



Yearly Status Report - 2017-2018

Part A

Data of the Institution

1. Name of the Institution		Indian Agricultural Research Institute
Name of the head of the Institution		Dr ASHOK KUMAR SINGH
Designation		Director
Does the Institution function from own campus		Yes
Phone no/Alternate Phone no.		01125842367
Mobile no.		9899045037
Registered Email		director@iari.res.in
Alternate Email		aks_gene@yahoo.com
Address		IARI, Pusa Campus
City/Town		New Delhi
State/UT		Delhi
Pincode		110012
2. Institutional Status		

University	Deemed
Type of Institution	Co-education
Location	Urban
Financial Status	central
Name of the IQAC co-ordinator/Director	Dr Pramod Kumar
Phone no/Alternate Phone no.	01125842416
Mobile no.	9910633210
Registered Email	incharge_pme@iari.res.in
Alternate Email	pramod_iari@yahoo.co.in

3. Website Address

Web-link of the AQAR: (Previous Academic Year)	https://iari.res.in/files/Latest-News/AQAR_REPORT_2016-17.pdf
4. Whether Academic Calendar prepared during the year	Yes
if yes,whether it is uploaded in the institutional website: Weblink :	https://www.iari.res.in/index.php?option=com_content&view=article&id=633&Itemid=196

5. Accreditation Details

Cycle	Grade	CGPA	Year of Accreditation	Validity	
				Period From	Period To
1	A+	3.51	2016	16-Sep-2016	15-Sep-2021

6. Date of Establishment of IQAC

11-May-2017

7. Internal Quality Assurance System

Quality initiatives by IQAC during the year for promoting quality culture		
Item /Title of the quality initiative by IQAC	Date & Duration	Number of participants/ beneficiaries
Research Advisory Committee	21-Dec-2017 2	40

Academic council meeting	08-Feb-2017 1	39
Academic council meeting	07-Jul-2017 1	41
Academic council meeting	16-Dec-2017 1	38
Extension Council Meeting	17-Jun-2017 1	89
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8. Provide the list of Special Status conferred by Central/ State Government-UGC/CSIR/DST/DBT/ICMR/TEQIP/World Bank/CPE of UGC etc.

Institution/Department/Faculty	Scheme	Funding Agency	Year of award with duration	Amount
Division of Agricultural Economics	Centre of Advanced Faculty Training (CAFT)	ICAR	1995 9855	1756341
Division of Plant Pathology	Centre of Advanced Faculty Training (CAFT)	ICAR	1995 9855	1528805
Division of Agricultural Extension	Centre of Advanced Faculty Training (CAFT)	ICAR	1995 9855	3154500
Division of Plant Pathology	National Certification System for Tissue Culture Raised Plants (NCS-TCP)	DBT	2016 1825	2310000
Division of Biochemistry	Centre of Advanced Faculty Training (CAFT)	ICAR	1995 9855	968788
ZTM &BPD Unit, IARI	ABIC	ICAR	2016 1825	3000000
ZTM &BPD Unit, IARI	ZTMC	ICAR	2016 2190	750000
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9. Whether composition of IQAC as per latest NAAC guidelines:

Yes

Upload latest notification of formation of IQAC

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10. Number of IQAC meetings held during the

5

year :	
The minutes of IQAC meeting and compliances to the decisions have been uploaded on the institutional website	Yes
Upload the minutes of meeting and action taken report	View File
11. Whether IQAC received funding from any of the funding agency to support its activities during the year?	No

12. Significant contributions made by IQAC during the current year(maximum five bullets)
o The academic rules and regulations for the year are delineated in the academic term calendar and is implemented through PG School, Dean, Professors, Board of Studies (BoS)
o Significant contributions made by MSc/ PhD students is presented by the Professor of each Division at Annual Convocation week programme
o To encourage students to do good work and to achieve excellence in education and research the selected MSc/ PhD students from each Division is invited to participate in Gold Medal presentation Award competition.
o The Research programme for the year prepared by the Divisions in the Divisional Budget and Research Committee (DBRC), it is then implemented by the PIs/ Co-PIs of the projects and is evaluated in the Institute Research Council (IRC I), Institute Research Council (IRC II) and Research Advisory Committee (RAC).
o The Extension activities of the Institute for the year are planned in the Extension Council Meeting

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13. Plan of action chalked out by the IQAC in the beginning of the academic year towards Quality Enhancement and outcome achieved by the end of the academic year

Plan of Action	Achivements/Outcomes
The academic calendar of the year is prepared and uploaded on website	The academic calendar of the year
Research programme is prepared for a period of five years and annually revised by DBRC	Accomplished the research activities as per schedule.
The Extension activities of the Institute is planned in the Extension Council meeting	The trainings, on farm demonstrations, farmers visits, Pusa Krishi Mela, etc have been achieved as per plans.
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14. Whether AQAR was placed before statutory body ?	Yes				
<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 50%; text-align: center;">Name of Statutory Body</th> <th style="width: 50%; text-align: center;">Meeting Date</th> </tr> </thead> <tbody> <tr> <td style="text-align: center;">DG ICAR</td> <td style="text-align: center;">21-Dec-2017</td> </tr> </tbody> </table>		Name of Statutory Body	Meeting Date	DG ICAR	21-Dec-2017
Name of Statutory Body	Meeting Date				
DG ICAR	21-Dec-2017				
15. Whether NAAC/or any other accredited body(s) visited IQAC or interacted with it to assess the functioning ?	No				
16. Whether institutional data submitted to AISHE:	Yes				
Year of Submission	2020				
Date of Submission	18-Dec-2020				
17. Does the Institution have Management Information System ?	Yes				
If yes, give a brief description and a list of modules currently operational (maximum 500 words)	<p>PG School, IARI Management System exists for online management of academic activities of students. The system is available to students, faculty members, scientists and administrative staff of PG school. The management system includes, course management, student management, faculty management, administrative management, eLearning and student Research management system. The student management system monitors the progress of each student through constitution of advisory committees, Board of Studies, preparation, submission and approval of PPWs and ORWs. The online system facilitates conduction of qualifying examination, thesis submission and final viva voce examination. This system also operates for online submission of fees. Besides this, eoffice is in place for management of office files. Management of Information Services Financial Management System exists to take up Financial Management: Solutions for General ledger, Account Payable, Account Receivable, Cash Management, Fixed Assets Management, Budget Management and grants, Project Management: Scope for Project Information, Costing, Project Documents, Contract Management and Collaboration of Project documents,</p>				

Material Management: Solutions for Purchase and Inventory Management, Human Resource: Employee information, HR policies, Leave Management, Performance and Appraisal System and Payroll System: Salary, GPF, Pension Payment, Retirement Benefit Calculation and Income tax calculation Solutions for all the ICAR employees.

Part B

CRITERION I – CURRICULAR ASPECTS

1.1 – Curriculum Design and Development

1.1.1 – Programmes for which syllabus revision was carried out during the Academic year

Name of Programme	Programme Code	Programme Specialization	Date of Revision
No Data Entered/Not Applicable !!!			
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1.1.2 – Programmes/ courses focussed on employability/ entrepreneurship/ skill development during the Academic year

Programme with Code	Programme Specialization	Date of Introduction	Course with Code	Date of Introduction
Nill	Nill	Nill	AG ECON 532: International trade	09/07/2010
Nill	Nill	Nill	AG ECON 550: Agricultural development and policy analysis	09/07/2010
Nill	Nill	Nill	AC 505: Agrochemical regulation, quality control and management	09/07/2010
Nill	Nill	Nill	AE 555: Testing and evaluation of agricultural equipment	09/07/2010
Nill	Nill	Nill	AE 620: GIS and remote sensing for land water resource management	09/07/2010
Nill	Nill	Nill	AE 657: Computer aided analysis and design of farm machinery	09/07/2010
Nill	Nill	Nill	AE 656:	09/07/2010

			Machinery systems for precision agriculture	
Nill	Nill	Nill	AG ECON 530: Agricultural marketing	09/07/2010
Nill	Nill	Nill	AG ECON 630: Agricultural price analysis	09/07/2010
Nill	Nill	Nill	AG ECON 641: Institutional and legal environmental for agribusiness	09/07/2010
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1.2 – Academic Flexibility

1.2.1 – New programmes/courses introduced during the Academic year

Programme/Course	Programme Specialization	Dates of Introduction
No Data Entered/Not Applicable !!!		
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1.2.2 – Programmes in which Choice Based Credit System (CBCS)/Elective Course System implemented at the University level during the Academic year.

Name of programmes adopting CBCS	Programme Specialization	Date of implementation of CBCS/Elective Course System
MSc(Agriculture)	Nill	22/08/1958
PhD or DPhil	Nill	22/08/1958

1.3 – Curriculum Enrichment

1.3.1 – Value-added courses imparting transferable and life skills offered during the year

Value Added Courses	Date of Introduction	Number of Students Enrolled
Advances in Breeding for Stress Resistance in Vegetable Crops (VSC611)	20/11/2017	5
Advances in Vegetable Breeding for Quality and Special Traits (VSC622)	02/04/2018	4
Algae in Agriculture and Industry (MB605)	02/04/2018	4
Applications of Microorganisms in Agriculture (MB606)	02/04/2018	6
Applied Microbiology (MB 608)	31/07/2017	9
Basic Horticulture (VS507)	31/07/2017	3
Biotechnology for	31/07/2017	5

Vegetable Crop Improvement (VSC 601)		
Breeding of Cross Pollinated Vegetable Crops (VSC 513)	20/11/2017	15
Breeding of Self Pollinated Vegetable Crops (VSC522)	02/04/2018	10
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1.3.2 – Field Projects / Internships under taken during the year

Project/Programme Title	Programme Specialization	No. of students enrolled for Field Projects / Internships
MSc(Agriculture)	Economic analysis of agricultural diversification and its impact on farm income in Bihar; Biswajit Sen (20634), MSc (Ag Econ)	1
MSc(Agriculture)	Climate change and vegetable production: An analysis of impacts and farmers'adaptation strategies; Philip Kuriachen (20635), MSc (Ag Econ)	1
MSc(Agriculture)	Economic analysis of climate variability and its impact on crop production in Marathwada region of Maharashtra; Sunil Kumar BR (20637), MSc (Ag Econ)	1
MSc(Agriculture)	Analysis of digital divide in agricultural information delivery; Ms Laxmipriya Upadhyaya (20643), MSc (Ag Extn)	1
MSc(Agriculture)	An analytical study of ICT mediated social learning for risk adjustment in agriculture; Ms Priti Priyadarshini (20644), MSc (Ag Econ)	1
MSc(Agriculture)	A study of indigenous technical knowledge (ITKS) in tribal farming system of Himachal Pradesh; Sahil Swangla (20645), MSc (Ag Extn)	1
MSc(Agriculture)	An analytical study of yield gaps in major	1

	pulses; Gireesh S (20646), MSc (Ag Extn)	
MSc(Agriculture)	Identification and validation of indicators of a model village; Ms Sonita Rani Sethy (20647), MSc (Ag Extn)	1
PhD or DPhil	Economic assessment of community based tank irrigation systems in rainfed regions of Andhra Pradesh; Kiran Kumar TM (10379), PhD (Ag Econ)	1
PhD or DPhil	Impact assessment of IARI-Voluntary organizations partnership extension model: A Multidimensional Analysis; Madan Singh (10402), PhD (Ag Extn)	1
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1.4 – Feedback System

1.4.1 – Whether structured feedback received from all the stakeholders.

Students	Yes
Teachers	No
Employers	No
Alumni	No
Parents	No

1.4.2 – How the feedback obtained is being analyzed and utilized for overall development of the institution? (maximum 500 words)

Feedback Obtained
<p>The university has well-defined mechanism to obtain structured feedback from all the stakeholders viz. students, teachers etc, which is then scrupulously processed to derive actionable insights for improving the overall output and impact of the various teaching courses/programmes. To cite an examples at the end of each trimester, the students are provided with the a "Course evaluation proforma" for each course taught in that trimester for their candid and uninhibited feedback about the course. The "Course evaluation proforma" contains objective questions to assess the perception of the students regarding the course design and its implementation. The response of the students is analysed by the Professor of the Division as well as by the competent authorities in the PG School, ICAR-IARI and appropriate actions are taken immediately to fill in the deficiency gaps, if any, highlighted by the students for the further improvement of the course. If there is any shortfall as regard to the method and mode of teaching of any of the course instructors, he/she is personally advised by the Professor of the Discipline to take necessary measures to live up to the expectations of the students. Similarly, the course instructors whose teaching style is appreciated by the students, in the evaluation proformae submitted by them, are acknowledged for their performance at various platforms in order to encourage them to keep up the good work. Every year before the convocation programme, nominations of the consistently top-</p>

performing faculty members are invited by the PG School, ICAR-IARI from each Discipline and BEST TEACHER AWARD(S) are decided upon amongst these nominees this award is conferred every year during the convocation programme. Furthermore, Board of Studies in each Discipline is constituted with faculty members from each category, alongwith one students' representative. The meetings of the BOS are regularly convened to deliberate and decide upon various issues concerning teaching programmes. The faculty members and students are encouraged to put forth their genuine concerns and viewpoints for their forwardal to the PG School for further discussion in the four standing committees. The recommendations of the standing committee are discussed and approved, if found suitable, in the Academic Council meetings, which are held at least thrice in a year. The elected representatives of the faculty and students (two each) are also members of Academic Council and can raise their concerns and innovative ideas in the academic council meetings to improve the teaching and learning practices at IARI. The feedback is also obtained from the IARI Alumni during the Alumni dinner organised in the Convocation week celebration. The concerns of common interest are also discussed at Professors' meeting organized at regular intervals by Dean and Joint Director (Edn.) IARI.

