARMA	STUDIES OF FERTILITY RESTORATION OF VARIOUS MALE STERILE CYTOPLASMS AND GENETIC DIVERSITY OF ELITE RESTORERS AND MAINTAINERS IN PEARL MILLET [Pennisetum glaucum (L). R. Br.]
68	20552	NITISH RANJAN PRAKASH	EVALUATION OF CHICKPEA (Cicer arietinum L.) LINES FOR TOLERANCE TO HERBICIDE
69	20553	PREM CHAND GYANI	INHERITANCE AND MOLECULAR MAPPING OF LEAF RUST RESISTANCE IN SYNTHETIC HEXAPLOID WHEAT, 'SYNTHETIC 45'
70	20554	SHYAM SUNDAR D	HAPLOTYPE ANALYSIS OF Phosphorus uptake 1 (Pup1) AND ITS RELATIONSHIP WITH PHOSPHORUS DEFICIENCY TOLERANCE IN RICE
71	20607	HA VAN GIOI	STUDYING THE EXPRESSION OF DROUGHT-RESPONSIVE CANDIDATE GENES IN MAIZE HYBRIDS

No.	ROLL NO	NAME OF THE STUDENT	Title of Thesis
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## MICROBIOLOGY

72	20566	AJAY KUMAR	NANOPARTICLE ASSISTED SACCHARIFICATION FOR BIOETHANOL PRODUCTION
73	20567	Ms. SWATI SAGAR	MOLECULAR ANALYSIS OF AMMONIA-OXIDISING MICROORGANISMS IN RICE MICROBIOME
74	20568	SHEKHAR KUMAR	FUNGAL MEDIATED SOLUBILIZATION OF ROCK PHOSPHATE USING AGRO-INDUSTRIAL RESIDUES
75	20624	DEEPAK KUMAR KOLI	IDENTIFICATION, CHARACTERIZATION AND EVALUATION OF NODULE ASSOCIATED BACTERIA FROM CHICKPEA

## MOLECULAR BIOLOGY AND BIOTECHNOLOGY

76	20569	Ms. PARICHITA PRIYADARSHINI	EXPRESSION PROFILING OF miRNAs IN WILT-RESISTANT AND - SUSCEPTIBLE GENOTYPES OF CHICKPEA
77	20570	Ms. ALKA BHARATI	EXPRESSION ANALYSIS OF TaDof1 GENE UNDER NITROGEN DEPRIVED CONDITION IN CONTRASTING WHEAT GENOTYPES
78	20571	Ms. SHARANI CHOUDHURY	ALLELE MINING OF PANICLE BLAST 1 (Pb1) GENE IN INDIAN RICE ACCESSIONS
79	20572	Ms. SREESHMA N	ALLELE MINING FOR DREB2A GENE ASSOCIATED WITH DROUGHT TOLERANCE IN INDIAN RICE COLLECTIONS
80	20573	Ms. JYOTSANA TILGAM	COMBINATORIAL SILENCING OF ACETYLCHOLINE ESTERASE AND 20-HYDROXY ECDYSONE RECEPTOR GENES FOR GRAM POD BORER ( <i>Helicoverpa armigera</i> ) RESISTANCE
81	20574	AWAKALE PRAMOD ATMARAM	CLONING AND EXPRESSION ANALYSIS OF <i>Brevis radix</i> (BRX) GENE FROM DIPLOID SPECIES OF WHEAT EXHIBITING BETTER ROOT TRAITS UNDER OSMOTIC STRESS

## NEMATOLOGY

82	20575	VINAYKUMAR B K	EVALUATION OF <i>Trichoderma virens</i> (MILLER, GIDDENS AND FOSTER) VON ARX AGAINST ROOT-KNOT NEMATODE, <i>Meloidogyne incognita</i> INFECTING TOMATO CV PUSA RUBY
83	20576	VINOD S	CHARACTERIZATION OF CYST FORMING NEMATODES <i>Heterodera</i> spp. FROM KANGRA AND KULLU DISTRICTS OF HIMACHAL PRADESH
84	20577	DASH MANORANJAN PITABAS	IN SILICO IDENTIFICATION, CHARACTERIZATION AND FUNCTIONAL VALIDATION OF NEUROPEPTIDE-LIKE PROTEIN (nips) GENES FROM MELOIDOGYNE INCOGNITA
85	20623	DEVARAJA K.P.	COMPARATIVE INFECTIVITY OF ROOT-KNOT NEMATODE ( <i>Meloidogyne graminicola</i> ) IN DIRECT SEEDED RICE GENOTYPES ( <i>Oryza sativa</i> L.)

## PLANT GENETIC RESOURCES

86	20579	KUWARDADRA SAHADEO INDALDAS	STRATEGY FOR MONITORING ADVENTITIOUS PRESENCE OF TRANSGENES IN MAIZE COLLECTIONS EMPLOYING DIFFERENT GM DIAGNOSTIC ASSAYS
87	20580	SHIVAM KUMAR	GENETIC DIVERSITY IN INDIAN COTTON ( <i>Gossypium hirsutum</i> L.) CULTIVARS USING MICROSATELLITE MARKERS AND COMPARISON OF DIVERSITY PATTERNS
88	20581	HARI PRASATH S	VARIABILITY STUDIES IN MORPHOLOGICAL AND BIOCHEMICAL CHARACTERS OF SELECTED GERMPLASM LINES OF FABA BEAN ( <i>Vicia faba</i> L.)
89	20582	SHYAM KUMAR	DETECTION OF BANANA ( <i>Musa</i> spp.) VIRUSES In Vitro CULTURES AND STUDIES ON VIRUS ELIMINATION USING CRYOTHERAPY

