A Brief Report on Value Added Course on

" Household Waste-Based Fertilizers "

(12th December, 2022 to 28th December, 2022)

Organized by Department of Agriculture

Integral Institute of Agricultural Science and Technology

Integral University, Lucknow

Currently, there is a significant need for more food due to increase in population. Thus, in order to increase crop growth and meet global demand for food, chemical pesticides and fertilizers have been utilized extensively. The widespread use of chemical fertilizers has, however, led to the dynamic equilibrium of soil, flora and fauna ecosystems as well as the contaminating water, streams. The need for environment friendly, sustainable fertilizers has driven the search for alternative sources. Due to this, interest in household waste as a sustainable feedstock has grown over the past decade. If managed appropriately, the beneficial nutrients included in household waste can be used. They are rich in organic materials, and after being cleaned of pathogens, they can be used as potential fertilizers. More environmentally and ecologically responsible agricultural techniques are now required due to growing concern towards the environment.

Waste management is a key challenge in rural and urban societies. Conventional agricultural activities are mostly dependent upon agrochemicals which are a threat to human as well as environmental health. On-site and off-site domestic wastes are good options for the preparation of valuable manures or fertilizers. Handling organic wastes through reusing, recycling, and composting practices is an effective solution for household waste management and the organic nutrition of plants.

Integral Institute of Agricultural Technology and Sciences (IIAST) organized a four-week virtual value added course on "Household waste-based fertilizers" from 12th December 2022 to 28th December, 2022. This course was designed to impart knowledge about the household waste management, familiarize with the formulation of household waste-based organic fertilizers and also address environmental and social problems by the handling of domestic wastes.

This course was specially designed for all the UG, PG and Ph.D. course students of any department throughout the university. A total of 160 students were selected to complete all the registration formalities. The course was to see insights and to cover the Sustainable Development Goals (SDGs) of the United Nations-2030 in the field of Zero Hunger and Responsible Consumption and Production.

This was a virtual mode course conducted for seven days a week wherein lectures were delivered from Monday to Friday between 5:30-7:30 PM while a session for Quiz was conducted on Saturday(s) between 01:00 PM - 03:00 PM, respectively.

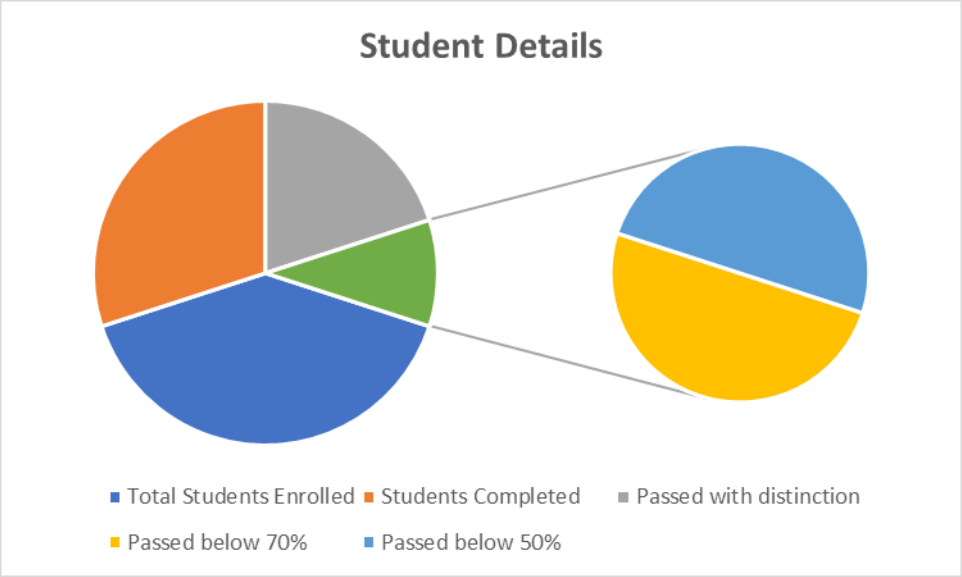
The Value-Added Course was conducted under the guidance of Dr. Saba Siddiqui, Head, Department of Agriculture, Integral University and was coordinated and facilitated by the following faculty members.

1. Dr. Deepranjan Sarkar – Course Coordinator, Department of Agriculture, Integral University, Lucknow.
2. Dr. Khalid Habib – Faculty Coordinator, Department of Agriculture, Integral University, Lucknow.
3. Dr. P. Smriti Rao - Faculty Coordinator, Department of Agriculture, Integral University, Lucknow.

The Course modules were addressed by the following resource persons:

S.No.	Date		Course Instructor	Module
	From	To		
1.	12/12/2022	15/12/2022	Dr. Khalid Habib	Household waste management: opportunities and challenges. Introduction to essential plant nutrients, crop fertilizers, nutrients recycling, and organic production.
2.	16/12/2022	19/12/2022	Dr. P. Smriti Rao	Classification of organic manures, sources and nutritional status of organic fertilizers. Solid waste management, kitchen waste management, fruit and vegetable waste-based fertilizers.
3.	20/12/2022	23/12/2022	Dr. Deepranjan Sarkar	Composting: classification, factors affecting the process, and methods. Vermicomposting: species and method, application of solid and liquid manures.
4.	24/12/2022	28/12/2022	Dr. Deepranjan Sarkar	Night soil, bone meal, fish meal, and liquid fertilizers. Commercial bio-based products, technological progress, fertilizer regulations.