CRITERION II – TEACHING- LEARNING AND EVALUATION

2.1 – Student Enrolment and Profile

2.1.1 – Demand Ratio during the year

Name of the Programme	Programme Specialization	Number of seats available	Number of Application received	Students Enrolled
MSc(Agriculture)	Nil	155	Nil	143
PhD or DPhil	Nil	184	2039	183
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2.2 – Catering to Student Diversity

2.2.1 – Student - Full time teacher ratio (current year data)

Year	Number of students enrolled in the institution (UG)	Number of students enrolled in the institution (PG)	Number of fulltime teachers available in the institution teaching only UG courses	Number of fulltime teachers available in the institution teaching only PG courses	Number of teachers teaching both UG and PG courses
2017	Nil	326	Nil	505	Nil

2.3 – Teaching - Learning Process

2.3.1 – Percentage of teachers using ICT for effective teaching with Learning Management Systems (LMS), E-learning resources etc. (current year data)

Number of Teachers on Roll	Number of teachers using ICT (LMS, e-Resources)	ICT Tools and resources available	Number of ICT enabled Classrooms	Number of smart classrooms	E-resources and techniques used
505	505	10	32	6	12
View File of ICT Tools and resources					
View File of E-resources and techniques used					

2.3.2 – Students mentoring system available in the institution? Give details. (maximum 500 words)

The Institute has developed a robust and vibrant student mentoring system over the years, which has contributed a great deal towards the skill- and knowledge-enrichment of the students, their employability leading to

significant enhancement in the overall output and impact of the institute at national and international arena. The mentoring of the students starts with orientation programme organized at the Institute level, attended by all the stakeholders viz. Director, Joint Directors, Associate Dean, MOHR, Librarian, medical Officer, HODs, Professors and faculty members etc. All the higher officials address the newly admitted students in this programme to encourage them and to make them aware about the facilities available in the institute, past achievements of the institute, various academic rules and regulations, expectations of the institute from the students and rich legacy and culture of the institute etc. To enable the students to quickly adopt to the new environment similar programmes are organized at the Divisional level also. The IARI has a unique system of appointment of one Professor in each Discipline, who looks after all the academic affairs of the division. During initial one month of students' admission, he and HOD guides the students for various academic activities. The allotment of the Research Guides to the students is done within the first trimester of their admission. After this, the Research guides take over the role of mentorship of the students allotted to them. He/she helps them in the selection of courses and in the constitution of their advisory committee, which has members from the major, minor and supporting divisions. The advisory Committee of the students help them to prepare their Plan of Post Graduate Work (PPW) and the Outline of Research Work (ORW). The advisory committee of the students meets regularly not only to provide counselling and assistance to the students but also to identify his/her strengths and weaknesses, taking appropriate measures to bridge the recognized gaps and further building on their strengths. Students are also counselled by Master of Halls of Residence (MOHR) and wardens of their respective hostels. The institute has a placement cell which provides the much-needed career guidance to the students along with HOD, Professor, and their respective Research Guides. Besides, an honorary "Lady Students' Adviser" is nominated by the Dean to look after the welfare and needs of lady students. In addition, an honorary "Foreign Students' Adviser" is nominated by the Dean to not only to look after the academic needs and problems of the foreign students but also to make them aware about social and cultural fabric of India. A Hospitality Committee functions under the Chairmanship of the Foreign Students' Adviser to look after the comfort of foreign students. A qualified Medical Officer takes care of health for better efficiency and output. The Medical Officer resides on the Institute campus and is thus available during day and night. The medical service is provided free to students at the dispensary. The PG School, IARI, New Delhi has Standing Committee on Students Problems Discipline, Welfare, Board and Residences

Number of students enrolled in the institution	Number of fulltime teachers	Mentor : Mentee Ratio
1106	505	1:2

2.4 – Teacher Profile and Quality

2.4.1 – Number of full time teachers appointed during the year

No. of sanctioned positions	No. of filled positions	Vacant positions	Positions filled during the current year	No. of faculty with Ph.D
572	505	67	13	416

2.4.2 – Honours and recognition received by teachers (received awards, recognition, fellowships at State, National, International level from Government, recognised bodies during the year)

Year of Award	Name of full time teachers receiving awards from state level, national level, international level	Designation	Name of the award, fellowship, received from Government or recognized bodies
2018	Dr. Sai Prasad	Professor	Fellow' award from NAAS, New Delhi by National Academy of Agricultural Sciences
2018	Dr. Sai Prasad	Professor	Best Poster Award by International Conference on Global Research Initiatives for Sustainable

			Agriculture Allied Sciences
2017	Dr. Madhu Patial	Assistant Professor	Certificate of excellence by Education expo TV held at Bangalore
2018	Dr. R. K. Sharma	Professor	Elected as Treasurer, Indian Society of Genetics Plant Breeding by Indian Society of Genetics Plant Breeding
2018	Dr. P. K. Singh	Professor	Elected Fellow of Indian Society of Genetics and Plant Breeding by Indian Society of Genetics Plant Breeding
2018	Dr. P. K. Singh	Professor	V S Mathur Memorial Award, Indian Society of Genetics and Plant Breeding by Indian Society of Genetics Plant Breeding
2017	Dr. Kiran B. Gaikwad	Professor	Young Scientist Award: In 3rd International conference on Bioresources Stress Management by VishwaBharti University, Kolkata Indian Council of Agricultural Research, New Delhi, India
2017	Dr. Anju Mahendru Singh	Professor	Honoured as team member with Best paper award by the Association of Food Scientists and Technologists (India)
2018	Dr. Vinod	Professor	Elected Fellow National Academy of Agricultural Sciences by National Academy of Agricultural Sciences
2018	Dr. S. K. Jha	Professor	DST-SERB early career research award with a

project of Rs.
28,74,744/- by DST-
SERB

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2.5 – Evaluation Process and Reforms

2.5.1 – Number of days from the date of semester-end/ year- end examination till the declaration of results during the year

Programme Name	Programme Code	Semester/ year	Last date of the last semester-end/ year-end examination	Date of declaration of results of semester-end/ year- end examination
MSc(Agriculture)	Nill	Trimester-II	01/04/2017	08/04/2017
MSc(Agriculture)	Nill	Trimester-III	22/07/2017	29/07/2017
MSc(Agriculture)	Nill	Trimester-I	18/11/2017	25/11/2017
PhD or DPhil	Nill	Trimester-II	01/04/2017	08/04/2017
PhD or DPhil	Nill	Trimester-III	22/07/2017	29/07/2017
PhD or DPhil	Nill	Trimester-I	18/11/2017	25/11/2017

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2.5.2 – Average percentage of Student complaints/grievances about evaluation against total number appeared in the examinations during the year

Number of complaints or grievances about evaluation	Total number of students appeared in the examination	Percentage
Nill	237	0

2.6 – Student Performance and Learning Outcomes

2.6.1 – Program outcomes, program specific outcomes and course outcomes for all programs offered by the institution are stated and displayed in website of the institution (to provide the weblink)

http://pgs.iasri.res.in/pgs_main.asp

2.6.2 – Pass percentage of students

Programme Code	Programme Name	Programme Specialization	Number of students appeared in the final year examination	Number of students passed in final year examination	Pass Percentage
Nill	MSc(Agriculture)	Nill	140	140	100
Nill	PhD or DPhil	Nill	97	97	100

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2.7 – Student Satisfaction Survey

2.7.1 – Student Satisfaction Survey (SSS) on overall institutional performance (Institution may design the questionnaire) (results and details be provided as weblink)

<https://www.iari.res.in/files/Latest->

CRITERION III – RESEARCH, INNOVATIONS AND EXTENSION

3.1 – Promotion of Research and Facilities

3.1.1 – Teachers awarded National/International fellowship for advanced studies/ research during the year

Type	Name of the teacher awarded the fellowship	Name of the award	Date of award	Awarding agency
National	Dr. K. K. Vinod	Elected as Fellow of Indian Society of Genetics and Plant Breeding	Nill	ISGPB
National	Dr. M. G. Mallikarjuna	Awarded Early Career Research grant from DST-SERB, GOI from 2018 to 2021	Nill	DST-SERB, GOI
National	Dr. S. P. Singh	Fellow ISGPB	Nill	ISGPB
National	Dr. Nirupama Singh	Excellence in Research Award	Nill	International Conference on Global Research Initiatives for Sustainable Agriculture Allied Sciences, 02-04 December, 2017, MPUAT, Udaipur, Rajasthan
National	Dr. Rajendra Kumar	Fellowship recognition award	Nill	Indian Society for Pulses Research Development (ISPRD)
National	Dr. Gyan Prakash Mishra	Selected as NAAS Associate	Nill	National Academy of Agricultural Sciences
National	Dr. Gyan Prakash Mishra	Membership of the National Academy of Sciences, India (NASI) during 2018.	Nill	National Academy of Agricultural Sciences
National	Dr. Vinod	Elected Fellow National Academy of Agricultural Sciences	Nill	National Academy of Agricultural Sciences
National	Dr. S. K. Jha	DST-SERB early career	Nill	DST

		research award with a project of Rs. 28,74,744/- by DST-SERB		
National	Dr. Sai Prasad	Fellow' award from NAAS, New Delhi	Nil	National Academy of Agricultural Sciences
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3.1.2 – Number of JRFs, SRFs, Post Doctoral Fellows, Research Associates and other fellows in the Institution enrolled during the year

Name of Research fellowship	Duration of the fellowship	Funding Agency
National Fellowship (OBC)	1825	UGC
Moulana Azad National Fellowship	1825	Ministry of Minority Affairs
IARI junior research fellowship	730	IARI
IARI Senior Research Fellowship	1095	IARI
Senior Research Fellowship	1095	ICAR
DST-INSPIRE	1825	DST
DBT-Senior Research Fellowship	1825	DBT
CSIR senior Research Fellowship	1825	UGC-CSIR
National Fellowship (ST)	1825	UGC
National Fellowship (ST)	1825	UGC
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3.2 – Resource Mobilization for Research

3.2.1 – Research funds sanctioned and received from various agencies, industry and other organisations

Nature of the Project	Duration	Name of the funding agency	Total grant sanctioned	Amount received during the year
Major Projects	1095	ICAR, AIREA, BARNS, CSIR, DAC, DBT, DST, NFSF, IMD, MOHRD, MSME, NCPAH, NHB, PPVFRA, RKVY, SAC	31511.41	7062.8
Minor Projects	1095	ICAR, ATARI, DRDO, MIDH, NABARD, NMSA,	321.77	72.13

		PPVFRA, DBT, DST		
Industry sponsored Projects	1095	Ajay Bio tech India Ltd	28.94	6.49
Projects sponsored by the University	2555	IARI	643	643
International Projects	1095	BMGF, PEER, GCFSI, CIMMYT, IRRI, IFPRI, ICARDA	542.43	121.58
Total	Nil	Nil	33047.62	7906
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3.3 – Innovation Ecosystem

3.3.1 – Workshops/Seminars Conducted on Intellectual Property Rights (IPR) and Industry-Academia Innovative practices during the year

Title of workshop/seminar	Name of the Dept.	Date
Workshop on Current Funding opportunities for Start-ups' organized under 'Arise, Launchpad for Agri Start-ups	ZTMBPD UNIT	01/03/2017
Hands-on Training on Prior-art Search	ZTMBPD UNIT	15/11/2017
Soil Health Management - ADP	ZTMBPD UNIT	30/10/2017
Intellectual Property Rights Business	ZTMBPD UNIT	10/04/2017
Rapid Degradation of Agro-Residues with Low-Cost Input	ZTMBPD UNIT	10/06/2017
GST (Goods Service Tax)	ZTMBPD UNIT	20/07/2017
Intellectual Property Rights on Nutritional Security	ZTMBPD UNIT	19/09/2017
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3.3.2 – Awards for Innovation won by Institution/Teachers/Research scholars/Students during the year

Title of the innovation	Name of Awardee	Awarding Agency	Date of award	Category
Selection of a compatible biocontrol consortium effective against fusarium wilt of tomato	Kavi Sidharthan V, MSc (20718)	ICAR-IARI	09/02/2018	IARI Merit Medal
Studies on	K. Ravindra	ICAR-IARI	09/02/2018	IARI Merit

plant regeneration in marigold (tagetes spp.) through in vitro culture of male and female gametophytes	Kumar, PhD (10461)			Medal
Evaluation of papaya genotypes for low temperature stress tolerance	Mr. Satyabrata Pradhan, MSc (20693)	ICAR-IARI	09/02/2018	IARI Merit Medal
Development of reconstituted rice	Shaghaf Kaukab, MTech (20592)	ICAR-IARI	09/02/2017	IARI merit medal
Studies on integrated crop management modules for enhancing productivity and profitability of direct seeded basmati rice	Kajal Das (20662)	ICAR-IARI	09/02/2018	IARI Gold Medal
Long-term fertilization effects on soil aggregation and carbon pools under wheat based cropping systems in two soils	Avijit Ghosh, PhD	ICAR-IARI	09/02/2017	Merit medal for outstanding academic performance
Hydrology sensor and IoT	NEER AGRIVENTURES	IIT Gandhinagar	Nil	Best Prototype Award at IGNITE
ASSOCIATION MAPPING FOR GRAIN IRON AND ZINC CONTENT IN PEARL MILLET (Pennisetum glaucum (L). R. Br)	N. Anuradha, PhD (10288)	ICAR-IARI	09/02/2018	Best student of the IARI
Marker assisted backcross breeding for incorporation	Ranjith Kumar Elluru (9975)	ICAR	Nil	ICAR-Jawahar Lal Nehru Award for Best PhD thesis

of novel bacterial blight resistance gene Xa38 in Pusa Basmati 1121				
Response modulation of mango (Mangifera indica L.) to ethylene inhibitors	Vijay Rakesh Reddy, PhD (10183)	ICAR	Nil	ICAR-Jawahar Lal Nehru Award for Best PhD thesis
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3.3.3 – No. of Incubation centre created, start-ups incubated on campus during the year