No.	ROLL NO	NAME OF THE STUDENT	Title of Thesis
<b>PLANT PATHOLOGY</b>			
90	20583	SAURABH KUMAR DUBEY	GENETIC MANIPULATION IN THE GENOME OF Soybean yellow mottle mosaic virus (SYMMV) AND INFECTIVITY ANALYSIS FOR EXPLORING ITS POTENTIALITY AS A TRANSIENT GENE DELIVERY SYSTEM
91	20584	Ms. RAMYASHREE DEVI G S	CHARACTERIZATION AND IDENTIFICATION OF SPECIES AND RACES OF <i>Xanthomonas</i> ASSOCIATED WITH BACTERIAL LEAF SPOT OF PEPPER
92	20585	Ms. VEENA K H	RESPONSE OF CANDIDATE PATHOGENICITY GENES OF <i>Colletotrichum orbiculare</i> INCITING CUCUMBER ANTHRACNOSE TO OXIDATIVE STRESS AND PLANT PHENOLICS
93	20586	SUNIL KUMAR SUNANI	UNDERSTANDING THE SEED BORNE INFECTION OF <i>Fusarium fujikuroi</i> INCITING BAKANAIE DISEASE OF RICE
94	20587	RUBIN DEBBARMA	POLYPHASIC TAXONOMY FOR SPECIES DELINEATION OF GENUS <i>Penicillium</i>
<b>PLANT PHYSIOLOGY</b>			
95	20588	NITIN SHARMA	PHYSIOLOGICAL RESPONSE OF RICE GENOTYPES TO HIGH NIGHT TEMPERATURE
96	20589	Ms. SHAMIMA PARVEEN	SENESCENCE INDUCED IRON REMOBILIZATION IN BREAD AND DURUM WHEAT
97	20590	Ms. LAKSHMI RAJ	INTERACTIVE EFFECTS OF HIGH[CO <sub>2</sub> ] AND TEMPERATURE ON microRNA MEDIATED PHOSPHORUS STARVATION TOLERANCE IN RICE
98	20591	MAHESH MEENA	IMAGE BASED PHENOTYPING OF CROP GROWTH IN WHEAT
<b>POST HARVEST TECHNOLOGY</b>			
99	20592	Ms. SHAGHAF KAU KAB	DEVELOPMENT OF RECONSTITUTED RICE
100	20593	Ms. SMRUTHI JAYARAJAN	INFLUENCE OF ETHYLENE ABSORBENTS AND NITRIC OXIDE ON SHELF LIFE AND POSTHARVEST QUALITY OF NECTARINE
101	20594	GAJANAN GUNDEWADI	EFFECT OF BASIL OIL BASED NANOEMULSION COATING ON SHELF LIFE AND SPOILAGE OF OKRA
102	20595	PUNEET KUMAR	STUDIES ON THERMAL PROCESSING OF SOYBEAN
<b>SEED SCIENCE AND TECHNOLOGY</b>			
103	20596	PRAVEEN S PATTED	IMPACT OF ASCOCHYTA BLIGHT OF CHICKPEA ON SEED QUALITY AND DEVELOPMENT OF SCAR MARKER
104	20597	RAVI BHUSHAN PRASAD	IMPACT OF HEAT STRESS ON SEED QUALITY AND ITS MITIGATION THROUGH SEED ENHANCEMENT IN WHEAT VARIETIES ( <i>Triticum aestivum</i> )
105	20598	DHANUSH K S	COMPARATIVE EVALUATION OF DIFFERENT SEED PRIMING TECHNIQUES FOR ENHANCING PLANTING VALUE IN ONION ( <i>Allium cepa</i> L.)
106	20599	DAMODAR DAS	STUDIES ON BIOCHEMICAL VARIABILITY AND SEED QUALITY PARAMETERS IN QUALITY INDIAN MUSTARD GENOTYPES
107	20600	SANJAY KUMAR	ASSESSMENT OF PHYSIOLOGICAL SEED QUALITY IN CAULIFLOWER AND RADISH SEED LOTS

No.	ROLL NO	NAME OF THE STUDENT	Title of Thesis
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## SOIL SCIENCE AND AGRICULTURAL CHEMISTRY

- |     |       |                    |  |
|-----|-------|--------------------|--|
| 108 | 20601 | AVIJIT GHOSH       | LONG-TERM FERTILIZATION EFFECTS ON SOIL AGGREGATION AND CARBON POOLS UNDER WHEAT BASED CROPPING SYSTEMS IN TWO SOILS   |
| 109 | 20602 | AMRESH CHAUDHARY   | DYNAMICS OF SOIL ORGANIC CARBON AND AVAILABLE NUTRIENTS IN MAIZE BASED CROPPING SYSTEMS UNDER CONSERVATION AGRICULTURE |
| 110 | 20603 | CHIRANJEEV KUMAWAT | IMPACT OF RESIDUE MANAGEMENT ON PHOSPHORUS TRANSFORMATION UNDER MAIZE-WHEAT CROPPING SYSTEM                            |
| 111 | 20604 | ANIL KUMAR VERMA   | AVAILABILITY AND UPTAKE OF METALS IN SLUDGE TREATED AND POLLUTED SOILS   |