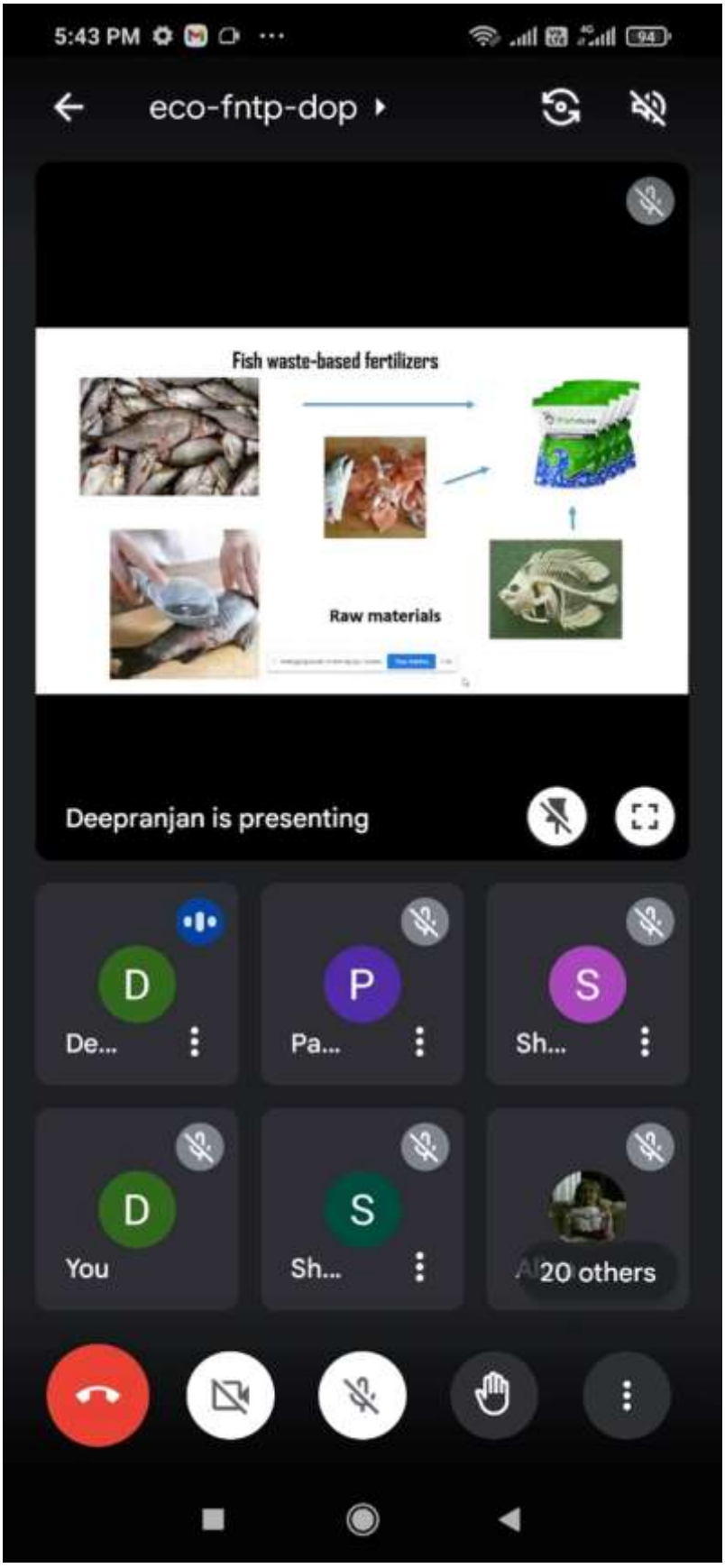
All the participants who successfully completed the course were awarded e-certificates on the basis of their quiz test, feedback for every unit, attendance, general feedback, and moreover 50% qualifying criteria for the course.



Key Highlights of the VAC:

- To impart knowledge about the household waste management.
- To familiarize with the formulation of household waste-based organic fertilizers.
- To address environmental and social problems by the handling of domestic wastes.
- An initiative towards sustainable development goal: Zero Hunger (SDG Goal 2) and Responsible Consumption and Production (SDG Goal 12)

Glimpse of VAC:


5:43 PM
eco-fntp-dop
Fish waste-based fertilizers
Raw materials
Deepranjan is presenting
De...
Pa...
Sh...
You
Sh...
20 others

5:41 PM

eco-fntp-dop

Municipal solid waste

Household waste

India generates 1.49 lakh tonne c which 1.10 lakh tonne is treated.

Deepranjan is presenting

D De...

P Pa...

S Sh...

D You

S Sh...

21 others

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LUCKNOW - INDIA

INSPIRING EXCELLENCE

INTEGRAL INSTITUTE OF AGRICULTURAL SCIENCE AND TECHNOLOGY (IIAST), INTEGRAL UNIVERSITY, LUCKNOW

CERTIFICATE OF COMPLETION

This is to certify that

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has successfully completed Value Added Course on **"Household Waste-Based Fertilizers"** offered by **Department of Agriculture** from 12-12-2022 to 28-12-2022

Dr. Deepranjan Sarkar
Course Coordinator

Dr. Khalid Habib
Resource Person

Dr. P. Smriti Rao
Resource Person

Dr. Saba Siddiqui
Head, Department of Agriculture, IIAST

Prof. Dr. Mohd. Haris Siddiqui
Director, Department of Agriculture, IIAST