Incubation Center	Name	Sponsored By	Name of the Start-up	Nature of Start-up	Date of Commencement
ZTM BPD UNIT	ZTM BPD UNIT	ICAR	M/s Unison Agroco	Instant mix millets Breakfast	Nil
ZTM BPD UNIT	ZTM BPD UNIT	ICAR	M/s Enzys Gonvindji Bio Labs	Enzymes Translational Research Application Centre for Plant Tissue Lab	Nil
ZTM BPD UNIT	ZTM BPD UNIT	ICAR	M/s Urban Farmers Pvt. Ltd	Zero Mile organic Products	Nil
ZTM BPD UNIT	ZTM BPD UNIT	ICAR	Kad Bio-Tech	Innovation Production and marketing of quality Soyanut under the Brand Name Soa Nutri Nuts	Nil
ZTM BPD UNIT	ZTM BPD UNIT	ICAR	M/s Ananya Seeds Pvt.Ltd	Production and Marketing of High Quality Hybrid OP seeds and vegetables and field crop	Nil
ZTM BPD UNIT	ZTM BPD UNIT	ICAR	Beej India Pvt. Ltd	Seeds Production Processing of	Nil

				commodities	
NTM BPD UNIT	ZTM BPD UNIT	ICAR	M/s Jai-Biotech Research Centre	Manufacturing of Bio-fertilizers and Bio-pesticides	Nil
ZTM BPD UNIT	ZTM BPD UNIT	ICAR	M/s Society for Farmer Development	Biscuit Making from Nutritionally Rich Traditional Millets in Combination with wheat flour	Nil
ZTM BPD UNIT	ZTM BPD UNIT	ICAR	M/s Natures Lap	Utilization of Waste Mango Kernel for Extraction of Rich Mango Kernel butter and oil	Nil
ZTM BPD UNIT	ZTM BPD UNIT	ICAR	M/s Arpan Seeds	Double zero Mustard	Nil
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3.4 – Research Publications and Awards

3.4.1 – Ph. Ds awarded during the year

Name of the Department	Number of PhD's Awarded
Agricultural Chemicals	1
Agricultural Economics	2
Agricultural Engineering	12
Agricultural Extension	1
Agricultural Physics	3
Agricultural Statistics	5
Agronomy	9
Biochemistry	4
Bioinformatics	1
Entomology	7
Environmental Sciences	3
Genetics and Plant Breeding	8
Horticulture	13
Microbiology	4
Molecular Biology and Biotechnology	7
Nematology	1

Plant Genetic Resources	4
Plant Pathology	2
Plant Physiology	2
Post Harvest Technology	1
Seed Science and Technology	4
Soil Science and Agricultural Chemicals	3

3.4.2 – Research Publications in the Journals notified on UGC website during the year

Type	Department	Number of Publication	Average Impact Factor (if any)
National	Agricultural Chemicals	10	Nil
National	Agricultural Economics	7	Nil
National	Agricultural Engineering	17	Nil
National	Agricultural Extension	7	Nil
National	Agricultural Physics	10	Nil
National	Agronomy	14	Nil
National	Entomology	13	Nil
National	Genetics and Plant Breeding	42	Nil
National	Floriculture and Landscaping	22	Nil
National	Fruits and Horticulture Technology	11	Nil

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3.4.3 – Books and Chapters in edited Volumes / Books published, and papers in National/International Conference Proceedings per Teacher during the year

Department	Number of Publication
Agricultural Chemicals	22
Agricultural Economics	2
Agricultural Engineering	12
Agricultural Extension	11
Agricultural Physics	3
Agronomy	42
Biochemistry	6
Entomology	23
Environmental Sciences	14
Genetics and Plant Breeding	26

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3.4.4 – Patents published/awarded/applied during the year

Patent Details	Patent status	Patent Number	Date of Award
Development of polymeric formulations of bioactive molecules and method of preparation thereof	Published	295150	28/03/2018
process of making stable neem meliacin(s) concentrates and products with controlled active ingredient release	Published	291334	02/01/2018
preparation of liquid pesticidal concentrates of neem meliacin(s)	Published	293925	07/03/2018
An Apparatus For in vivo Mass Production Of Entomopathogenic Nematode	Filed	201711000736	01/07/2017
Method and Apparatus for Side View Imaging for Field Phenotyping of Crop Biomass and Growth	Filed	201711016288	05/09/2017
A novel bio-pesticidal formulation with improved shelf-life and the method for its preparation	Published	284264	15/06/2017
Urea Molasses Mineral Block Machine	Published	283378	18/05/2017
Development of slow release nano formulations of bioactive molecules and method of preparation thereof	Published	290155	30/11/2017
A product and process for the decontamination of pesticide residues from vegetables by using safe reagent	Published	290363	07/12/2017

Anti-oxidant and anti-bacterial diaryl-indazol-3-ols and their method of preparation thereof	Published	290085	29/11/2017
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3.4.5 – Bibliometrics of the publications during the last academic year based on average citation index in Scopus/ Web of Science or PubMed/ Indian Citation Index

Title of the Paper	Name of Author	Title of journal	Year of publication	Citation Index	Institutional affiliation as mentioned in the publication	Number of citations excluding self citation
Aflatoxins: A global concern for food safety, human health and their management	Kumar, P., Mahato, D.K., Kamle, M., Mohanta, T.K., Kang, S.G.	Frontiers in Microbiology	2017	Null	ICAR-IARI	294
ICTV virus taxonomy profile: Potyviridae	Wylie, S.J., Adams, M., Chalam, C., Kreuze, J., López-Moya, J.J., Ohshima, K., Praveen, S., Rabenstein, F., Stenger, D., Wang, A., Zerbini, F.M.	Journal of General Virology	2017	Null	ICAR-IARI	159
Abiotic stress tolerance in plants: Myriad roles of ascorbate peroxidase	Pandey, S., Fartyal, D., Agarwal, A., Shukla, T., James, D., Kaul, T., Negi, Y.K., Arora, S., Reddy, M.K.	Frontiers in Plant Science	2017	Null	ICAR-IARI	153

Characterization of pesticide sorption behaviour of slow pyrolysis biochars as low cost adsorbent for atrazine and imidacloprid removal	Mandal, A., Singh, N., Purakayastha, T.J.	Science of the Total Environment	2017	Nil	ICAR-IARI	153
Enhanced plant growth promoting role of phycomolecules coated zinc oxide nanoparticles with P supplementation in cotton (Gossypium hirsutum L.)	Venkatachalam, P., Priyanka, N., Manikandan, K., Ganeshbabu, I., Indiraarulseli, P., Geetha, N., Muralikrishna, K., Bhattacharya, R.C., Tiwari, M., Sharma, N., Sahi, S.V.	Plant Physiology and Biochemistry	2017	Nil	ICAR-IARI	142
The uncertainty of crop yield projections is reduced by improved temperature response functions	Wang, E., Martre, P., Zhao, Z., Ewert, F., Maiorano, A., Rötter, R.P., Kimball, B.A., Ottman, M.J., Wall, G.W., White, J.W., Reynolds, M.P.,	Nature Plants	2017	Nil	ICAR-IARI	131

	Alderman, P.D., Aggarwal, P.K., Anothai, J., Basso, B., Biernath, C., Cammarano, D., Challinor, A.J., De Sanc					
Plant beneficial rhizospher ic microor ganism (PBRM) strategies to improve nutrients use effici ency: A review	Meena, V.S., Meena, S.K., Verma, J.P., Kumar, A., Aeron, A., Mishra, P.K., Bisht, J.K., Patt anayak, A., Naveed, M., Dotaniya, M.L.	Ecological Engineerin g	2017	Nill	ICAR- IARI	106
Production of biodiesel from microalgae through biological carbon capture: a review	Mondal, M., Goswami, S., Ghosh, A., Oinam, G., Tiwari, O.N., Das, P., Gayen, K., Mandal, M.K., Halder, G.N.	3 Biotech	2017	Nill	ICAR- IARI	106
Performa nce improv ement of microbial fuel cells for waste water treatment along with value addition:	Choudhury, P., Uday, U.S.P., Mahata, N., Nath Tiwari, O., Narayan Ray, R., Kanti Band	Renewable and Sustai nable Energy Reviews	2017	Nill	ICAR- IARI	100

A review on past achievements and recent perspectives	yopadhyay, T., Bhunia, B.					
Establishment of critical limits of indicators and indices of soil quality in rice-rice cropping systems under different soil orders	Biswas, S., Hazra, G.C., Pura kayastha, T.J., Saha, N., Mitran, T., Singha Roy, S., Basak, N., Mandal, B.	Geoderma	2017	Nill	ICAR-IARI	98

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3.4.6 – h-Index of the Institutional Publications during the year. (based on Scopus/ Web of science)

Title of the Paper	Name of Author	Title of journal	Year of publication	h-index	Number of citations excluding self citation	Institutional affiliation as mentioned in the publication
Aflatoxins: A global concern for food safety, human health and their management	Kumar, P., Mahato, D.K., Kamle, M., Mohanta, T.K., Kang, S.G.	Frontiers in Microbiology	2017	42	294	ICAR-IARI
ICTV virus taxonomy profile: Potyviridae	Wylie, S.J., Adams, M., Chalam, C., Kreuze, J., López-Moya, J.J., Ohshima, K., Praveen, S., Rabenstein, F., Stenger, D., Wang, A.,	Journal of General Virology	Nill	42	159	ICAR-IARI

	Zerbini, F.M					
Abiotic stress tolerance in plants: Myriad roles of ascorbate peroxidase	Pandey, S., Fartyal, D., Agarwal, A., Shukla, T., James, D., Kaul, T., Negi, Y.K., Arora, S., Reddy, M.K.	Frontiers in Plant Science	2017	42	153	ICAR-IARI
Characterization of pesticide sorption behaviour of slow pyrolysis biochars as low cost adsorbent for atrazine and imidacloprid removal	Mandal, A., Singh, N., Purakayastha, T.J.	Science of the Total Environment	2017	42	153	ICAR-IARI
Enhanced plant growth promoting role of phycomolecules coated zinc oxide nanoparticles with P supplementation in cotton (Gossypium hirsutum L.)	Venkatachalam, P., Priyanka, N., Manikandan, K., Ganeshbabu, I., Indiraarulsevi, P., Geetha, N., Muralikrishna, K., Bhattacharya, R.C., Tiwari, M., Sharma, N., Sahi, S.V.	Plant Physiology and Biochemistry	2017	42	142	ICAR-IARI
The uncertainty of crop yield	Wang, E., Martre,	Nature Plants	2017	42	131	ICAR-IARI

projection s is reduced by improved t emperature response functions	P., Zhao, Z., Ewert, F., Maiorano, A., Rötter, R.P., Kimball, B.A., Ottman, M.J., Wall, G.W., White, J.W., Reynolds, M.P., Alderman, P.D., Aggarwal, P.K., Anothai, J., Basso, B., Biernath, C., Cammarano, D., Challinor, A.J., De Sanc					
Plant beneficial rhizospher ic microor ganism (PBRM) strategies to improve nutrients use effici ency: A review	Meena, V.S., Meena, S.K., Verma, J.P., Kumar, A., Aeron, A., Mishra, P.K., Bisht, J.K., Patt anayak, A., Naveed, M., Dotaniya, M.L.	Ecological Engineerin g	2017	42	106	ICAR- IARI
Production of biodiesel from microalgae through biological	Mondal, M., Goswami, S., Ghosh, A., Oinam, G., Tiwari, O.N., Das,	3 Biotech	2017	42	106	ICAR- IARI

carbon capture: a review	P., Gayen, K., Mandal, M.K., Halder, G.N.					
Performance improvement of microbial fuel cells for waste water treatment along with value addition: A review on past achievements and recent perspectives	Choudhury, P., Uday, U.S.P., Mahata, N., Nath Tiwari, O., Narayan Ray, R., Kanti Band yopadhyay, T., Bhunia, B.	Renewable and Sustainable Energy Reviews	2017	42	100	ICAR-IARI
Establishment of critical limits of indicators and indices of soil quality in rice-rice cropping systems under different soil orders	Biswas, S., Hazra, G.C., Pura kayastha, T.J., Saha, N., Mitran, T., Singha Roy, S., Basak, N., Mandal, B.	Geoderma	2017	42	98	ICAR-IARI

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3.4.7 – Faculty participation in Seminars/Conferences and Symposia during the year

Number of Faculty	International	National	State	Local
Attended/Seminars/Workshops	79	356	22	31
Presented papers	58	234	2	9
Resource persons	26	118	17	51