## VEGETABLE SCIENCE

- |     |       |                    |  |
|-----|-------|--------------------|--|
| 112 | 20555 | Ms. B VANLALNEIHI  | BIOCHEMICAL AND MOLECULAR CHARACTERIZATION OF GENOTYPES IN CAULIFLOWER ( <i>Brassica oleracea</i> var. <i>botrytis</i> L.)                         |
| 113 | 20558 | SIDDHAROOD MARAGAL | STUDIES ON EFFECT OF PLANTING TIME AND FERTILIZER DOSES ON GROWTH, YIELD AND QUALITY OF CUCUMBER AND BITTER GOURD GROWN UNDER PROTECTED STRUCTURES |
| 114 | 20560 | JAYANTA JAMATIA    | MORPHOLOGICAL AND MOLECULAR CHARACTERIZATION OF <i>Citrullus</i> SPECIES AND STUDIES OF INTER- SPECIFIC HYBRIDIZATION                              |
| 115 | 20564 | GURURAJ MATHPATI   | STUDIES ON HAPLOIDISATION IN SHORT DAY ONION ( <i>Allium cepa</i> L.)  |

## WATER SCIENCE AND TECHNOLOGY

- |     |       |                |  |
|-----|-------|----------------|--|
| 116 | 20605 | RAGHUKUMAR A S | POTENTIAL OF PLANT BASED BIO ADSORBENTS FOR HEAVY METAL REMOVAL FROM WASTEWATERS                                   |
| 117 | 20606 | VIKASH KUMAR   | WATER PRODUCTIVITY AND YIELD ASSESSMENT OF RICE GROWN UNDER DIFFERENT METHODS OF ESTABLISHMENT AND NITROGEN LEVELS |
| 118 | 20618 | ALI MOHAMMAD   | WATER BALANCE AND SIMULATION OF RICE PRODUCTIVITY IN CONSERVATION AGRICULTURE BASED DIRECT SEEDED RICE             |
| 119 | 20620 | NAQIBULLAH     | WATER BALANCE AND LEGUME PRODUCTIVITY UNDER DIFFERENT MOISTURE CONSERVATION PRACTICES IN RAINFED AGRI-HORTI SYSTEM |





List of candidates who have successfully completed all the requirements including final viva-voce examination for the award of degree of Doctor of Philosophy as on 29/11/2016

No.	ROLL NO	NAME OF THE STUDENT	Title of Thesis
<b>AGRICULTURAL CHEMICALS</b>			
1	10225	NEERAJ KUMAR	PREPARATION OF NANO-FIPRONIL AND NANO-PRETELACHLOR AND THEIR BIO-EFFICACY EVALUATION
<b>AGRICULTURAL ECONOMICS</b>			
2	9774	Ms. LISA MARIAM VARKEY	INVESTMENT AND POLICY IMPERATIVES FOR SUSTAINABLE DEVELOPMENT OF KUTTANAD WETLAND ECOSYSTEM (KWE) OF KERALA
3	9779	HARISH KUMAR K.	MARKETING AND PRICE BEHAVIOUR OF AND IMPACT OF MARKET REFORMS ON HORTICULTURAL COMMODITIES IN KARNATAKA
<b>AGRICULTURAL ENGINEERING</b>			
4	9627	VARUN CHATURVEDI	MODELLING AND SIMULATION OF HAND-ARM VIBRATION OF OPERATOR IN POWER TILLER OPERATION
5	9783	PANDIRWAR ASHUTOSH PRADEEP	DESIGN AND DEVELOPMENT OF MECHANICAL TRANSPLANTER FOR ONION SEEDLINGS
6	9928	SHIDDANAGOUDA YADACHI	STUDIES ON THE EFFECTS OF ROTARY TILLAGE ON SOIL PHYSICAL PROPERTIES AND CROP RESPONSE
7	10076	PITTALA RAJIAH	DESIGN AND DEVELOPMENT OF PRECISION PLANTER FOR DIRECT PADDY SEEDING
<b>AGRICULTURAL EXTENSION</b>			
8	9939	PANKAJ KUMAR SINHA	ASSESSMENT OF CAPACITY BUILDING PROGRAMMES OF RUDSETI FOR SELF-EMPLOYMENT AMONG RURAL YOUTH
9	10242	Ms. JAGRITI ROHIT	MAPPING AND FORECASTING OF COMPETENCIES FOR EXTENSIONISTS IN CHANGING AGRICULTURAL SCENARIO
10	10243	Ms. HEMA BALIWADA	FARMER-LED INNOVATIONS AND THEIR TECHNO-ECONOMIC FEASIBILITY FOR SCALING UP
11	10247	Ms. ANSHIDA BEEVI C.N.	AN ANALYTICAL STUDY ON JOB PERFORMANCE OF WOMEN EXTENSION PERSONNEL IN KERALA
12	10366	Ms. BUSHE LEKANG	AN ASSESSMENT OF THE EXPERIENTIAL LEARNING PROGRAMME OF INDIAN COUNCIL OF AGRICULTURAL RESEARCH FOR ENTREPRENEURIAL DEVELOPMENT
<b>AGRICULTURAL PHYSICS</b>			
13	10085	BAPPA DAS	CHARACTERIZATION OF WATER-DEFICIT STRESS RESPONSE OF PLANTS THROUGH HYPERSPECTRAL REMOTE SENSING
<b>AGRICULTURAL STATISTICS</b>			
14	10253	PRADIP BASAK	USE OF CALIBRATION APPROACH FOR ESTIMATION OF FINITE POPULATION REGRESSION COEFFICIENT INVOLVING TWO-STAGE SAMPLING DESIGN
15	10257	HIMADRI SHEKHAR ROY	STUDY OF NONLINEAR STATISTICAL MODELS FOR PEST POPULATION DYNAMICS IN NORTHERN REGION OF INDIA

