

BACKGROUND

The negative effect of faulty agricultural production practices on ecosystem is the major constraint in achieving food and nutritional security, environmental sustainability and societal well-being in 21st century. Indian agriculture is under tremendous pressure to feed its burgeoning population. Moreover, India faces a critical imbalance in its natural resource base with about 18% (human) and 15% (livestock population) of the world being supported only on 2.4% (geographical area), 1.5% (forest and pasture lands) and 4.2% (water resources). A serious threat is being predicted in meeting the food, fibre, fuel and fodder requirements of the growing population due to climate change effects. In this context, the Sustainable Development Goals (SDGs) provide clear guiding principles and targets to encourage sustainable food production under the global theme of eradicating poverty. Under the changing climate scenario resource conservation technologies are viable options to shift production oriented to profit oriented sustainable farming. Improved agricultural machines have been found to be very effective on fields by reducing GHG emission. Increasing SOC in passive pool is one of the moto of climate smart agriculture. Therefore, resource conservation technologies may be considered as a realistic solution of the above-mentioned concerns. The current agricultural production practices under intensive agricultural production systems are neither sustainable nor environmentally sound that has led to the environmental degradation. (Ladha *et al.*, 2009).

Most of the agro-industrial wastes are untreated and underutilized, therefore in maximum reports it disposed of either by burning, dumping or unplanned landfilling. These untreated wastes create different problems with climate change by increasing a number of greenhouse gases. These wastes cause a serious disposal problem (Rodríguez-Couto 2008). For examples, the juice industries produced a huge amount of waste as peels, the coffee industry produced coffee pulp as a waste, and cereal industries produced husks. All over the world approximately 147.2 million metric tons of fiber sources are found, whereas 709.2 and 673.3 million metric tons of wheat straw residues and rice straws were estimated, respectively, in the 1990s (Belewu and Babalola 2009). As per the composition of these agro-industrial residues are

concerned, they have high nutritional prospective, therefore they are getting more consideration for quality control and also categorized as agro-industrial by-products (Graminha *et al.* 2008).

Various studies reported that different kinds of waste such as pomegranate peels, lemon peels and green walnut husks can be used as natural antimicrobials (Adámez *et al.* 2012; Katalinic *et al.* 2010). Wastes from the organic compounds although a risk to the atmosphere, but they represent a possible source for making of mushrooms as foodstuffs and other bio-based products like bio-energy and biofertilizers. The availability of these nutrients in raw materials offers appropriate environments for the growth of microorganisms. These microorganisms have got the ability to reuse the raw materials with the use of fermentation processes. The agro-industrial residues are used for solid support in SSF developments for making different beneficial products. It also helps for the production of fermentable sugars by reducing the production cost on the basis of food crops.

Dr. Panjabrao Deshmukh Krishi Vidyapeeth, Akola (MS) has pioneered in various aspects of Agro Industrial waste management and its impact on soil carbon and climate change mitigation. It has an excellent faculty to train researchers on agro and industrial waste management, soil carbon sequestration and stabilization for mitigating the adverse effect of climate change. The laboratories of the university are well equipped with modern instruments. The scientific and technical staff is experienced with state-of-the-art analytical methods and techniques.

OBJECTIVES

1. To apprise concepts and types of Agro Industrial waste
2. To impart knowledge and skills in agro industrial waste management
3. To brief potential of soil carbon sequestration and climate change mitigation in agriculture

COURSE CONTENT

- Introduction to agro and industrial waste and management methods
- Use of different agrowaste in different crops
- Crop residues generation and their utilization in agriculture

- Practical aspects of different agrowaste
- Significance of microbial consortia and bio stimulants in agriculture
- Magnitude of Agro and industrial waste for reclamation of problem soils
- Use of agrowaste in brickette preparation
- Magnitude of application of Agro and Industrial waste in horticultural crops
- Use of Agro-waste in conservation agriculture
- Conservation agriculture and carbon sequestration
- Use of agro industrial waste in agri-horti-forest system
- Synthesis of nano materials
- Practical exposure to thermal power, biochar plant, vermicomposting units and fields of farmers
- Agro-waste valorisation in circular economy

ELIGIBILITY

The officers in the cadre of Scientists / Assistant Professors / Subject Matter Specialists or equivalent and above from ICAR institutes, SAUs, CAUs, who are actively engaged in research, teaching and extension in the areas of Soil Science, Agronomy, Microbiology, Horticulture, Forestry, Environmental Sciences and other relevant Agriculture subjects are eligible to attend the Short Course. The total number of participants will be restricted to 25. The interested participants are requested to submit their application through proper channel.