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3.5 – Consultancy

3.5.1 – Revenue generated from Consultancy during the year

Name of the Consultan(s)	Name of consultancy	Consulting/Sponsoring	Revenue generated
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department	project	Agency	(amount in rupees)
Dr. Sharad Mohan, PS, Division of Nematology	Dissemination of entomopathogenic tea garden in West Bengal and Assam	Ajay Bio tech (India) Ltd.	2894458
Dr. Naresh Kumar, Prof. CESCRA	"Assessment of Climate Change Impacts, Vulnerability and Adaptation: a regional assessment on agriculture' for enabling India's Third National Communication to UNFCCC: agriculture"	Ministry of Environment, Forest and Climate Change (MoEFCC	3089000
Dr. R.S. Bana, Scientist-PI, Division of Agronomy	"Evaluation of 'Plant nutrient supplements' for productivity and nutrient use efficiency of major cropping system"	Indogulf Cropsciences Ltd.	1533525
Dr. Suresh Nebapure Scientist, Division of Entomology	"Studies on monitoring and management of insect pests using innovative pheromone formulations"	ATGC Biotech Pvt. Ltd.	1086336
Dr. Dinesh Kumar Principal Scientist, Division of Agronomy	"Agronomic Evaluation of ZnO Nanoparticle Embedded N:P:K (15:15:15) Complex fertilizer in rice- wheat cropping system"	Rashtriya Chemicals Fertilizers Limited	1488783
Dr. Bindvi Arora Scientist Division of FSPHT	"Product optimization of antioxidant rich green leafy vegetables (GLVs) based reconstitutable power.	Bharat Budhiraja, KrIsh Perennials Pvt. Ltd	818549
Dr. D.R. Biswas Scientist, Division of SSAC	"Development and Evaluation of Enriched Organic Manure with Rock Phosphate for Enhancing Crop Production and Soil Fertility"	M/s Giriganga Infrasolutions Private limited to Aquagreen Engineering Management Pvt. Ltd. (AEMPL	2722614

Dr. R.N. Sahoo, PS-PI Division of Agril. Physics	"Developing need based precision technologies for Viticulture'	M/s Mahindra Mahindra Ltd	1445826
Dr. J.P. Singh, PS, Entomology-PI	"Evaluation of Quinalphos and its analogous against Helicoverpa armigera and Aphis gossypil"	Gharda Chemicals Limited, Maharashtra	245110
Dr. Irani Mukherjee, Prof. Principal Scientist, Division of Ag. Chemicals	To study the residue and dissipation of tebuconazole 430SC (Folicur) in Chilli	Bayer Crop Science Ltd.	230000
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3.5.2 – Revenue generated from Corporate Training by the institution during the year

Name of the Consultan(s) department	Title of the programme	Agency seeking / training	Revenue generated (amount in rupees)	Number of trainees
CATAT, IARI, New Delhi	Improved agricultural practices for higher productivity income, 21-25 March 2017	ATMA Nagaur, Rajasthan	24450	30
CATAT, IARI, New Delhi	Improved crop production technologies for cereals and pulses, 9-25 Sept 2017	ATMA Naguar, Rajasthan	24450	30
CATAT, IARI, New Delhi	Improved crop production technologies for higher income, 4-10 Oct 2017	ATMA Jaipur, Rajasthan	24450	31
CATAT, IARI, New Delhi	Improved technologies for water management in crops, 11-16 Dec 2017	ATMA Purnia, Bihar	15365	18
Division of Soil Science and Agricultural Chemistry	ICAR- Sponsored HRD Training on "In strumentation Techniques for Analysis of Soil, Plant and Water", 04-13Oc	ICAR- Sponsored	256750	17

	tober2017			
Division of Soil Science and Agricultural Chemistry	14th Advanced Level Training on Soil Testing, Plant Analysis and Water Quality Assessment, 08-28 Dec. 2017(3 weeks)	Self-sponsored	680000	16
Department of Seed Science and Technology	Seed production in field and vegetable crops(Kharif) 3-7 Oct., 2017	NSC, New Delhi	210000	23
Department of Floriculture and Landscaping	Training on Ornamental Horticulture and Landscape Gardening organised by Division of Floriculture and Landscaping, IARI, New Delhi.	for Section Officers (Horticulture), Delhi Development Authority (24-30 December, 2018) 1st Batch	224400	40
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3.6 – Extension Activities

3.6.1 – Number of extension and outreach programmes conducted in collaboration with industry, community and Non- Government Organisations through NSS/NCC/Red cross/Youth Red Cross (YRC) etc., during the year

Title of the activities	Organising unit/agency/ collaborating agency	Number of teachers participated in such activities	Number of students participated in such activities
No Data Entered/Not Applicable !!!			
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3.6.2 – Awards and recognition received for extension activities from Government and other recognized bodies during the year

Name of the activity	Award/Recognition	Awarding Bodies	Number of students Benefited
Award for display of technology	Ist prize for best display of technologies in National Sheep and Wool Fair on Dec 8, 2017	ICAR-Central Sheep and Wool Research Institute, Avikanagr, Rajasthan	Nil
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3.6.3 – Students participating in extension activities with Government Organisations, Non-Government Organisations and programmes such as Swachh Bharat, Aids Awareness, Gender Issue, etc. during the year

Name of the scheme	Organising unit/Agen	Name of the activity	Number of teachers	Number of students
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	cy/collaborating agency		participated in such activities	participated in such activities
Swachh Bharat Abhiyan	Master of Halls of Residence	Swachata Abhiyan	9	1106
Mera Gaon Mera Gaurav	Different Divisions of IARI	Awareness creation about schemes of government of India, latest technologies developed by IARI, etc	505	100
IARI post office linkage model developed with the Department of Posts, Government of India	Division of Agricultural Extension, IARI CATAT, IARI	Demonstration of IARI varieties through post masters of Post offices	1	10
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3.7 – Collaborations

3.7.1 – Number of Collaborative activities for research, faculty exchange, student exchange during the year

Nature of activity	Participant	Source of financial support	Duration
Indo - Australian Grand Challenge programme	Dr.S.Subramanan	AISRF	7
NEWS India-UK Fellowship, UK	Dr G.K. Jha	UK	30
Provide consultancy services for Bhutan Living Standard Survey (BLSS) to finalize sampling design for Living standard measurement survey as a sampling expert, Bhutan	Dr UC Sud	FAO	6
To develop research and educational partnership with European Higher Educaiton Institutions under Mobility programme of European Commission Erasmus Mundus	Dr Shelly Praveen	EU	62

In vitro double stranded (ds)-RNA synthesis technology for control of plant viruses	Dr Basavaprabhu L Patil	European Union Erasmus Mundus	60
Convergence Network Analysis of Extension organizations for enhancing their effectiveness in pluralistic Extension regime	ICAR-IARI, New Delhi; IGKV, Raipur; Chhatisgarh; ICAR Research Complex for NER, Shillong, Meghalaya; BAU, Ranchi; Jharkhand.	NASF, ICAR	1460
In-house project entitled Development of Improved technologies for higher yield and quality in selected fruit crops	1. ICAR-IARI, Amartara Cottage, Shimla 2. ICAR-IARI-Kalimpong	IARI	2555
Project on "Development of High-Quality Rust Resistant Wheat Varieties for India", Australia	Dr. Prashanth Babu H	Indo-Australian Career Boosting Gold Fellowship 2015-16	730
Project milestones meeting related to the Innovate UK Project No: 101918 'Hybrid Wheat for Food Security', Australia	Dr Vinod	Sydney University, Australia	7
4th Stress Tolerant Orphan Legumes (STOL) Meeting, Nelson Mandela African Institute of Science and Tech, Arusha, Tanzania,	Dr Pratibha Brahmi	Kirkhouse Trust, United Kingdom	2

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3.7.2 – Linkages with institutions/industries for internship, on-the- job training, project work, sharing of research facilities etc. during the year

Nature of linkage	Title of the linkage	Name of the partnering institution/ industry /research lab with contact	Duration From	Duration To	Participant

		details			
Teaching Research	PG outreach programme	DSR, Hyderabad	08/10/2014	31/12/2019	Dr Hari Prasanna Dr IV Patil Dr Sujay Rakshit
Teaching Research	PG outreach programme	M/s Jain Irrigation Systems Pvt Ltd, Jalgaon, Maharashtra	25/04/2013	31/12/2019	Nil
Collaborative research work	Development of a plant protection product based on natural extracts and oils derived from karanjin, capsaicin, sesamin and garlic	M/s Seipasa, Valencia, Spain fespina@seipasa.com 34 962 541 163 ICAR-IARI, New Delhi	01/06/2017	Nil	From M/s Seipasa, Spain Dr. Maria De Puig Mora Project Manager Mr. Francisco Espinosa Chief Research Officer From IARI, New Delhi Dr. V.S. Rana (PI) Dr. N.A. Shakil (CO-PI)
Collaborative research work	Chemical, structural and functional characterization of identified anti-tick lead phytochemicals and optimization of delivery matrix for effective application of natural formulation for the control of acaricide resistant ticks	ICAR-IVARI, Izatnagar CSIR-NBRI, Lucknow ICAR-IARI, New Delhi ICAR-DMAPR, Anand CoVAS, Pookode	01/01/2017	Nil	IVRI, Izatnagar Dr. Srikanta Ghosh, Dr. B.C. Saravanan, Dr. Ravi Kumar, Dr. S. Dey, NBRI, Lucknow Dr. AKS Rawat, Dr. Sharad Srivastav, Dr. M. M. Pandey IARI, New Delhi Dr. Rajesh Kumar, Dr. Suman Gupta DMAPR, Anand Dr. Satyanshu Kumar CVAS, Pook
Research	DBT	CMERTI,	01/01/2017	Nil	Dr.Subrama

project	Twinning Project	CSB, Jorhat			ian
Teaching Research	PG outreach programme	Indian Institute of Horticultural Research, Hesaraghatta, Lakepost, Bangalore 560089	23/12/2010	31/12/2019	16
Teaching Research	PG outreach programme	CIPHET, Ludhiana, Punjab-141004	04/12/2010	31/12/2019	Dr Deepak Raj Rai Dr Shyam Narayan Jha Student 10
Teaching Research	PG outreach programme	CIAE, Nabi Bagh, Bhopal, Madhya Pradesh, India-462038	10/12/2010	31/12/2019	10
Teaching Research	PG outreach programme	DWR, Karnal, Haryana 132001	12/11/2011	31/12/2019	Dr RS Chhokar Dr Subhash Chander
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3.7.3 – MoUs signed with institutions of national, international importance, other universities, industries, corporate houses etc. during the year

Organisation	Date of MoU signed	Purpose/Activities	Number of students/teachers participated under MoUs
UPL Mumbai (Dr. Ram Asrey)	01/08/2018	To evaluate bio-efficacy of anti-sprouting agent	5
M/s. Bharat Seeds Pvt. Ltd., 90/ A, C- Block, Sirsa, Haryana-125055	18/05/2017	PB 1637	13
M/s. Genetic Seeds	18/05/2018	PB 1637	13
M/s. Supreme Breeder	19/05/2017	PB 1637	13
M/s. Alliance Agritech	24/05/2017	PB 1637	13
M/s. KRBL Ltd.	24/05/2017	PB 1637	13
M/s. Omkar Seeds	24/05/2017	PB 1637	13
M/s. Dayal Seeds Pvt. Ltd.	30/05/2017	PB 1637	13
M/s. Topgrow Global Seeds	24/05/2017	21 vegetable varieties	10

M/s South Asia Biotechnology Centre	03/05/2017	Anthocyanin extraction from black carrot	3
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CRITERION IV – INFRASTRUCTURE AND LEARNING RESOURCES

4.1 – Physical Facilities

4.1.1 – Budget allocation, excluding salary for infrastructure augmentation during the year

Budget allocated for infrastructure augmentation	Budget utilized for infrastructure development
531	531

4.1.2 – Details of augmentation in infrastructure facilities during the year

Facilities	Existing or Newly Added
Campus Area	Existing
Class rooms	Existing
Laboratories	Existing
Seminar Halls	Existing
Classrooms with LCD facilities	Newly Added
Seminar halls with ICT facilities	Newly Added
Classrooms with Wi-Fi OR LAN	Newly Added
Value of the equipment purchased during the year (rs. in lakhs)	Newly Added
No file uploaded.	

4.2 – Library as a Learning Resource

4.2.1 – Library is automated {Integrated Library Management System (ILMS)}

Name of the ILMS software	Nature of automation (fully or partially)	Version	Year of automation
KOHA	Fully	16X	2012

4.2.2 – Library Services

Library Service Type	Existing		Newly Added		Total	
Text Books	134636	Nill	853	5171067	135489	5171067
Reference Books	3602	Nill	69	161729	3671	161729
e-Books	56	Nill	302	4631043	358	4631043
Journals	129529	Nill	186	15570045	129715	15570045
CD & Video	16453	Nill	320	Nill	16773	Nill
Weeding (hard & soft)	1299	Nill	Nill	Nill	1299	Nill
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4.2.3 – E-content developed by teachers such as: e-PG- Pathshala, CEC (under e-PG- Pathshala CEC (Under Graduate) SWAYAM other MOOCs platform NPTEL/NMEICT/any other Government initiatives & institutional (Learning Management System (LMS) etc

Name of the Teacher	Name of the Module	Platform on which module is developed	Date of launching e-content
Sandeep Kumar	e-pathshala,	e-pathshala, MHRD, GOI	Nil
Dr Alka Singh	Indian Agriculture Development (3 videos on Institutional Development on Agricultural Research, Institutional Development on Agricultural Education, Institutional Development on Agricultural Extension)	SWAYAM-MOOC https://onlinecourses.swayam2.ac.in/nou21_ag11/preview	Nil
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4.3 – IT Infrastructure

4.3.1 – Technology Upgradation (overall)

Type	Total Computers	Computer Lab	Internet	Browsing centers	Computer Centers	Office	Departments	Available Bandwidth (MBPS/GBPS)	Others
Existing	3100	110	3100	0	120	1260	1610	1	0
Added	250	30	250	0	0	90	130	0	0
Total	3350	140	3350	0	120	1350	1740	1	0

4.3.2 – Bandwidth available of internet connection in the Institution (Leased line)

1 MBPS/ GBPS

4.3.3 – Facility for e-content

Name of the e-content development facility	Provide the link of the videos and media centre and recording facility
No Data Entered/Not Applicable !!!	