No.	ROLL NO	NAME OF THE STUDENT	Title of Thesis
<b>AGRONOMY</b>			
16	10263	RAKESH KUMAR VERMA	INTEGRATED NUTRIENT MANAGEMENT IN DIRECT SEEDED BASMATI RICE (ORYZA SATIVA L.)- BASED CROPPING SYSTEMS
17	10365	Ms. FIREHIWOT ENDALE MERGYA	CROP RESIDUE AND NITROGEN MANAGEMENT IN MAIZE(Zea mays L.) - WHEAT [Triticum aestivum (L.) emend. Fiori & Paol] CROPPING SYSTEM UNDER CONSERVATION AGRICULTURAL PRACTICES
<b>BIOCHEMISTRY</b>			
18	9819	M.S. SUJITHKUMAR	ELUCIDATION OF THE ROLE OF PHYTOSTEROLS IN DROUGHT TOLERANCE IN RICE (Oryza sativa L.)
19	10269	MANOJ KUMAR	ANTHOCYANINS AS INGREDIENT FOR FOOD INDUSTRY: STRATEGY FOR EXTRACTION, FUNCTIONAL CHARACTERIZATION AND ENHANCED STABILITY
<b>ENTOMOLOGY</b>			
20	9824	ANIL KUMAR CHOLLA	STUDIES ON RESISTANCE MECHANISMS AND IDENTIFICATION OF MOLECULAR MARKER(S) LINKED TO Chilo Partellus (LEPIDOPTERA: PYRALIDAE) RESISTANCE IN MAIZE
<b>ENVIRONMENTAL SCIENCES</b>			
21	10120	FAYAZ AHMAD MALLA	METHANE ENRICHMENT IN BIOGAS USING SELECTIVE CHEMICAL SCAVENGERS AND MICROALGAE
22	10367	LARRY CHIKUKURA	IMPACT OF CLIMATE CHANGE AND WATER STRESS ON MUNG BEAN-WHEAT CROPPING SYSTEM
<b>GENETICS</b>			
23	9681	Ms. YADAV PRACHI SHRIPATRAO	INTERACTION AMONG WNT 4, WNT 6 AND WNT 10 SIGNALING GENES IN Drosophila melanogaster
24	9974	Ms. HARITHA BOLINEDI	GENETIC, MOLECULAR AND BIOCHEMICAL ANALYSIS OF BACKCROSS DERIVED TRANSGENIC GOLDEN RICE LINES IN THE BACKGROUND OF A MEGA RICE VARIETY SWARNA
25	9975	RANJITH KUMAR ELLUR	MARKER ASSISTED BACKCROSS BREEDING FOR INCORPORATION OF NOVEL BACTERIAL BLIGHT RESISTANCE gene Xa38 IN PUSA BASMATI 1121
26	10129	ABDUL FIYAZ R.	QTL MAPPING FOR RESISTANCE TO BAKANAIE DISEASE IN RICE (Oryza sativa L.)

No.	ROLL NO	NAME OF THE STUDENT	Title of Thesis
<b>HORTICULTURE</b>			
27	9699	P. MUTHUKUMAR	GENETICS OF YIELD AND ITS COMPONENTS AND MARKER ASSISTED INTROGRESSION OF 'Or' GENE FOR ENHANCING $\beta$ -CAROTENE IN CAULIFLOWER
28	9850	Ms. FLEMINE XAVIER	INHERITANCE OF YIELD AND QUALITY TRAITS AND INTERSPECIFIC HYBRIDISATION IN OKRA ( <i>Abelmoschus esculentus</i> (L.) MOENCH
29	9992	NARENDRA CHAUDHARY	STUDIES ON THE EFFECT OF GROWING ENVIRONMENT AND MEDIA COMPOSITION ON GROWTH, FLOWERING AND BULB PRODUCTION IN <i>Lilium</i>
30	9997	KAMLESH KUMAR	DNA MARKER-BASED DIFFERENTIATION OF ZYGOTIC AND NUCELLAR SEEDLINGS AND IDENTIFICATION OF POLYMORPHIC MICROSATELLITE MARKERS AMONG PARENTAL MANGO GENOTYPES
31	10002	Ms. TSHERING LHAMU BHUTIA	GENETICS OF YIELD TRAITS AND DOWNY MILDEW RESISTANCE IN CUCUMBER ( <i>Cucumis sativus</i> L.)
32	10004	MOHAMED IBRAHIM ABDELHAY FARAG	PHYSIOLOGICAL AND GENETIC STUDIES ON DROUGHT TOLERANCE AND GENERATION MEAN ANALYSIS FOR YIELD RELATED TRAITS IN CUCUMBER ( <i>Cucumis sativus</i> L.)
33	10299	SHIV LAL	IDENTIFICATION OF GENOMIC REGIONS FOR ALTERNATE BEARING AND FRUIT QUALITY TRAITS IN MANGO ( <i>Mangifera indica</i> L.)
<b>MOLECULAR BIOLOGY AND BIOTECHNOLOGY</b>			
34	10059	BHUPENDRA SINGH PANWAR	ISOLATION OF cry GENE(S) FROM <i>Bacillus thuringiensis</i> (BT) ISOLATES RECOVERED FROM DIVERSE HABITATS IN INDIA FOR THE CONTROL OF LEPIDOPTERAN INSECT PESTS
<b>NEMATOTOLOGY</b>			
35	10020	PRAKASH BANAKAR	CHARACTERIZATION OF KEY RNAi PATHWAY GENES AND TO ESTABLISH THE FUNCTIONAL SIGNIFICANCE OF FMRF AMIDE LIKE PEPTIDE GENES IN THE LIFE CYCLE OF <i>Meloidogyne incognita</i>
<b>PLANT PATHOLOGY</b>			
36	10032	NEELAKANTH HIREMANI	VIRULENCE AND GENETIC DIVERSITY ANALYSIS OF <i>Fusarium oxysporum</i> f.sp. <i>lentis</i> ISOLATES CAUSING WILT IN LENTIL
37	10330	KARTAR SINGH	CROSS INFECTIVITY AND COMPARATIVE GENOMICS OF <i>Bipolaris sorokiniana</i> AND <i>Bipolaris oryzae</i> FOR CHARACTERIZATION OF PATHOGENICITY RELATED GENES IN WHEAT AND RICE
<b>PLANT PHYSIOLOGY</b>			
38	9884	RAMESH, K V.	TRANSCRIPTOME ANALYSIS OF HIGH TEMPERATURE STRESS RESPONSE IN CONTRASTING RICE ( <i>Oryza sativa</i> L.) GENOTYPES
39	9886	PRASHANTKUMAR S. HANJAGI	INTERACTIVE REGULATION OF NITROGEN, IRON AND ZINC USE EFFICIENCY IN WHEAT ( <i>Triticum aestivum</i> L.)
40	10034	Ms. SHIVANI NAGAR	REGULATORY ROLE OF GIBBERELLIC ACID UNDER HIGH TEMPERATURE STRESS IN WHEAT ( <i>Triticum aestivum</i> L.)

