

## Details about Training cum Workshop

Drone technology has revolutionized Agriculture by providing innovative solutions for monitoring and managing crops with enhanced precision and efficiency. Drones equipped with sensor of high-spatial and spectral resolution and GPS technology can capture real-time data from fields, offering farmers detailed insights into crop and soil health. The drone acquired image can be analyzed to identify issues such as pest infestations, nutrient deficiencies and water stress, allowing for timely interventions and reducing the reliance on chemical inputs. Drones are also used for precision spraying, applying fertilizers, pesticides and herbicides directly to specific areas, reducing waste and minimizing environmental impact. Additionally, they assist in crop mapping, yield prediction and field management, which helps optimizing resource use and improve overall productivity. As technology continues to evolve, drones are becoming an essential tool in the drive towards more sustainable, data-driven agriculture.

This workshop cum training is focused on Drone remote sensing explaining how various sensors (RGB, Multispectral, Hyperspectral and Thermal) capture data for monitoring of crop health and other key agricultural factors. The deliberations will provide an insight into the principles of drone remote sensing, steps involved in mission planning, image acquisition, processing etc. highlighting how the collected data aids in crop monitoring, informed decision-making, yield prediction, disease detection and precision irrigation.

The participants will also learn about drone spraying having live demonstrations of drones imaging using different sensors and also precision spraying.

## Course Directors

### Dr. Sachin K. Rautaray

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## Course Coordinators

### Dr. Debabrata Sethi

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**Venue: ICAR-IIWM, Opposite Rail Vihar,  
Chandrasekharpur, Bhubaneswar-751023,  
Odisha**



## Training cum Workshop

on

## DRONE TECHNOLOGY & ITS APPLICATIONS IN AGRICULTURE



December 02-03, 2024

Organized by

ICAR-Indian Institute of Water  
Management, Bhubaneswar, Odisha

&

ICAR-Indian Agricultural Research  
Institute, New Delhi

### Eligibility for participation:

This workshop is open for young and active academicians. We welcome Assistant Professor/ Assoc. Professor/ Scientist/ RA/ SRFs/ Research Scholars from SAUs', CAUs' or ICAR Institutes/ Private Universities with specialization in Agriculture, Agricultural engineering, soil & water conservation engineering related subjects/ Soil Science/ Agricultural Physics/ Agronomy/ Environmental Science or any other related discipline and are interested in the field of Digital/ Precision Agriculture or applications of drone technology in agriculture. Participants are also expected to have direct working knowledge/ experience in agriculture.

There is no age limit for the participants. The total number of participants shall be limited to 50 in physical mode.

### Topics to be covered (Theory and practical)

- Drone Technology for Agriculture: An Overview
- Principles and steps involved in Drone Remote Sensing
- Pre-processing and analysis of Drone acquired images
- Live demonstration of drone imaging using different sensors like RGB, multispectral, and hyperspectral and drone based spraying.

**Duration: 02 Days (02-03 December, 2024)**

**Training Fee: Nil**

### Travelling and Daily Allowances:

No TA/DA will be paid by the organizer. It may be borne by the sponsoring institution.

### Accommodation and Food:

Boarding and lodging facilities for participants will be arranged at ICAR Guesthouse/near by Hotels on payment basis and only working-lunch will be provided by the organizer.

### How to Apply:

Scanned copy of duly filled application form should be sent to the Course Director via e-mail at

[sachin.rautaray@icar.gov.in](mailto:sachin.rautaray@icar.gov.in)/  
[debabrata.sethi@icar.gov.in](mailto:debabrata.sethi@icar.gov.in)/  
[ashok.nayak@icar.gov.in](mailto:ashok.nayak@icar.gov.in)  
[rajeev4571@gmail.com](mailto:rajeev4571@gmail.com)

Selected candidates will be informed by 29<sup>th</sup> November, 2024 through e-mail. A maximum of 50 participants will be selected for the training on physical mode.

**Last Date for Applying: 28<sup>th</sup> November, 2024**



## Registration Form

### Training cum Workshop

### DRONE TECHNOLOGY & ITS APPLICATIONS IN AGRICULTURE

**Full Name**  
(in block letters):

**Designation:**

**Discipline:**

**Date of Birth and Gender:**

**Name of the Organization:**

**Address:**

**Email Id:**

**Mobile No:**

**Is applicant ICAR employee (Yes/No):**

**It is certified that the information furnished above are correct.**

**Signature of the Candidate:**

**The particulars given by the candidate are correct and the nomination is recommended.**

**Signature of Controlling Officer with Seal and Date:**