4.4 – Maintenance of Campus Infrastructure

4.4.1 – Expenditure incurred on maintenance of physical facilities and academic support facilities, excluding salary component, during the year

Assigned Budget on academic facilities	Expenditure incurred on maintenance of academic facilities	Assigned budget on physical facilities	Expenditure incurred on maintenance of physical facilities
700	700	2145	2145

4.4.2 – Procedures and policies for maintaining and utilizing physical, academic and support facilities - laboratory, library, sports complex, computers, classrooms etc. (maximum 500 words) (information to be available in institutional Website, provide link)

The institute has a well-oiled system in place for the maintenance of the physical, academic and support facilities built in the campus over the years. Adequate budgetary provisions are made during allocation of the annual budget for undertaking this all-important work. The cleanliness in each division of the institute is maintained on daily basis by the permanent skilled supporting staff members along with the contractual staff, specifically hired for the aforementioned purpose, under the guidance and supervision of a designated building in-charge in each division. The construction repair and electrical maintenance work in the institute is undertaken by CPWD. Besides, there is a separate unit viz. Farm, Horticulture and Landscape Operation Service Unit (FHLOSU) in the institute, which not only looks after the day-to-day repair and maintenance of the imported and indigenous machines but also supervises all the landscaping work, maintenance of gardens/lawns of the Institute and its residential areas. Every department maintains a stock register for the available equipments. Proper audit of the stock takes place at the end of every year and reports submitted for future records and references. The maintenance of equipments/instruments housed in different divisions is undertaken by the concerned HOD as per the laid down General Financial Rules (GFR). The annual Maintenance Contract (AMC) of all costly and sensitive instruments/equipments in these divisions is obtained for their uninterrupted and hassle-free use by the beneficiaries. The log book for the use of all the instruments is properly maintained. The IT equipment for providing Internet services throughout the campus is also kept under AMC. The servers and data centre equipments are managed by System Administrator. The LAN maintenance is under the Network Administrator. The website and online application activities are managed by Website administrator. A senior faculty member has been appointed as an In-charge of the central library, who along with the Librarian, technical officers and other supporting staff manages its day-to-day affairs. At end of the Academic year stock verification is done and librarian prepares the report.. Procurement of books as per the requirement is done through a committee by inviting the requirement of books from various departments which is then processed following the standard procurement procedure. Needless to mention that during the execution of all the purchases, the Government of India (GOI) rules, regulations and guidelines are followed mutatis mutandis.

<https://iari.res.in/>

CRITERION V – STUDENT SUPPORT AND PROGRESSION

5.1 – Student Support

5.1.1 – Scholarships and Financial Support

	Name/Title of the scheme	Number of students	Amount in Rupees
Financial Support from institution	IARI JRF and SRF fellowship	187	20704320
Financial Support from Other Sources			
a) National	SRF-ICAR, DBT, DST, CSIR, National Fellowship (ST), National fellowship (SC), National Fellowship (OBC), Moulana AZAD	118	31651500

	National Fellowship, NET-JRF		
b)International	Special Scholarship Scheme for Afghan Nationals, Africa Scholarship Scheme, India-Africa Fellowship Programme, ACARE Programme, General Scholarship Scheme, ICAR-International Fellowship, Africa Scholarship Scheme, Bheard Fellowship Scheme, Mekong Gan	21	2439360

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5.1.2 – Number of capability enhancement and development schemes such as Soft skill development, Remedial coaching, Language lab, Bridge courses, Yoga, Meditation, Personal Counselling and Mentoring etc.,

Name of the capability enhancement scheme	Date of implemetation	Number of students enrolled	Agencies involved
Agronomy of rainy season crops (AGR 001)	09/07/2010	9	Division of Agronomy
Agronomy of Winter season Crops (AGR 002)	09/07/2010	9	Division of Agronomy
Agronomy of summer season crops (AGR 003)	09/07/2010	9	Division of Agronomy
Soil and Environment (AGR 004)	09/07/2010	9	Division of SSAC
Major Pests of Crops and their Management (AGR 005)	09/07/2010	9	Division of Entomology
Crop morphology and physiology (AGR 006)	09/07/2010	9	Division of Plant Physiology
Principles of Horticultural Crops (AGR 007)	09/07/2010	9	Division of Horticulture
On-farm Education and Visits to different Institutions (AGR 008)	09/07/2010	9	Division of Agricultural Extension
Principles of Post Harvest Technology (AGR	09/07/2010	9	Division of Post Harvest Technology

009)			
Elements of Genetics and Plant Breeding (AGR 010)	09/07/2010	9	Division of Genetics
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5.1.3 – Students benefited by guidance for competitive examinations and career counselling offered by the institution during the year

Year	Name of the scheme	Number of benefited students for competitive examination	Number of benefited students by career counseling activities	Number of students who have passed in the comp. exam	Number of students placed
2017	ARS SERVICES	1106	1106	89	89
2017	Other services	1106	1106	54	54
No file uploaded.					

5.1.4 – Institutional mechanism for transparency, timely redressal of student grievances, Prevention of sexual harassment and ragging cases during the year

Total grievances received	Number of grievances redressed	Avg. number of days for grievance redressal
0	0	0

5.2 – Student Progression

5.2.1 – Details of campus placement during the year

On campus			Off campus		
Name of organizations visited	Number of students participated	Number of students placed	Name of organizations visited	Number of students participated	Number of students placed
No Data Entered/Not Applicable !!!					
No file uploaded.					

5.2.2 – Student progression to higher education in percentage during the year

Year	Number of students enrolling into higher education	Programme graduated from	Department graduated from	Name of institution joined	Name of programme admitted to
2017	80	MSc (Ag)	Agricultural Chemicals	IARI	PhD
2017	100	MSc (Agri)	Agricultural Economics	IARI	PhD
2017	100	MSc (Agri)	Agricultural Extension	IARI	PhD
2017	100	MSc (Agri)	Agricultural	IARI	PhD

			Physics		
2017	100	MSc (Agri)	Agricultural Statistics	IARI	PhD
2017	100	MSc (Agri)	Agronomy	IARI	PhD
2017	75	MSc (Agri)	Biochemistry	IARI	PhD
2017	67	MSc (Agri)	Molecular Biology & Biotechnology	IARI	PhD
2017	75	MSc (Agri)	Nematology	IARI	PhD
2017	100	MSc (Agri)	Entomology	IARI	PhD
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5.2.3 – Students qualifying in state/ national/ international level examinations during the year (eg:NET/SET/SLET/GATE/GMAT/CAT/GRE/TOFEL/Civil Services/State Government Services)

Items	Number of students selected/ qualifying
NET	89
Any Other	143
No file uploaded.	

5.2.4 – Sports and cultural activities / competitions organised at the institution level during the year

Activity	Level	Number of Participants
Annual Sports Meet	Post Graduate	85
Annual Cultural Meet	Post Graduate	76
Quiz, Declamation, Debate	Post Graduate	48
No file uploaded.		

5.3 – Student Participation and Activities

5.3.1 – Number of awards/medals for outstanding performance in sports/cultural activities at national/international level (award for a team event should be counted as one)

Year	Name of the award/medal	National/ Internaional	Number of awards for Sports	Number of awards for Cultural	Student ID number	Name of the student
2017	Gold	National	1	Nil	Nil	Nil
2017	Silver	National	1	Nil	Nil	Nil
No file uploaded.						

5.3.2 – Activity of Student Council & representation of students on academic & administrative bodies/committees of the institution (maximum 500 words)

The IARI has an active Students' Union known as Post Graduate School Students' Union (PGSSU), who puts forth major concerns of the students and issues related to them at different fora for their resolution and implementation. The Executive Committee of PGSSU comprises of following elected members: (i) President (ii) Vice President (Girl) (iii) General Secretary (iv) Games and Sports Secretary (v) Finance Secretary (vi) Social Cultural Secretary (vii) The students representative to the Academic Council (viii) Five class representatives (ix) Literary secretary (Girl) (x) Alumni secretary (xi) Career

Council and Placement Secretary. The Board of Studies (BOS) in each Discipline also has a students' representative, who actively takes part in the decision making in the matters pertaining to the various academic activities of that particular Discipline. Two student representatives are also appointed as member of the Academic Council in the following manner: 1. The President, PGSSU is an ex-officio student representative in the Academic Council. 2. The second student representative is elected every year by secret ballot by the members of the PGSSU through the same election process adopted for electing the Executive of the Post Graduate School Students' Union. 3. The tenure of the student representative is one year. Furthermore, the President PGSSU elected students' representative are also members of following three Standing Committees: • Standing Committee on Scholarships, Financial Assistance and Academic Progress • Standing Committee on Students Problems and Discipline, Welfare Board and Residences • Standing Committee on Courses, Curricula and academic affairs Students Welfare Fund is maintained in the PG School, IARI. The student welfare fund is granted advance loans to the needy students for special purposes. This fund is administered by a committee known as Students Welfare Committee. The President, PGSSU and Finance Secretary, PGSSU are members in this committee. Furthermore, the students are also kept members in the committees constituted for prevention of sexual harassment and ragging at work place and for promotion of gender sensitization. The students are also members in the various committees constituted for successful organization of various annual events at the institute such as convocation week programme, various award lectures, teachers day celebration, international women's day celebration, Girrl child day celebration, Krishi Vigyan Mela, etc.

5.4 – Alumni Engagement

5.4.1 – Whether the institution has registered Alumni Association?

Yes

IARI has a registered Alumni Association, which has been created with a primary aim of networking its alumni and developing a sense of community amongst them. Alumni are one of the main stakeholders of the University as they contribute immensely to the functioning and development of the university in multiple dimensions. The institute is utilising the services of Alumni in various committees like Institute Research Council, Research Advisory Council, Quinquennial Review Team, etc. The Alumni are also being encouraged to join as Adjunct Faculty to strengthen teaching and research activities. The Alumni are also welcome to serve IARI as National Professor, Eminent Scientist, Eminent Professor, etc. The Alumni also form pool of resources for evaluation of thesis, external examiners of students' theses and for conducting Qualifying Examination. The Alumni serving in various ICAR institutes, SAUs and Private Firms are welcome to take up collaborative or joint research projects. Besides, they are providing mentoring services to the current students of the institute. Through their rich experience they are helping the students to understand the requirements of various industries and educating them to plan and shape their career in right direction. Students also get opportunity to work in the labs of some of the alumni to gain research experience in cutting edge technologies. They are also imparting them first-hand knowledge about the various steps and procedures needed for setting up their own start-ups. During the convocation week celebration of the institute, alumni are invited for the convocation week celebration and they share their memories and experiences during convocation dinner. This helps them to rekindle their old relationships. Alumni Directory is regularly updated to keep the contact alive with all the IARIians.

5.4.2 – No. of registered Alumni:

9766

5.4.3 – Alumni contribution during the year (in Rupees) :

No Data Entered/Not Applicable !!!

5.4.4 – Meetings/activities organized by Alumni Association :

Alumni meet was organized on the 9th Feb 2018 convocation and the alumni are invited to participate and give their feedback.

CRITERION VI – GOVERNANCE, LEADERSHIP AND MANAGEMENT

6.1 – Institutional Vision and Leadership

6.1.1 – Mention two practices of decentralization and participative management during the last year (maximum 500 words)

The institute follows a professional approach in managing the various academic and administrative activities by way of decentralization and participative management. The Director of the institute gives adequate budgetary allocation of funds to the Joint Directors and Heads of Divisions (HODs) along with the generous freedom and flexibility for their utilization to ensure full, independent and effective discharge of their responsibilities and functions. The HODs are empowered to sanction indents amounting to Rs 1 lakh. Monthly meetings of the HODs are conducted by the Director to review the progress made and to chart out the future course of action. Similarly, at the divisional level a Divisional Budget and Research Committee (DBRC) is constituted by including members from different categories of scientists as well as an Administrative Officer. The Chairman of DBRC is head of the Division. The major issues pertaining to equitable and judicious use of allocated funds as well as strategies for enhancing the impact of the ongoing research activities in the division, new programmes to be undertaken and ways to secure additional funds from external sources are thoroughly discussed in the regular meetings of the DBRC and recommendations sent to the Director, IARI for further approval. For an effective efficient implementation of the academic vision of the institute and for seamless discharge of the Institute's mandate in this regard, Board of Studies (BOS) is constituted in each division with members from different strata of scientists. The chairperson of BOS is the Professor of the division and it also includes one Students' Representative. All the major decisions for maintaining, nourishing and improving the teaching standards in the division are taken by the BOS under the guidance of Director and Dean of the institute. The Professor of the division is given full freedom to effectively utilize funds allocated for strengthening PG activities in the division as per the GFR. The four standing Committees, IQAC under the guidance of competent authorities are involved in defining policies procedures, framing guidelines and rules regulations pertaining to admission, examination, discipline, grievance, support services, finance etc.

6.1.2 – Does the institution have a Management Information System (MIS)?