No.	ROLL NO	NAME OF THE STUDENT	Title of Thesis
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### POST HARVEST TECHNOLOGY

41	9740	KALE SAKHARAM JAGAN	PARBOILING OF PUSA BASMATI 1121 FOR HIGHER RETENTION OF AMYLOSE CONTENT AND PROCESS MODELLING USING NEURAL NETWORK
42	10040	Ms. SHAMEENA BEEGUM P.P.	OPTIMIZATION OF PROCESSING TECHNIQUES FOR UTILIZATION OF WATERMELON ( <i>Citrullus lanatus</i> )
43	10041	MURALI S.	ENCAPSULATION OF RICE BRAN OIL
44	10182	PANKAJ KUMAR KANNAUJIA	APPROACHES TO EXTEND SHELF-LIFE, MINIMIZE WATER LOSS, CHILLING INJURY AND STORAGE DISEASES IN SUMMER SQUASH ( <i>Cucurbita pepo</i> L.)
45	10184	Ms. PATIL SHARMILA SURESH	IMPACT OF EXTRUSION PROCESSING ON SELECTED CEREALS AND LEGUMES: ANTIOXIDANT AND RHEOLOGICAL INSIGHTS FOR NEW PRODUCT DEVELOPMENT

### SOIL SCIENCE AND AGRICULTURAL CHEMISTRY

46	10194	RANJAN PAUL	INTERACTION OF SOIL NANOCCLAY WITH PHOSPHATASE IN RELATION TO PHOSPHORUS MINERALIZATION
47	10199	SHIVA NATH SUMAN	CLAY-HUMUS STABILITY IN SOILS UNDER CONSERVATION AGRICULTURE
48	10353	Ms. KIRTI SAURABH	NANOCCLAY POLYMER COMPOSITES WITH BIODEGRADABLE POLYMERS FOR CONTROLLED RELEASE OF NITROGEN IN RICE AND WHEAT CROPS

### WATER SCIENCE AND TECHNOLOGY

49	9907	SUNIL KUMAR	EFFECT OF CONSERVATION AGRICULTURE PRACTICES AND IRRIGATION SCHEDULING ON WATER USE AND PRODUCTIVITY OF MAIZE-WHEAT CROPPING SYSTEM
50	10369	DEFO CELESTIN	MODELLING HEAVY METAL ADSORPTION AND PLANT UPTAKE IN VERTICAL SUB-SURFACE FLOW SEWAGE TREATMENT WETLANDS OF INDIAN AGRICULTURAL RESEARCH INSTITUTE

