

**ZONAL TECHNOLOGY MANAGEMENT & BUSINESS PLANNING
AND DEVELOPMENT UNIT**

ICAR-Indian Agricultural Research Institute, New Delhi – 110 012

Call for the Proposal for Agripreneurship Development Program



AGRIPRENEURSHIP DEVELOPMENT PROGRAM
**SKILL DEVELOPMENT IN
COMPOST AND PUSA MYCORRHIZA
TECHNOLOGY**

24 -31 AUGUST 2023

9:30 AM - 4:30 PM

ZTM & BPD Unit and Division of
Microbiology, ICAR-IARI, Pusa Campus
New Delhi-110012

Course Director:
Dr. Livleen Shukla

Course Coordinator:
Dr. Akriti Sharma

Course Co-coordinator:
Dr Seema Sangwan
Dr Dolamani Amat

Last date to register:
23 August 2023

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Apply Here



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Name of the Training Course: Skill development in Compost and PUSA Mycorrhiza Technology

Date: 24th August 2023 to 31st August, 2023

Objectives:

- I. To impart training on compost technology for rapid biodegradation of agrowastes**
- II. To popularize application of compost for crop production among the farming community**

Agro-residues are parts of the plants left in the field after crops have been harvested and threshed. As India is an agrarian country, crop residues are generated in large quantities and constitute an abundant but under-utilized source of renewable biomass. An estimated amount of crop residues 507.837 m ton is being generated annually which includes rice straw (220.087 m ton), wheat straw (121.231m.ton), maize stalks (19.600 m ton), cassava stalks (0.371 m ton), cotton stalks (20.519 m ton), soybean straw + pods (18.725 m ton), jute stalks (4.500 m ton), sugarcane tops (83.175 m ton) and vegetable waste. These materials at times have been regarded as waste materials that require disposal, but it has now become increasingly realized that they are the most important natural resources and not wastes.

The composting of organic wastes is a time-tested technology, which is based on scientific principles and the various factors which control the biological processes are well known. Compost is a by-product of the activities of biological agents such as bacteria, fungi, actinomycetes and earthworms, which act on organic, matter of all kinds. The methods of composting may be aerobic, anaerobic or partially aerobic. The methods generally practiced by our farmers are regular dumping of animal dung in a pit or a heap mostly seen on roadside without caring about C/N ratio, moisture, aeration, temperature, microbial activity etc. However, this mostly results in poor quality compost produced even after 6-8 months. The farmers appreciate the value of compost but unable to put in requisite efforts to mobilize the organic resources for improving the soil fertility.

Bio-fertilizers are the organic substances which make use of microorganisms to increase the fertility of soil. These fertilizers are not harmful to crops or other plants like the chemical fertilizers. Use of bio fertilizers in the soil, makes the plants healthy as well as protect them from getting any diseases. Arbuscular mycorrhiza (AM) fungi are a symbiotic association between a fungus and the roots of a vascular plant. AM Fungi are ubiquitous and form a mutual relationship with roots of most plant species.

Soil- based culture is applied as a common method for production of AM Fungal inoculum. The AM fungi in form of biofertilizers help in plant growth and nutrition. They enhance the growth of plants, provide them resistance to disease and tolerance to adverse soil

and climatic conditions. The AM fungi are not host specific, any plant species can be infected by an AM fungal species but the degree of AM infection and its effect can differ with different host endophyte combinations. Cultures of AM fungi on plants growing in disinfected soil have been frequently used technique to increase propagule numbers.

There is a need to promote the standard and improved technologies of composting and make them aware about mycorrhiza as biofertilizers along with methods for their preparation by the farmers at village and block level. The compost and mycorrhiza can be prepared by individual farmers at a small scale and as an agri-business on a large scale in a block by a group of farmers in villages or establishing semi-mechanized compost plants in towns and cities. The potential of these agro wastes through proper compost technology has not been fully exploited because of

- Lack of mass awareness about loss of nutrients and pollution caused by mismanagement of agro wastes
- Lack of trained manpower both at the developmental level as well as at production level
- Poor extension network
- Lack of good quality compost inoculant
- Lack of awareness about use of mycorrhiza as biofertilizers and its beneficial impact on agriculture

Therefore, it is imperative to create mass awareness on the recycling of agro waste in addition to developing trained research personnel for accurate composting technology for rapid biodegradation of agro-waste and mass production of mycorrhiza in their own farms or poly houses so that they may use the potential of this biofertilizer. Besides this, different bio-augmented composts can be prepared and can be used for sustainable agriculture.

Outcomes of Training: After completing this training, trainees will have hands-on experience on composting and mycorrhiza technology and visiting a production site will also be included in the training for participants to widen their horizon and provide information about layout and general operations of a compost manufacturing plant. Training on production and use of compost inoculants, compost and vermicompost along with mycorrhiza and their use in organic farming and extension personnel can play a pivotal role in translating the new production technologies into viable alternatives for sustainable agriculture.

Identified team of experts:

- 1) **Course Director:** Dr. Livleen Shukla, Principal Scientist, Division of Microbiology

2) **Course Coordinator:** Dr. Akriti Sharma, Scientist (Sr. Scale) & In-Charge, ZTM & BPD Unit, IARI, New Delhi

Who can apply: The participants who have good command of the language (reading, writing, and speaking) in English and Hindi are encouraged to participate.

Date of registration starting: 02 August, 2023

Date of registration closing: 23 August, 2023

Duration& Date: 08 days (24– 31 August, 2023).

No. of trainees: Minimum 25.

Venue: Division of Microbiology & ZTM & BPD Unit, ICAR-IARI, Pusa Campus, New Delhi-110012

Training Costs (per candidate): **Rs. 4720/-** (with GST and excluding boarding and lodging) (Request your accommodation on email- zonaltech@gmail.com and accommodation can be provided as per the availability at IARI, PUSA, New Delhi on self-payment basis by the participants

Please make payment to the following account number:

Bank Name	:	CANARA BANK
Name	:	PUSA TAKSAY
Account Branch	:	19029-IARI, PUSA CAMPUS,DELHI 110012
IFSC	:	CNRB0019029
Account No	:	120000469441

Note: No registration will be considered without payment

Kindly follow the link for more details & application form:-

<https://pusakrishi.accubate.app/ext/survey/235/apply>