Yes

6.2 – Strategy Development and Deployment

6.2.1 – Quality improvement strategies adopted by the institution for each of the following (with in 100 words each):

Strategy Type	Details
Research and Development	<ul style="list-style-type: none">• Identification of research topics is done by the faculty and submitted to BOS of Disciplines, six months in advance to admission of students. HoD, Professors and all the faculty members are involved in deciding the advisory

committee of students and research topics • Allotment of Chairperson is based on students merit and their preference for thesis research topics. Strict monitoring of students research progress by advisory Committee, presentation before faculty and BOS members is done meeting. Modification/ corrective measures if any in the approved research work with the permission of the PG school are taken. External evaluation of thesis is done. PhD thesis is evaluated by two external experts not below the rank of Professor M.Sc/ M.Tech thesis is evaluated by one external examine. Incorporation of all the suggestions/ comments as suggested by the external examiners in the final version of the thesis is done. For PhD students, publication of two research papers (one published another communicated) in journal with NAAS score >5.0 is compulsory.

Library, ICT and Physical Infrastructure / Instrumentation

• Online journals and books are subscribed, which are accessible to all the students • Internet and intranet and Wi-Fi connectivity has been provided at all the divisions and hostels • The Institute established a National Phytotron Facility in 1997, to study the live responses of plants under controlled conditions. • There is a well-equipped Pesticide Referral Laboratory to analyze referred samples for pesticides. • Scanning Electron Microscope Facility (SEMF) at Division of Entomology • This Farm Machinery Testing Centre, Division of Agricultural Engineering, • ASRB Online Examination Centre has being established at IARI. • Through CeRA (Consortium for eResources in Agriculture), the institute provides online access of approx. 2380 e-Journals on LAN to scientific community. • Prof. M S Swaminathan Library has created Online Public Access Catalogue (OPAC) of resources of 36 libraries with "Online Computer Library Center" (OCLC) partnership. • The e-Language lab has been established with seating capacity of about 50 participants to facilitate language classes for foreign students. • There is a Central Laboratory for Soil and Plant Analysis at IARI.

Human Resource Management

• HRD cell of IARI get the training

plan for all staff from each discipline. Training programmes are organized at Institute and staff is sent for participation at National and International level. • Scientists and students are encouraged to participate in training both at national and international level through fellowships. • Grant is providing to faculty and students for attending various workshops/symposia/conferences etc. to broaden their horizon, skills and to foster new linkages. In APAR the reporting officer identify the training needs of the scientists and faculty is sent for training accordingly.

Industry Interaction / Collaboration

IARI students are encouraged to apply for PM fellowship in which the industry sponsors certain percent of Fellowship and student research is decided based on the need of the industry. Consultancy/ Contract research projects are being taken up by the scientists. BIRAC/DST.DBT projects involving industry is taken up by scientists. Students are encouraged to go for internship/ short course in Industry. IARI technology is commercialized to private firms through ZTM BPD Unit

Admission of Students

The Board of Studies (BoS) in each Discipline prepares the requirement of number of M.Sc. and PhD seats and submit to PG School. Hereafter, approval of Academic Council is obtained. The total seat requirement is communicated to the Education Division of ICAR. The Institute admits students to the Post Graduate School under five separate streams as indicated below:
 (A) Open competition (B) Faculty Upgradation Scheme (FUS) (C) Departmental stream (Scientific and Technical) (D) ICAR in-service nominees (E) International students. M.Sc. and M.Tech. degree courses: Entrance examination for admission to M.Sc. and M.Tech. degree courses is undertaken by the Education Division of ICAR and on the basis of merit, the ICAR finalizes the admission for 23 M.Sc. and one M.Tech. degree courses at IARI. Ph.D. degree courses: Admission to the Ph.D. courses in 22 disciplines is based on performance of candidates in the written entrance examination (70 weightage) academic score (20 weightage) interview (10 weightage).

	obtained. The total seat requirement is communicated to the Education Division of ICAR.
Curriculum Development	<ul style="list-style-type: none"> • Institute follows the course curriculum as recommended by the ICAR-BSMA (Broad Subject Matter Area) committees, which is being implemented in the teaching programme of 26 disciplines. • The curriculum is in line with international standards and covers frontier areas of science.
Teaching and Learning	<ul style="list-style-type: none"> • Periodic monitoring of the academic progress is done by Dean Joint Director (Edn.) during his/her meetings with the Professors of each teaching discipline. Strict compliance of the academic regulations and calendar time lines are followed right from the admission to convocation ceremony. The PG School has developed PGS online management system for paperless work for academic activities in all the 26 Disciplines. Online submission of all the proposals of students viz., student credentials, attendance, trimester grades, progress report, PPWs, ORWs, qualifying exam and thesis submission proposals, e-thesis etc is done. Frequent visits of Dean and Joint Director (Education) is made in the Divisions and interactions are done with students and faculty. Compulsory meeting of student Advisory Committee at least once during each trimester is done. • External examiners are invited for the Qualifying examination of PhD students • Board of Studies meeting in each discipline are held atleast one in each quarter
Examination and Evaluation	For Qualifying exam and Thesis viva voce, expert is called from outside IARI and analytical questions are asked. During each trimester, students performance is evaluated based on quizzes, Mind term and Final examination is done. Practical exams are conducted separately.

6.2.2 – Implementation of e-governance in areas of operations:

E-governance area	Details
Planning and Development	IARI is using the ERP solution developed by IASRI for ICAR namely "Management Information Services (MIS) including Financial Management System (FMS)" (MIS FMS). The system has provisions for: Project management: Scope for Project information, costing,

	project documents, contract management and grants Material management: Solutions for Purchase and inventory management
Administration	e-office is being implemented for the purpose management of office files comprising of file movement and administrative approval e-Tender is followed for purchase of scientific equipments with amount beyond Rs 1 crores
Finance and Accounts	IARI is using the ERP solution developed by IASRI for ICAR namely "Management Information Services (MIS) including Financial Management System (FMS)" (MIS FMS). The system has provisions for: Financial Management: Solutions for general ledger, account payable, account receivable, cash management, fixed assets management, budget management and grants Payroll system: Salary, GPF, Pension payment, retirement benefit calculation and income tax calculation, etc.
Student Admission and Support	PG School, IARI Management System for online management of academic activity of students. The system is available to students, faculty members, scientists and administrative staff of PG School, IARI. It has following sub modules (a) Course management (b) Student management (c) Faculty management (d) Administrative management (e) e-Learning (f) Student research management
Examination	"PG School, IARI Management System" for online management of academic activity of students. The system is available to students, faculty members, scientists and administrative staff of PG School, IARI. The students course grades are uploaded online into the PG School, IARI Management System by the Course leader which is approved by Professor and Dean The proforma for taking up qualifying examination submission of thesis is submitted online in which the Chairman, professor and HoD provide the names of external examiners which is finally selected by the Dean The results of qualifying examination and the thesis is submitted online into the "PG School, IARI Management System"

6.3 – Faculty Empowerment Strategies

6.3.1 – Teachers provided with financial support to attend conferences / workshops and towards membership fee of professional bodies during the year

Year	Name of Teacher	Name of conference/ workshop attended for which financial support provided	Name of the professional body for which membership fee is provided	Amount of support
2017	Awtar Singh	National Seminar on "Enhancing Productivity of Fruit Crops- Mitigating major challenges", IIHR, Bangaluru, 8th January, 2017.	Society for the Promotion of Horticulture, Bangalore	7500
2017	Dr Ananta Vashisth	XIV National Seed Seminar on Food Security through Augmented Seed Supply under Climate Uncertainties. 28-30 January, 2017. ICAR-IARI, New Delhi.	Indian Society of Seed technology	6000
2017	Dr Ananta Vashisth	6th International Conference on Recent Advances in Agriculture and Horticulture Sciences (ICRAAHS-2017)" during 16-17 December, 2017 at New Delhi.	The Society of Tropical Agriculture	12500
2017	Dr Ananta Vashisth	"National Seminar Agrometeorological Practices for Climate Resilient Farming and Food Security (AGMET-2017)" held at CCS Haryana Agricultural University, Hisar during 12-14 October,	Association of Agrometeorologists	3000

		2017.		
2018	A Mandal	14 day Skill Development Training on "Nanoparticles for Application in Biology" at CCMB, Hyderabad (19th February-3rd March, 2018)	CSIR-CCMB, Hyderabad	25000
2017	Dr. Manimaran, B.	National symposium on climate smart agriculture for nematode management	Nematological Society of India	5000
Nil	Dr. Ruma Das	National Seminar on "Nutrients and pollutants in soil-plant-animal-human continuum for sustaining soil, food and nutritional security - way forward" to be held at BCKV, Kalyani, West Bengal during 09-10 June, 2017	BCKV, Kalyani, West Bengal	13000
Nil	Shiva Dhar, A.K. Vyas and A. Kumar	Productivity of wheat under preceding legumes and cereals cropping with organic and inorganic nutrition: Oral Presentation in Agriculture and Agro forestry Section at 104th Indian Science Congress, at Tirupati from 3-7th Jan, 2017.	Indian Science Congress	6000
Nil	Dr SS Rathore	22th Annual Group Meeting Of Rapeseed-	AICRP-RM, DRMR	3000

		Mustard Research Workers AUGUST 06-07, 2017		
Nill	Dr. Sapna Panwar	National Conference on Floriculture for Rural and Urban Prosperity in the Scenario of Climate Change (February 16-18, 2018), Sikkim	Indian Society of Ornamental Horticulture	3000
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6.3.2 – Number of professional development / administrative training programmes organized by the University for teaching and non teaching staff during the year

Year	Title of the professional development programme organised for teaching staff	Title of the administrative training programme organised for non-teaching staff	From date	To Date	Number of participants (Teaching staff)	Number of participants (non-teaching staff)
2017	Nill	Empowerment of rural women through value addition in flower crops" was organized at project area of district Baghpat, U.P.	22/08/2017	24/08/2017	Nill	60
2017	CAFT training on "Technological and Policy Options for Enhancing Farmers' Income"	Nill	23/09/2017	13/10/2017	25	Nill
2018	CAFT training on "Quantitative Methods	Nill	23/01/2018	12/02/2018	25	Nill

	for Agricultural Policy Analysis"					
2017	CAFT Training on Extension Strategies for Nutrition Sensitive Agriculture to Address Sustainable Development Goal.	Nil	02/09/2017	22/09/2017	15	Nil
2017	CAFT Training on Advances in Instructional Technologies for Enhancing Teaching-Learning and Training Competencies	Nil	13/10/2017	02/11/2017	18	Nil
2018	CAFT Training on Innovations in Agricultural Extension for Enhanced Technology Application and Stakeholders Empowerment in Context to Changing Agrarian Needs	Nil	05/01/2018	25/01/2018	14	Nil
2018	Training on " Tools Techniques in Bioinfo	Nil	12/03/2018	14/03/2018	25	Nil

	rmatics"					
2017	Training on "Applications of Information Technology in Agriculture" for technical staff of IARI	Nil	04/12/2017	08/12/2017	25	Nil
2017	Training on "Implementation of KOHA Platform for Library Management in NARES" at Professor Jayashankar Telangana State Agriculture University, Hyderabad	Nil	17/11/2017	18/11/2017	55	Nil
2018	Training on Strengthening of Digital Library in NARES using KOHA Platform" at Indira Gandhi Krishi Vishwavidyalaya, Raipur	Nil	11/01/2018	Nil	430	Nil

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6.3.3 – No. of teachers attending professional development programmes, viz., Orientation Programme, Refresher Course, Short Term Course, Faculty Development Programmes during the year

Title of the professional development programme	Number of teachers who attended	From Date	To date	Duration
Advances in simulation modelling and climate change research	1	16/11/2017	06/12/2017	21

towards knowledge based agriculture, ICAR-HRM training at CESCRA, IARI, New Delhi				
International training workshop on Precision nitrogen nutrition in wheat: Integrating genetics and precision agronomy for improving nitrogen use efficiency organized under Indo-UK joint project on INEW at Borlaug Institute for South Asia and Intern	1	01/03/2018	05/03/2018	6
Participated in 11th Annual Workshop of Monitoring of Pesticide Residues at National Level at AAU, Anand	1	22/09/2017	22/09/2017	1
Participated in 5th AOAC India section Conference 2018 at New Delhi,	1	28/02/2018	01/03/2018	2
ICAR-HRM training on Genomics-assisted breeding for crop improvement	1	01/03/2018	21/03/2018	21
Experimental Designs and Statistical Data Analysis	1	11/09/2017	20/09/2017	9
Management of Plant Genetic Resources" organized at NBPGR, New	1	06/03/2018	19/03/2018	14

Delhi				
Advanced Statistical Tools and Techniques for Modelling and Forecasting Agricultural Data", ICAR-IASRI, New Delhi,	1	08/11/2017	28/11/2017	21
10th South Asian Training program on CGE Modelling , Kathmandu Bangladesh, SANEM	1	12/08/2017	14/08/2017	3
Intellectual Property Rights Business Zonal Technology Management Business Planning and Development Unit, ICAR -Indian Agricultural Research Institute, New Delhi	1	10/04/2017	12/04/2017	3

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6.3.4 – Faculty and Staff recruitment (no. for permanent recruitment):

Teaching		Non-teaching	
Permanent	Full Time	Permanent	Full Time
13	13	24	24

6.3.5 – Welfare schemes for

Teaching	Non-teaching	Students
CGHS provided to all faculty members, Dispensary with dedicated medical officer, Group Life Insurance Scheme is available to all employees	Institute Joint Staff Council (IJSC) Nehru Experimental Centre, Gymnasium	PG School Student Union Gym Sports Ground Dispensary PG School Welfare Fund

6.4 – Financial Management and Resource Mobilization

6.4.1 – Institution conducts internal and external financial audits regularly (with in 100 words each)

The Institution has an established mechanism for conducting internal and external audits on the financial transactions every year to ensure financial compliance. Internal audit is conducted half yearly by the internal financial

committee of the institution. The committee thoroughly verifies the income and expenditure details and the compliance report of internal audit is submitted to the management of the institution. External audit is conducted once every year by an external agency. • External Audit is conducted by the C A. G. Office as per its Audit calendar. • Internal Audit of the institute is conducted by the ICAR headquarter on yearly basis. • Besides, the physical verification of the stores and divisional libraries is conducted in each division by an in-house committee constituted by HOD for the aforesaid purpose.