Allocation of seats for Ph.D. programme for the Academic Year 2017-18

Sl. No.	Discipline	GEN	OBC	SC	ST	PH	Total
<b>A. IARI, New Delhi</b>							
1.	AGRICULTURAL CHEMICALS	3	2	1	-	-	6
2.	AGRICULTURAL ECONOMICS	2	1	1	1	-	5
3.	AGRICULTURAL ENGG. (Agricultural Processing & Structure)	1	-	-	-	-	1
4.	AGRICULTURAL ENGG. (Farm Power & Equipment)	2	1	1	-	-	4
5.	AGRICULTURAL ENGG. (Soil & Water Conservation Engineering)	2	1	-	-	-	3
6.	AGRICULTURAL EXTENSION	3	1	1	1	(1)	6
7.	AGRICULTURAL PHYSICS	3	1	-	1	-	5
8.	AGRICULTURAL STATISTICS	4	2	1	1	(1)	8
9.	AGRONOMY	4	2	1	1	-	8
10.	BIOCHEMISTRY	3	1	1	-	-	5
11.	BIOINFORMATICS	2	-	1	1	-	4
12.	COMPUTER APPLICATION	3	2	-	-	-	5
13.	ENTOMOLOGY	2	1	1	1	-	5
14.	ENVIRONMENTAL SCIENCES	3	1	1	-	-	5
15.	FLORICULTURE AND LANDSCAPING ARCHITECTURE	2	-	-	1	-	3
16.	FRUIT SCIENCE	2	2	1	-	-	5
17.	GENETICS AND PLANT BREEDING	4	4	2	1	(1)	11
18.	MICROBIOLOGY	2	2	1	1	-	6
19.	MOLECULAR BIOLOGY AND BIOTECHNOLOGY	4	2	1	-	-	7
20.	NEMATOLOGY	2	2	-	-	-	4
21.	PLANT GENETIC RESOURCES	3	1	1	-	-	5
22.	PLANT PATHOLOGY	4	2	2	1	(1)	9
23.	PLANT PHYSIOLOGY	3	2	1	-	-	6
24.	POST HARVEST TECH. (PHT of Horticultural Crops)	2	-	1	-	-	3
25.	POST HARVEST TECH. (Post Harvest Engineering & Technology)	1	1	-	-	-	2
26.	SEED SCIENCE AND TECHNOLOGY	3	2	1	-	-	6
27.	SOIL SCIENCE AND AGRICULTURAL CHEMISTRY	5	2	1	1	(1)	9
28.	VEGETABLE SCIENCE	2	2	1	-	-	5
29.	WATER SCIENCE AND TECHNOLOGY	3	2	-	-	-	5
<b>Total-A</b>		<b>79</b>	<b>42</b>	<b>23</b>	<b>12</b>	<b>(5)</b>	<b>156</b>
<b>B. CIAE, Bhopal</b>							
a.	AGRICULTURAL ENGG. (Agricultural Processing & Structure)	3	1	1	1	(1)	6
b.	AGRICULTURAL ENGG. (Farm Power & Equipment)	3	2	1	-	-	6
<b>Total-B</b>		<b>6</b>	<b>3</b>	<b>2</b>	<b>1</b>	<b>(1)</b>	<b>12</b>
<b>C. IIHR, Bangalore</b>							
a.	FLORICULTURE AND LANDSCAPING ARCHITECTURE	2	1	-	-	-	3
b.	FRUIT SCIENCE	2	2	-	-	-	4
c.	POST HARVEST TECH. (PHT of Horticultural Crops)	2	1	1	-	-	4
d.	VEGETABLE SCIENCE	2	1	1	1	(1)	5
<b>Total-C</b>		<b>8</b>	<b>5</b>	<b>2</b>	<b>1</b>	<b>(1)</b>	<b>16</b>
<b>Grand Total</b>		<b>93</b>	<b>50</b>	<b>27</b>	<b>14</b>	<b>(7)</b>	<b>184</b>



Allocation of seats for M.Sc./M.Tech. programmes for the Academic Year 2017-18

Sl. No.	Discipline	GEN	OBC	SC	ST	PH	Total
<b>A. IARI, New Delhi</b>							
1.	AGRICULTURAL CHEMICALS	2	1	1	-	-	4
2.	AGRICULTURAL ECONOMICS	3	1	-	-	-	4
3.	AGRICULTURAL ENGG. (Agricultural Processing & Structure)	2	-	-	-	-	2
4.	AGRICULTURAL ENGG. (Farm Power & Equipment)	2	1	-	-	-	3
5.	AGRICULTURAL ENGG. (Soil & Water Conservation Engineering)	2	-	1	-	-	3
6.	AGRICULTURAL EXTENSION	2	2	1	1	(1)	6
7.	AGRICULTURAL PHYSICS	3	1	-	-	-	4
8.	AGRICULTURAL STATISTICS	2	2	2	1	(1)	7
9.	AGRONOMY	2	1	1	1	(1)	5
10.	BIOCHEMISTRY	2	1	-	1	-	4
11.	BIOINFORMATICS	2	1	1	1	(1)	5
12.	COMPUTER APPLICATION	3	2	1	-	-	6
13.	ENTOMOLOGY	3	1	1	-	-	5
14.	ENVIRONMENTAL SCIENCES	3	2	1	-	-	6
15.	FLORICULTURE AND LANDSCAPING ARCHITECTURE	3	-	-	-	-	3
16.	FRUIT SCIENCE	2	1	-	1	-	4
17.	GENETICS AND PLANT BREEDING	3	2	1	-	-	6
18.	MICROBIOLOGY	2	2	1	-	-	5
19.	MOLECULAR BIOLOGY AND BIOTECHNOLOGY	2	2	2	1	(1)	7
20.	NEMATOLOGY	2	1	1	-	-	4
21.	PLANT GENETIC RESOURCES	2	1	1	-	-	4
22.	PLANT PATHOLOGY	4	2	1	1	-	8
23.	PLANT PHYSIOLOGY	2	2	1	-	-	5
24.	POST HARVEST TECH. (PHT of Horticultural Crops)	1	1	-	1	-	3
25.	POST HARVEST TECH. (Post Harvest Engineering & Technology)	1	-	-	-	-	1
26.	SEED SCIENCE AND TECHNOLOGY	3	2	1	-	-	6
27.	SOIL SCIENCE AND AGRICULTURAL CHEMISTRY	3	1	-	-	-	4
28.	VEGETABLE SCIENCE	2	2	1	-	-	5
29.	WATER SCIENCE AND TECHNOLOGY	2	1	-	1	-	4
<b>Total-A</b>		<b>67</b>	<b>36</b>	<b>20</b>	<b>10</b>	<b>(5)</b>	<b>133</b>
<b>B. IARI, Assam</b>							
a.	AGRONOMY	1	1	-	-	-	2
b.	GENETICS AND PLANT BREEDING	2	1	-	-	-	3
c.	SOIL SCIENCE AND AGRICULTURAL CHEMISTRY	1	-	1	-	-	2
d.	VEGETABLE SCIENCE	1	1	-	-	-	2
e.	WATER SCIENCE AND TECHNOLOGY	1	-	-	1	-	2
<b>Total-B</b>		<b>6</b>	<b>3</b>	<b>1</b>	<b>1</b>	<b>-</b>	<b>11</b>
<b>C. IARI, Jharkhand</b>							
a.	AGRONOMY	1	-	1	-	-	2
b.	GENETICS AND PLANT BREEDING	1	1	1	-	-	3
c.	SOIL SCIENCE AND AGRICULTURAL CHEMISTRY	1	-	-	1	-	2
d.	VEGETABLE SCIENCE	1	1	-	-	-	2
e.	WATER SCIENCE AND TECHNOLOGY	1	1	-	-	-	2
<b>Total-C</b>		<b>5</b>	<b>3</b>	<b>2</b>	<b>1</b>	<b>-</b>	<b>11</b>
<b>Grand Total</b>		<b>78</b>	<b>42</b>	<b>23</b>	<b>12</b>	<b>(5)</b>	<b>155</b>