DURATION

Duration of the Short Course training programme is 10 days with effect from 09-18 February 2026 (both days inclusive). The participants are expected to arrive at Dr. PDKV, Akola latest by the evening of 08th February and can leave after 17:00 hrs on 18th February 2026.

APPLICATION AND REGISTRATION

Interested candidates may send their applications in the prescribed format duly nominated / forwarded by the competent authority to Dr. Nitin Mukund Konde, Course Director, ICAR- Short Course Training Programme or Head, Department of Soil Science, Post Graduate Institute, Dr. PDKV, Akola (MS) 444104. They may also submit advance copy of the same, however confirmation will only be sent only after receipt of hard copy of application.



BOARDING AND LODGING

The selected participants will be provided free boarding and lodging in the University guest house. Food expenses will be borne by the organizers as per ICAR norms. All participants will be reimbursed to and fro travel fare for the journey to Akola by rail or bus by shortest route. The payment will be made as per the entitled class of travel, but restricted to the maximum of AC-II tier train fare/bus fare (as per actuals). Local participants are not eligible for boarding and lodging, however, they will be provided lunch and inter-session tea. Participants are requested to not to bring family members with them, as the University has limited hostel facilities. No DA will be paid to participants.

ABOUT AKOLA

Akola is a growing metropolis surrounded by forts, and has the Morna River running through the center of the city. Akola is well connected by rail (Mumbai-Howrah) and roadways to different parts of country. Participants travelling by train/bus should alight at Akola railway station or bus stand from where taxi/ auto-rickshaws can be hired to reach Dr. PDKV, Campus at a distance of 3-4 km from railway station and 2.5 km from bus stand. The nearest airport is Nagpur and Chatrapati Sambhajnagar around 250 km away from Akola. The participants are advised to make their return journey reservations in advance before leaving for Akola. The climate is pleasant during the month of February (~25°C) during day time and cool in the night (~18-20°C).

IMPORTANT DATES

- 1. Last date for receipt of application : 10-01-2026
- 2. Intimation of selection of participants : 15-01-2026
- 3. Confirmation by candidate : 20.01.2026
- 4. Display of waiting list (If any) : 30.01.2026

ALL CORRESPONDENCE SHOULD BE ADDRESSED TO
Dr. Nitin M. Konde

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Department of Soil Science, Post Graduate Institute,
Dr. Panjabrao Deshmukh Krishi Vidyapeeth, Akola, M.S.
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or
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ICAR Sponsored Short Course Training Programme on
MANAGEMENT OF AGRO AND INDUSTRIAL WASTE AND
ITS UTILIZATION IN AGRICULTURE

09-18 February 2026

Organizing Institute : Dr. PDKV, Akola (MS)

Application Form

- 1 Full name in block letters :
- 2 Designation :
- 3 Present employer and address :
- 4 Address to which reply should be sent (Postal address with PIN) :
- 5 Cell no :
- 6 Email :
- 7 Permanent Address :
- 8 Date of birth :
- 9 Sex (Male/Female) :
- 10 Marital status : (Married /Unmarried)
- 11 Teaching/research/professional experience (mention post held during last 5 years and number of publication) :
- 12 Field of specialization and current area of research/teaching :
- 13 Mention if you have participated in any Research seminar, Summer/ Winter School/Short Course, etc. during the previous years under ICAR/Other organization :
- 14 Postal order No. : dated.....of Rs 50/- (non-refundable) in favour of Comptroller, Dr.PDKV,Akola for registration of application :
- 15 Academic Record

Degree	Subject	University	CGPA	Year of Passing	Other information

Place

Date

Signature of Applicant

For office use of sponsoring institute

The application of Mr/Ms/Dr.....working asis hereby recommended for attending the Short Course training programme on “Management of agro and industrial waste and its utilization in agriculture” organized by Department of Soil Science , Dr.Panjabrao Deshmukh Krishi Vidyapeeth, Akola during 09-18 February 2026. It is certified that the information furnished by the candidate has been verified and found correct

Place

Date

Name and Signature of

sponsoring authority with seal

Google Link :

https://docs.google.com/forms/d/e/1FAIpQLSd4Ss12Oj5ikr-mum1ww9QVfqphROVud3PuK4YMhMTUT7Es-Q/viewform?usp=header

ICAR Sponsored
Ten Days Short Course Training Programme on

MANAGEMENT OF AGRO AND INDUSTRIAL
WASTE AND ITS UTILIZATION IN AGRICULTURE

09-18 February 2026



Course Director
Dr. N. M. Konde
Associate Professor CAS

Course Co-Directors
Dr. S. D. Jadhao
Dr. S. M. Bhoyar

Sponsored by
Agricultural Education Division
Indian Council of Agricultural Research
New Delhi-110012



Organized by
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Post Graduate Institute,

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