6.4.2 – Funds / Grants received from management, non-government bodies, individuals, philanthropies during the year(not covered in Criterion III)

Name of the non government funding agencies /individuals	Funds/ Grnats received in Rs.	Purpose
No Data Entered/Not Applicable !!!		
No file uploaded.		

6.4.3 – Total corpus fund generated

No Data Entered/Not Applicable !!!

6.5 – Internal Quality Assurance System

6.5.1 – Whether Academic and Administrative Audit (AAA) has been done?

Audit Type	External		Internal	
	Yes/No	Agency	Yes/No	Authority
Academic	Yes	QRT Institute Research Council (IRC II) Institute Research Council I Research Advisory Council (RAC) Are mechanism to monitor the research and teaching activities of the institute and recommendations are compiled with	Yes	Board of Studies and Divisional Budget and Research Committee (IRC I, IRC II RAC) monitors and guides day to day research and teaching activities of the Divisions, respectively
Administrative	Yes	Audit Working in Hindi is audited by the Hindi Committee	Yes	Annual stores verification by committee constituted for the purpose Audit department audits the financial activities Working in Hindi is audited by the

committee constituted for the purpose

6.5.2 – What efforts are made by the University to promote autonomy in the affiliated/constituent colleges? (if applicable)

- Funds have been provided to IASRI, NBPGR and NIPB, New Delhi and necessary infrastructure support is extended to IIHR, Bengaluru and CIAE, Bhopal for successful implementation of teaching programmes at these centres. The students admitted at these centres have full access to the PGS online management system for various teaching related activities. The students from these institutes can visit IARI and are provided access to different laboratories for undertaking any experiment committed in their thesis work.

6.5.3 – Activities and support from the Parent – Teacher Association (at least three)

- Parents are invited during Convocation and they are encouraged to give their feedback during the farewell programme organized in each Divisions for outgoing students. The students are felicitated for their academic and other achievements. Parents help in the mentoring and counselling of their wards as and when need arises

6.5.4 – Development programmes for support staff (at least three)

- Training programme for skill development are organized for supporting staff.
- Supporting staffs along with other staffs participate regularly in inter institutional sports activities organised by an institute under the administrative control of ICAR.
- New Pusa Recreation Centre (NPRC) has excellent facilities for indoor and outdoor games for support staff. The Centre helps the staff in personality development and maintaining physical fitness.
- Support staff can avail the facilities available in the IARI Dispensary.
- Support staff has representatives in IJSC who help in implementation of institute welfare schemes.

6.5.5 – Post Accreditation initiative(s) (mention at least three)

- The courses have been revised following the 5th Deans Committee Report BSMA (Broad Subject Matter Area) guidelines
- The outreach programme has been strengthened by recognising more institutes as partners in academic activities
- New courses have been added to broaden the knowledge of students with a view to inculcate soft skills
- The students thesis research is aligned with the research programme of Divisions so as to compliment each others' efforts

6.5.6 – Internal Quality Assurance System Details

a) Submission of Data for AISHE portal	Yes
b) Participation in NIRF	Yes
c) ISO certification	Yes
d) NBA or any other quality audit	Yes

6.5.7 – Number of Quality Initiatives undertaken during the year

Year	Name of quality initiative by IQAC	Date of conducting IQAC	Duration From	Duration To	Number of participants
2017	Research Advisory Committee	21/12/2017	24/12/2016	21/12/2017	40
2017	Academic council	08/02/2017	30/11/2016	08/02/2017	39

	meeting				
2017	Academic council meeting	07/07/2017	08/02/2017	07/07/2017	41
2017	Academic council meeting	16/12/2017	07/07/2017	16/12/2017	38
2017	Extension council meeting	17/06/2017	30/06/2016	17/06/2017	89
2017	<ul style="list-style-type: none"> National Institute Ranking Framework (NIRF) data was uploaded by IARI on 5.12.2017 and this year IARI has not been listed in any of the identified categories. However IARI listed under 'Special Mention Institutions' along with National Dairy Resear 	Nil	Nil	Nil	Nil

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CRITERION VII – INSTITUTIONAL VALUES AND BEST PRACTICES

7.1 – Institutional Values and Social Responsibilities

7.1.1 – Gender Equity (Number of gender equity promotion programmes organized by the institution during the year)

Title of the programme	Period from	Period To	Number of Participants	
			Female	Male
Empowerment of rural women through value addition in flower crops	02/08/2017	24/08/2017	50	0
Training on processing and value addition of fruits and vegetables for women farmers	24/10/2017	29/10/2017	9	0

of J & K state				
Farmers training for members of Krishi vistar avum mahila uthan sammiti Karnal	25/01/2018	13/02/2018	26	0
Value addition in soybean and pearl-millet	19/03/2018	24/03/2018	30	0
Nutrition in Lactating women	05/02/2018	05/02/2018	18	0
Preservation of seasonal fruits and vegetables	06/02/2018	13/02/2018	13	0
Establishment of nutri-farm	25/10/2017	31/10/2017	28	0
Dress-designing and tailoring	21/11/2017	04/01/2018	26	5
Exposure visit of general public New Delhi to Winter Rose Show	01/12/2017	31/12/2017	550	650
Grading, packing and post-harvest management	08/07/2017	28/07/2017	20	0
Preservation of fruits & vegetables	08/09/2017	08/09/2017	17	3

7.1.2 – Environmental Consciousness and Sustainability/Alternate Energy initiatives such as:

Percentage of power requirement of the University met by the renewable energy sources

- Solar panels have been installed on roof tops of Divisions, mela ground, NRL building, etc which generated 2 MW (25) of electricity
- The Institute has well-knit protocols/ procedures for the collection and disposal of different kinds of wastes (chemical, biological, radioactive, universal and recyclable) from the laboratories, hostels and research farms.
- Radiological safely office is operating in the Institute which takes care of the procurement of radioisotopes and biomolecules for research, collection of wastes on regular basis and its disposal in the designated Gamma garden.

7.1.3 – Differently abled (Divyangjan) friendliness

Item facilities	Yes/No	Number of beneficiaries
Physical facilities	Yes	9
Provision for lift	Yes	9

Ramp/Rails	Yes	9
Rest Rooms	Yes	9
Scribes for examination	Yes	9

7.1.4 – Inclusion and Situatedness

Year	Number of initiatives to address locational advantages and disadvantages	Number of initiatives taken to engage with and contribute to local community	Date	Duration	Name of initiative	Issues addressed	Number of participating students and staff
2017	763	29	Nil	365	IARI-VOs Partnership Programme	Assessment and promotion of IARI technologies, both improved varieties of different crops and NRM technology. Improved productivity of the crops in the farmers fields and higher income.	14
2017	39480	6	Nil	365	ATIC is effectively providing products, services, technologies and information services to different stakeholders through a single window delivery system	Single window delivery system to the farmers for the Institute technology and services.	6

2017	9378	600	Nill	365	Mera Gaon Mera Gaurav (MGMG) programme	Enhancing farmers knowledge about latest technology Dissemination of latest technology to farmers field	503
2017	46	46	Nill	365	IARI post office linkage model	Enhanced outreach of frontline extension system, Coverage of remotely located farmers through IARI improved technologies	4
2017	64	4	Nill	365	ARYA scheme	Entrepreneurship development in rural youth and women for value addition, protected cultivation, and mushroom production, 50 participants have adopted the vocation and established their own enterprise	5

2017	220	4	Nil	365	Frontline Demonstration programme	The improved varieties and latest recommended package of practices were demonstrated under the programmes in Gurugram district under CFLDs on Pulses and oilseeds under NMOOP and NFSM programme, and Improved varieties of IARI of wheat demonstrations	4
2017	462	4	Nil	365	Out scaling Agricultural Innovations for enhancing farm income and employment	Transfer of improved agricultural technologies. Enhancement in crop productivity and income of the farmers	14
2017	388	17	Nil	365	Strengthening Extension Education Programme of Developing Innovative Models and Techn	Assessment and promotion of IARI technologies, both improved varieties of different	14

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7.1.5 – Human Values and Professional Ethics Code of conduct (handbooks) for various stakeholders

Title	Date of publication	Follow up(max 100 words)
Post Graduate School Calendar	01/02/2011	The guidelines are being followed and practiced in true spirit for the academic activities of Institute
ICAR. 2006. ICAR Guidelines for Intellectual Property Management and Technology Transfer/ Commercialization. Indian Council of Agricultural Research, New Delhi	28/09/2006	The guidelines are being followed and practiced in true spirit for commercialization and IP management
ICAR, 2014. ICAR Rules and guidelines for Professional Service Functions (Training, Consultancy, Contract Research and Contract Service, Indian Council of Agricultural Research, New Delhi	21/09/2014	The guidelines are being followed and practiced in true spirit for training, consultancy and contract research
Vision Document 2025	Nil	The guidelines are being followed and practiced in true spirit
Vision Document 2050	Nil	The guidelines are being followed and practiced in true spirit
Soil testing services	Nil	The guidelines are being followed and practiced in true spirit for offering the services of the Institute laboratory for testing soil and water quality
Policy decisions and activities undertaken for	06/07/2018	Three per cent of the total number of seats in

the benefit of differently abled persons, Published in IARI Annual Report, 2017, Page 186.

each scheme of admission open to Indian nationals are reserved for differently abled candidates subject to their being otherwise suitable as per the norms of ICAR/Govt. of India. During the year 2017-18, 9 physically challenged students (4 M.Sc./M.Tech and 5 Ph.D.) were admitted against the reserved seats for differently abled candidates.

7.1.6 – Activities conducted for promotion of universal Values and Ethics

Activity	Duration From	Duration To	Number of participants
Vigilance Awareness Week	30/10/2017	04/11/2017	2038
Agricultural research, research ethics, rural development programme (PGS 505)	01/01/2017	31/12/2017	126
Adoption of Anti-Plagiarism Policy: To maintain academic integrity, documents like thesis and manuscripts prior to submission were subjected to web based software for plagiarism check and similarity reports, which should adhere to minimum norm..	01/01/2017	31/12/2017	1434
Anti-Ragging/ Grievance redressal mechanism:: PG School, IARI, New Delhi has Standing Committee on Students Problems Discipline, Welfare, Board and Residences which considers Complaints/Grievance of students, if any.	01/01/2017	31/12/2017	2038

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7.1.7 – Initiatives taken by the institution to make the campus eco-friendly (at least five)

- Biomass waste is collected and converted into compost under waste to wealth programme at Biomass Utilization Unit
- Institute has developed Pusa decomposer technology for in-situ residue management which is used on the campus and extensively used in Uttar Pradesh, Punjab and Haryana states help minimize paddy straw burning.
- Institute has installed solar panels and generates 2 MW of electricity
- Water harvesting ponds and recharge wells created for water harvesting and recycling of waste water
- Waste water treatment plant to treat waste water and used for irrigation
- Waste paper recycling plant installed to reuse waste papers

7.2 – Best Practices

7.2.1 – Describe at least two institutional best practices

The two best practices of IARI are: (A) VARIETIES OF CANOLA QUALITY INDIAN MUSTARD (BRASSICA JUNCEA) -FOR BETTER HUMAN HEALTH AND IMPROVED FARM INCOME

1a. Objectives of the Practice Rapeseed mustard is a traditional, indigenous and the most important edible oil crop in India. The presence of two anti-nutritional factors, erucic acid in seed oil and glucosinolates in seed meal cake, the nutritional value of rapeseed-mustard is continuously challenged by the health experts. To create value and improve the acceptance of rapeseed-mustard seed oil and meal, anti-nutritional factors such as erucic acid in oil and glucosinolates in the de-oiled cake need to be reduced through genetic options.

1b. The Practice Breeding efforts have been underway in India since 1970 for reducing the erucic acid and glucosinolates to internationally accepted Canola standards. Thirty exotic single zero/ canola lines including Zem-1 and Zem-2 of *B. juncea* Torch, Tobin, Candle and Span of *B. rapa* Tower, Altex and Westar of *B. napus* were introduced for testing in India. However, the introduced strains were not adaptable to Indian hot and dry growing conditions, therefore, initial efforts laid emphasis on the development of genetic stocks for low erucic acid and/or low glucosinolate in the indigenous cultivars using exotic donor sources. The zero erucic mustard developed by Kirk and Oram (1981) has been utilized by Indian scientists for transferring zero erucic traits to Indian mustard varieties. Australian and Chinese double low lines were used as donors for canola traits. These efforts led to the development and release of the first double low variety 'GSC-5' of *B. napus*, and the first low erucic acid variety 'Pusa Karishma' of *B. juncea* in 2003 and 2005, respectively. This first low erucic acid variety of Indian mustard has a limited preference among the farmers and traders due to its small seed size, though establishing a benchmark for the development of low erucic Indian mustard varieties with better productivity and market acceptability. Consistent efforts at ICAR-IARI, New Delhi has led to development of two double zero and seven single zero varieties of Indian mustard.