**Qualification for Admission to M.Sc./M.Tech. and Ph.D. degree programme in different discipline at IARI, New Delhi during 2017-18 session**

S. No.	Discipline	For M.Sc./M.Tech.	For Ph.D.
		Bachelor's Degree in	Proposed qualification - M.Sc./M.Sc.(Ag)/ M.Tech./M.E. in
1.	Agricultural Chemicals	Agriculture / Horticulture / Forestry	Agricultural Chemicals / Soil Science and Agricultural Chemistry / Environmental Science / Chemistry
2.	Agricultural Economics	Agriculture / Dairy Science / Veterinary Science / Animal Husbandry / Fisheries	Agricultural Economics / Dairy Economics/ Livestock Economics/ Agricultural Marketing and Cooperation/ Fisheries Economics/Environmental Economics
3.	Agricultural Engineering	Agricultural Engineering / B.Tech / B.E.	Agricultural Engineering / Dairy Engineering / Water Science and Technology ; M.Sc. in Dairy Engineering and M.Tech. in PHT Engg./Farm Engg./Biochemical Engg. are eligible for Ph.D. in Agricultural Processing and Structures (Pre-requisite; B.Sc. / B.Tech. / B.E. in Agricultural Engineering)
4.	Agricultural Extension	B.Sc. or B.Sc. in Agriculture / Dairy Science / Veterinary Science / Animal Husbandry / Fisheries	Agricultural Extension / Extension Education / Dairy Extension / Fisheries Extension / Livestock Extension/ Home Science Extension/Agricultural Extension and Communication/ Veterinary and Animal Husbandry Extension/Rural Development/Rural Management
5.	Agricultural Physics	B.Sc. or B.Sc. in Agriculture / Horticulture	Agricultural Physics / Soil Science / Agricultural Meteorology / Meteorology / Physics / Biophysics / Water Science and Technology/ Geo-informatics/Remote Sensing/Geo-physics/ Environmental Science
6.	Agricultural Statistics	B.Sc. or B.Sc. in Agriculture / Horticulture / Dairy Science/Vet. Science/Animal Husbandry/Fisheries	Agricultural Statistics / Statistics / Mathematical Statics / Bio-Statistics
7.	Agromony	Agriculture	Agromony / Water Science and Technology/Water Management
8.	Biochemistry	B.Sc. or B.Sc. in Agriculture / Horticulture	Biochemistry / Agricultural Biochemistry / Agricultural Chemistry / Molecular Biology and / OR Biotechnology / Chemistry with Organic Chemistry as a special subject/ Plant Physiology/Biophysics
9.	Bioinformatics	B.Sc. in any discipline of Science	M.Sc./M.Sc.(Ag)/M.Tech./M.E. in Bioinformatics/ OR Molecular Biology/ Biotechnology / Computer Sciences/ Computer Application/ Agri.- Informatics/Agricultural Statistics/ Statistics/ Mathematical Statistics/ Bio-Statistics with Bioinformatics as a subject in their Post- Graduation degree
10.	Computer Application	Agriculture / Computer Science / Agricultural Engineering, B.Sc. (Hort.), Veterinary Science, B.Sc.(Forestry) or B.Sc. with Maths / Statistics / Physics / Biology	M.Sc./MCA/M.Tech./M.E. in Computer Science/ Computer Application/ Computer Engineering/ Computer Science Engineering/ Information Technology/Agri.- informatics
11.	Entomology	B.Sc. or B.Sc. in Agriculture / Horticulture / Forestry / Agroforestry / Sericulture	Entomology / Agricultural Entomology / Sericulture/Apiculture /Zoology or Plant Protection with Entomology as specialization

