# NATIONAL TRAINING PROGRAMME

# ON PRECISION FARMING – A WAY FOR SUSTAINING FOOD SECURITY AND NATURAL RESOURCE MANAGEMENT

**Duration :** 10 days (07<sup>th</sup> to 16<sup>th</sup> December, 2022)

> Venue : Department of Agronomy College of Agriculture V. C. Farm, Mandya.



Organized by : Department of Agronomy College of Agriculture University of Agricultural Sciences, Bangalore V. C. Farm, Mandya, Karnataka - 571 405





**Background :** Agriculture is the backbone of our country and economy, which accounts for almost 30 per cent of GDP and employs 70 per cent of the population. One of the leading agricultural producers globally, India has one of the largest arable lands worldwide, with over 155 million hectares. Agriculture is the good right arm of India's economy and employs nearly half of the nation's population. But in light of a burgeoning global population, India and numerous countries face a looming food security crisis. To feed an ever-growing global population, it is imperative for India to increase its crop production by leveraging sustainable, high-tech and smart farming practices. In the wake of climate change, depletion of natural resources and an imminent food crisis, India must move beyond aggressive farming and towards precision farming. According to estimates, the global precision farming market is forecasted to reach \$14.6 billion by 2026 at CAGR of ~8%. Precision farming, although at a nascent stage in India, can help the country become the top agricultural producer across the globe by maximizing farm productivity and profitability.

Precision agriculture a farm management system that harnesses information and communications technology (ICT), the Internet of Things (IoT), artificial intelligence (AI), data analytics and other advanced technologies to minimize production costs and maximize farm productivity, profitability and sustainability. Precision agriculture focuses on deploying the right inputs at the right time and the right place in the right manner on the basis of quantitative soil parameters and plant growth condition. It undertakes a comprehensive approach to maintaining field and soil wellbeing in a way that elevates the quality and quantity of yield while minimizing environmental harm. The scope of precision agriculture is unlimited and therefore can be exploited to bring about a new dimension to agriculture and allied sectors. A ten days training programme would give thorough refreshment to the teachers and scientist on recent developments in Precision agriculture.

#### Aims of training programme:

Capacity building to enhance teaching skills and implement research projects in production systems under precision approaches.

#### **Course content:**

- Need for precision farming under Indian conditions
- Use of RS, GIS and GPS for delineation of spatial and temporal variability in a farm
- Enhancing the input use efficiency in precision agriculture
- Sensor based precision nitrogen management practices
- Precision farming techniques in field and horticultural crops
- Precision weed management practices
- Precision water management practices
- Precision pest management practices
- Variable rate of application of inputs
- Smart agricultural technologies
- Farm machinery and implements used in precision farming
- Challenges in adoption of precision farming in Indian scenario
- Decision support system and use of simulation models for forecasting the crop yield

#### **Resource persons:**

The experts from UASB and other SAUs, ICAR Institutes (NBSS and LUP, IIHR, SBI, *etc*), senior officers from State Agricultural Department will cover topics of precision farming technologies in water management, weed management, pest management, filed and horticultural crops, livestock management *etc*.

# About the host institute:

College of Agriculture, V. C. Farm, Mandya, a premier education institute under the canopy of University of Agricultural Sciences, Bangalore is constantly striving towards excellence in agricultural education. Since its inception in 1991, the college has been the hub for agricultural education and has actively

involved in imparting education to students. In addition to college, campus also have Zonal agricultural Research Station established in the year 1931 and making persistent efforts in research and development and has released numerous high yielding varieties, production technologies and pest management strategies in rice, maize, small millets, sugarcane and forage crops. In addition to this, campus also have KVK which is actively involved in disseminating the technologies to farmers though field demonstrations, training programmers etc. The campus is spread across 255.5 ha, next to Vishweshwaraiah Canal, in Mandya district; about 11 km from Bengaluru-Mysore highway, en route to pilgrim place Melukote. Geographically the centre is placed between

 $12^{\circ}45'$  to  $13^{\circ}5'$  North attitude and  $76^{\circ}45'$  to  $78^{\circ}24'$  East longitude and at an altitude of 695 m above MSL.

# Eligibility

The training programme is designed for the scientists working in Teaching, Research and Extension under SAUs/ ICAR institution, Deemed Universities, Central Universities, State Department of Agriculture officials and other ICAR/ SAU organization related to Agricultural Sciences for those working in Assistant Professors or above cadre.

#### **Application procedure**

The interested teachers/scientists/extensional personals interested in this training programme may apply using nomination form enclosed duly recommended by the controlling officer along with biodata directly to the Email <u>sbyogananda@gmail.com</u>, <u>sbyogananda@uasbangalore.edu.in</u> within the last date for application.

### **Boarding, Lodging and Travel**

Free lodging and boarding facilities will be provided to the participants in the Training Hostel of the College of Agriculture, V. C. Farm, Mandya. The participants should abide by the UAS rules. TA should be borne by the participants only.

#### How to reach the venue

Mandya is well connected by train and bus from Bangalore and other Districts. The College of Agriculture, V. C. Farm, Mandya is located on Bangalore – Mysore State highway 17 about 11 km from Mandya city Bus Stand and Railway Station towards en route to pilgrim place to Melukote.

### **Important Dates**

Last date for receiving application: 21-11-2022 Intimation to selected candidate: 22-11-2022 Confirmation from selected candidate: 24-11-2022

# **Course Directors**

### Dr. S. S. Prakash

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## **Course Co-ordinators**

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