(B) BREEDING HIGH YIELDING AND WIDELY ADAPTED VARIETIES OF LENTIL AND CHICKPEA

1b. Objectives of the Practice Lentil is cultivated by small and marginal farmers as rainfed crop in Central India. It is grown on residual moisture of rainy season. The crop suffers from terminal moisture stress. Early maturity of about 100 days can help this crop in escaping terminal moisture stress. Bold seed size is another essential requirement of lentil. However in Eastern and Northern India, medium bold to small seeded types are preferred. Chickpea (*Cicer arietinum* L.) is a rich source of nutrition and is ranked second amongst food legumes after common bean as far as its production is concerned. The single largest share of chickpea production (65, 9.0 MT) is held by India, followed by Australia (14) in total world production (Merga et al., 2018). To attain self-sufficiency by 2050, the total pulse production in the country needs to reach 39 MT (Vision 2050, IIPR) and amongst all pulses, chickpea production alone needs to reach about 16 to 17.5 MT from a limited area of about 10.5 m ha with an average productivity of 15-17 q/ha.

2b. The Practice L 4717: Notified and released in 2017. Recommended

for Central Zone comprising states of Madhya Pradesh, parts of Uttar Pradesh and Rajasthan and Chhattisgarh. Suitable for timely planting under rainfed conditions in Central Zone for Rabi season. Average yield is 12-13 q/ha. L 4717 is resistant to powdery mildew disease and moderately resistant to fusarium wilt and ascochyta blight. It exhibited earliness, with mean maturity 100 days (over years and locations). Biofortified with Fe concentration of 65ppm. L 4727: Notified and released in 2018. Recommended for Central Zone comprising states of Madhya Pradesh, parts of Uttar Pradesh and Rajasthan and Chhattisgarh. Suitable for timely planting under rainfed conditions in Central Zone for Rabi season. The average yield is 11.5 to 14.5 q / ha. Exhibited yield superiority of 23.7 percent over the best check IPL 316. Mean maturity duration is 103 days. Moderately resistant to wilt in Central Zone. Seed size is bold with 100 seed weight of 3.1gm. L 4729: Notified and released in 2020.

Recommended for Central Zone comprising states of Madhya Pradesh, parts of Uttar Pradesh and Rajasthan and Chhattisgarh. Suitable for timely planting under rainfed conditions in Central Zone for Rabi season. Bold seeded variety with attractive seed coat colour. Extra early variety maturing in 103 days. Moderately resistant to wilt in Central Zone. Seed size is bold with 100 seed weight of 3.2 gm. PDL-1 (Pusa Avantika): It has been released for cultivation under salinity conditions in Haryana and Uttar Pradesh. PDL-1 yielded on an average of 983.1 kg/ha under salt stress environment. It is also lodging tolerant besides tolerances to drought and heat stresses. Its maturity duration is around 111 days under salt stress and 140 days under normal conditions.

PSL-1 (Pusa Yuvraj): PSL-9 is recommended for Haryana and Uttar Pradesh for salinity stress situation (ECe 6.0 dS/m). It has yielded on an average of 949.5 kg/ha under salt stress environment This variety is also disease and pest resistant. PSL-9 matures in around 112 days under salt stress and 130 days under normal conditions. Chickpea 1. Pusa Vijay (BGM 10-217): The variety has

been recently identified and released in UP by UP SVRC for UP and adjoining areas. It is timely sown desi variety with ability to withstand drought and has an yield advantage of 10.83 percent over checks with yield potential of 2.7t/ha and average yield of 2.1t/ha with high degree of resistance to fusarium wilt and drought. 2. BG 4005: Pusa 4005 is a marker-assisted backcross breeding (MABB) derived drought tolerant introgression line of desi chickpea variety Pusa 362 possessing "QTL hotspot" region conferring drought tolerance. It recorded an overall weighted mean yield advantage of 18.8 over the best national check (JAKI 9218) with an overall weighted mean yield of 1618 kg/ha and has an yield potential of 1940 kg/ha under drought conditions in north western plain zone (NWPZ) for which it has been identified. It is highly resistant to Fusarium wilt and stunt and moderately resistant (MR) to Dry root rot, collar rot and Botrytis Gray Mold. It has medium bold seed size (100-seed weight of 22.4 g) and protein content of 17.17 . 3. Pusa Chickpea 20211 (Pusa Chickpea Manav): It is a MABC derived wilt resistance introgression variety of chickpea developed suing the recurrent parent "Pusa 391" possessing

introgression of "QTL region" for wilt resistance on LG 2 having QTLs 1,3,4 5 from WR 315. The variety has been released for Central India in 2020 by Central Variety Release Committee (CVRC), Department of Agriculture and Farmers Welfare (DACFW), Government of India for Central Zone comprising of Central Zone (CZ) comprising of Madhya Pradesh, Chattisgarh, Maharashtra, Gujarat and Bundelkhand region of Uttar Pradesh the largest chickpea production zone in word. It recorded an overall weighted mean yield advantage of 28 over recurrent parent Pusa 391 across all the centers tested in National WRIL Trials under AICRIP over two consecutive years across central zone of testing namely, Rabi 2018-19 (25 over Pusa 391 over six locations) and Rabi 2019-20 (30 percent over Pusa 391 over five locations). It has an overall weighted mean yield of 2392 kg/ha and has an yield potential of 3915 kg/ha under wilt stress conditions over the recurrent parent Pusa 391 which yielded 1877 kg/ha. 4. Pusa Chickpea 10216. It is the Country's first drought tolerant desi chickpea vaiety developed through

chickpea developed suing the recurrent parent "Pusa 391" possessing introgression of "QTL region" for wilt resistance on LG 2 having QTLs 1,3,4 5 from WR 315. The variety has been released for Central India in 2020 by Central Variety Release Committee (CVRC), Department of Agriculture and Farmers Welfare (DACFW), Government of India for Central Zone comprising of Central Zone (CZ) comprising of Madhya Pradesh, Chattisgarh, Maharashtra, Gujarat and Bundelkhand region of Uttar Pradesh the largest chickpea production zone in word. It recorded an overall weighted mean yield advantage of 28 over recurrent parent Pusa 391 across all the centers tested in National WRIL Trials under AICRIP over two consecutive years across central zone of testing namely, Rabi 2018-19 (25 over Pusa 391 over six locations) and Rabi 2019-20 (30 percent over Pusa 391 over five locations). It has an overall weighted mean yield of 2392 kg/ha and has an yield potential of 3915 kg/ha under wilt stress conditions over the recurrent parent Pusa 391 which yielded 1877 kg/ha. 4. Pusa Chickpea 10216. It is the Country's first drought tolerant desi chickpea vaiety developed through

Marker Assisted Backcross Breeding Programme introgressing the root QTLs for drought from ICC 4958 into Pusa 372. The variety has been released for Central India in 2019 by Central Variety Release Committee (CVRC), Department of Agriculture and Farmers Welfare (DACFW), Government of India for Central Zone comprising of Central Zone (CZ) comprising of Madhya Pradesh, Chattisgarh, Maharashtra, Gujarat and Bundelkhand region of Uttar Pradesh the largest chickpea production zone in world. It recorded an overall weighted mean yield advantage of 16 over recurrent parent Pusa 372 across all the centers tested in National DTIL Trials under AICRIP over two consecutive years across central zone of testing 5. Pusa Parvati: It was released for cultivation in Central India in 2019 comprising states of Madhya Pradesh, Maharashtra, Gujarat, Chhattisgarh and parts of Rajasthan. It is moderately resistant to Fusarium wilt, dry root rot and stunt. It is an erect desi chickpea variety suitable for machine harvesting and gives an average grain yield of 2.27 t/ ha in 112 days. 6. Pusa 3043: Desi chickpea variety released and notified (Central varieties) for release in 2018 for North East Plain zone of India comprising eastern UP, Bihar, Jharkhand, West Bengal, Assam. It is notable to mention that this is the first chickpea variety identified since last 15 years to this all-important zone. It has a breeder seed demand of 300q for 2020-21.

Upload details of two best practices successfully implemented by the institution as per NAAC format in your institution website, provide the link

https://www.iari.res.in/index.php?option=com_content&view=article&id=827&Itemid=9

7.3 – Institutional Distinctiveness

7.3.1 – Provide the details of the performance of the institution in one area distinctive to its vision, priority and thrust in not more than 500 words

Towards sustainable food security and enhancing farmers income, IARI has developed and released twelve improved varieties of food crops during 2017-18. High yielding and superior quality wheat variety HI8777 is biofortified with higher iron and zinc content in the grains was released. The Pusa Basmati 1121 developed by the Institute has earned a cumulative value of Rs 50 lakh crores during 2008-2016, and brought prosperity to millions of farmers. An improved version of Pusa Basmati 1121 named Pusa Basmati 1718 was developed with inbuilt resistance to bacterial blight disease. Four biofortified maize hybrids were released. Towards protein nutritional security, a desi chickpea variety BG 3043 and an extra early maturing (120 days) pigeon pea variety Pusa Arhar 16, amungbean variety Pusa 1431, and a lentil variety L 4727 were released. The Country's first double zero Indian mustard variety Pusa Double Zero Mustard 31 was released for Punjab, Haryana, Delhi, Jammu and northern Rajasthan. IARI also released 18 varieties/hybrids in vegetable and flower crops. To bridge the phenotype-genotype gap, the Institute has established "Nanaji Deshmukh Plant Phenomics Centre (NDPPC)" which was inaugurated by Hon'ble Prime Minister of India, Shri Narendra Modi inaugurated and dedicated the "Nanaji Deshmukh Plant Phenomics Centre (NDPPC)" to the Nation on 11th October, 2017. During this year, 31 innovative technologies of IARI were transferred to 14 industry partners. The National Agricultural Fair, Krishi Unnati Mela 2018 with a major theme of "doubling farmers' income by 2022" was organized during March 16-19, 2018. Hon'ble Prime Minister gave the Krishi Karman Awards and the Pandit Deen Dayal Upadhyaya Krishi Protsahan Puraskars to the farmers during the mela. As planned for this year, three per cent of the total number of seats in each scheme of admission in Ph.D. open to Indian nationals are reserved for differently abled candidates. IARI played key role in establishing Advanced Centre for Agricultural Research and Education (ACARE) at Yezin Agricultural University (YAU), Myanmar and revision of syllabi for Post-Graduate Courses of YAU, Myanmar. IARI faculty has delivered twelve courses during the 1st semester of

the academic session 2017-18 at ACARE. To maintain academic integrity, 1526 documents in the form of thesis and manuscripts prior to submission were subjected to web-based software 'Turnitin'. Faculty and students of IARI have published Research papers 620 research papers in peer reviewed journals with International Impact factor. The 56th Convocation of the Post Graduate School of the IARI was held on February 9, 2018. Hon'ble President of India, Shri Ram Nath Kovind graced the function as Chief Guest. During this Convocation, 237 candidates (133 M.Sc., 7 M.Tech. and 97 Ph.D.) were awarded degrees including 14 (12 M.Sc./ M.Tech. and 2 Ph.D.) international students. Based on the National Institutional Ranking Framework (NIRF) India Rankings 2018 by the Ministry of Human Resource Development (MHRD), IARI has been awarded the status of 'Special Mention Institution'. The Institute received ISO 9001:2015 certificate for quality management system.

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https://www.iari.res.in/files/Publication/annual_report/IARIANNUALREPORT_29082018.pdf

8. Future Plans of Actions for Next Academic Year

1. To enhance the research outcome of faculty and students: Faculties will be encouraged to bring external funded projects, and to conduct basic and strategic research leading to high quality research publication, patents, copy rights and technologies. 2. To promote agri-entrepreneurship and startups through Agribusiness Incubation programmes. 3. To strengthen research skills of students and faculty through National Agricultural Higher Education program 4. Promotion of digital solutions: IARI will strengthen E-Granth and Krishikosh for promotion of open access policy, subscription of electronic journals and e-books for library. 5. To complete establishment of Advanced Centre for Agricultural Research and Education (ACARE) at Yezin Agricultural University, Myanmar 6. To strengthen inter-institutional collaboration Nationally and International collaboration in education and research. 7. To strengthen research facilities with new equipments, and initiation of construction of new hostels for students. 8. To establish facilities in the different disciplines for the easy accessibility of differentially abled students and staff under Accessible India Campaign 9. School-wise plan: a) School of crop improvement: To utilise germplasm resources for identification of donors and genes, and to develop crop varieties with innate resistance to biotic and abiotic stresses, less input requirements, enhanced quality and yield using new breeding technologies for improving farmers income. b) School of Horticulture: Development of varieties and hybrids of vegetables, fruits and flowers for enhancing nutrition security of consumers and livelihood security of farmers. c) School of Basic Sciences: To decipher phenotype-genotype relationship using high throughput phenomics and genome editing. d) School of Crop Protection: To develop diagnostic kits for pathogen detection, Chemo and bioprospecting for agrochemicals through design, discovery and development of novel processes, and RNAi approaches for management of pest and diseases. e) School of Natural Resource Management: To develop methods for crop and resources management and solutions to crop residue burning by using Remote Sensing and GIS approaches, develop crop and resource management technologies including microbiomes, and strategies to minimize global warming potential of crop management technologies for enhancing productivity and environmental sustainability. f) School of Social Sciences: The social sciences and technology transfer research will focus on impact assessment, technology transfer through demonstrations and IARI-Post Office Linkage model, Krishi Mela, Farmers trainings, Mera Gaon Mera Gaurav, and promote nutrition through A2N (Agriculture to Nutrition) model and empowerment of women in agriculture and mainstreaming of gender issues