S. No.	Discipline	For M.Sc./M.Tech.	For Ph.D.
		Bachelor's Degree in	Proposed qualification - M.Sc./M.Sc.(Ag.) / M.Tech./M.E. in
12.	Environmental Sciences	B.Sc. or B.Sc. in Agriculture / Horticulture / Forestry / Agro Forestry/Agricultural Engineering	M.Sc./M.Sc.(Ag.)/M.Tech./M.E. in Agricultural Sciences/ Environmental Sciences/ Physical Sciences/ Life Sciences/ Chemical Sciences
13.	Floriculture and Landscape Architecture	Horticulture / Agriculture	Horticulture or Agriculture with major in Floriculture / Floriculture and Landscaping/Floriculture and Landscape Architecture/Post Harvest Technology of Horticultural Crops / Genetics and / OR Plant Breeding / Plant Genetic Resources / Plant Physiology / Crop Physiology with specialisation in Floriculture
14.	Fruit Science	Horticulture / Agriculture	Horticulture or Agriculture with major in Fruit Science, Pomology / Genetics and / OR Plant Breeding / Plant Genetic Resources / Plant Physiology with specialisation in any of above discipline of Fruit Science
15.	Genetics	B.Sc. or B.Sc. in Agriculture / Horticulture / Forestry	Genetics and / OR Plant Breeding / Plant Genetic Resources / Agril. Botany/any other branch of Biological Sciences with Plant Genetics and / OR Plant Breeding as a subject
16.	Microbiology	B.Sc. or B.Sc. in Agriculture / Microbiology / Horticulture	Microbiology / Agricultural Microbiology/Environmental Microbiology/Industrial Microbiology / Soil Science and / OR Agricultural Chemistry / Genetics / Botany / Agricultural Botany / Molecular Biology and / OR Biotechnology / Relevant Life Sciences / Biochemistry with Microbiology as a special subject
17.	Molecular Biology and Biotechnology	B.Sc. or B.Sc. in Agriculture / Horticulture / Forestry / Sericulture / Biotechnology	Molecular Biology and / OR Biotechnology / Biochemistry / Plant Physiology/Genetic Engg./Agricultural Biochemistry / Botany / Agricultural Botany / Genetics and / OR Plant Breeding / Microbiology / Agricultural Microbiology / Plant Genetic Resources/Bioinformatics/Relevant Life Sciences.
18.	Nematology	B.Sc. or B.Sc. in Agriculture / Horticulture / Forestry / Biotechnology	Nematology / Entomology / Zoology / Botany / Mycology and / OR Plant Pathology / Relevant Life Sciences / Molecular Biology and / OR Biotechnology / Plant Protection with Nematology as specialization/ Agricultural Entomology/ Agricultural Microbiology/ Helminthology with Nematology
19.	Plant Genetic Resources	B.Sc. or B.Sc. in Agriculture / Horticulture / Forestry	Plant Genetic Resources / Genetics / Plant Breeding / Agricultural Botany / Horticulture / Plant Biotechnology / Seed Science & Technology / Plant Physiology / any other branch of Biological Sciences with specialization in these subjects and/or Plant Taxonomy / Economic Botany/Biotechnology
20.	Plant Pathology	B.Sc. or B.Sc. in Agriculture / Horticulture / Forestry	Mycology and/OR Plant Pathology / Botany / Agricultural Botany / Molecular Biology and/OR Biotechnology / Genetics / Microbiology / Seed Science and Technology / Biochemistry / Plant Genetic Resources / Plant Protection / Relevant Life Sciences with Mycology and Plant Pathology as specialization
21.	Plant Physiology	B.Sc. or B.Sc. in Agriculture / Horticulture	Plant Physiology / Crop Physiology/Horticulture / Botany / Agricultural Botany / Biochemistry / Relevant Life Sciences / Molecular Biology and/OR Biotechnology / Plant Genetic Resources

S. No.	Discipline	For M.Sc./ M.Tech.	For Ph.D.
		Bachelor's Degree in	Proposed qualification - M.Sc./M.Sc.(Ag)/ M.Tech./M.E. in
22.	Post Harvest Technology	Agriculture / Horticulture / Food Science / Food Science and Technology / B.Tech. / B.E. in Agricultural Engineering / Food Engineering / Biochemical Engineering / Chemical Engineering	e) For Post Harvest Technology of Horticultural Crops: Horticulture / Post Harvest Technology / Food Science & Technology/Microbiology/Biochemistry f) For Post Harvest Engineering and Technology: Agricultural Processing and Structures / Food Engineering / Post Harvest Engineering / Biochemical Engineering
23.	Seed Science and Technology	B.Sc. or B.Sc. in Agriculture / Horticulture / Forestry	Seed Science and Technology OR Genetics and/OR Plant Breeding / Plant Physiology OR Crop Physiology / Botany OR Agricultural Botany / Plant Genetic Resources/ Mycology OR Plant Pathology OR Entomology OR Nematology with specialization in Seed Science
24.	Soil Science and Agricultural Chemistry	B.Sc. or B.Sc. in Agriculture / Horticulture	Soil Science and/OR Agricultural Chemistry / Env. Sciences/Agril. Microbiology/Chemistry / Agricultural Physics with specialization in Soil Physics
25.	Vegetable Science	Horticulture / Agriculture	M.Sc. in Horticulture or Agriculture with major in Olericulture/ Vegetable Science/ Vegetable Breeding/Post Harvest Technology of Vegetable Crops/ Genetics and/or Plant Breeding/ Plant Genetic Resources with specialisation in vegetable crops
26.	Water Science and Technology	Agriculture / Horticulture / Agricultural Engineering / B.Tech. / B.E. (Agril. Engineering)	Water Science and Technology / Agricultural Physics / Soil Science and Agricultural Chemistry / Mathematics (with Physical Sciences at Bachelors Degree Level) / M.Tech. in Agril. Engineering /Irrigation Engg/ Civil Engineering

