

**Organized ICAR Sponsored Winter School on  
“Artificial Intelligence, Electronic Devices and IoT for Transforming Agriculture with Cutting-Edge  
Technologies”  
(January 03-23, 2024)**

ICAR-Central Institute of Agricultural Engineering, Bhopal, organized an ICAR-Sponsored 21-day Winter School on “Artificial Intelligence, Electronic Devices, and IoT for Transforming Agriculture with Cutting-Edge Technologies” during January 03-23, 2024. The broad objective of this winter school was to recognize the importance and need for the site-specific and optimum use of agricultural inputs to reduce the cost of cultivation along with the conservation of our natural resources. The program was designed to update the skills and knowledge of 22 Twenty two scientist and assistant professors of SAUs and ICAR institutes involved in the field of design, development, and extension activities related to the Internet of Things, electronic devices, artificial intelligence, machine learning, deep learning, and algorithm development. This convergence of cutting-edge technologies is expected to reshape the landscape of farming practices, fostering efficiency, precision, and sustainability.

The formal inauguration of the program was held on January 03, 2024, in the presence of Dr. KK Shukla, Director MANIT Bhopal, and Dr. CR Mehta, Director ICAR-CIAE, Bhopal. Dr. Shukla in his address emphasized the need of learning cutting technologies to apply in field of agriculture for benefit of farmers. During the winter school, an array of sessions delved into precision agriculture, artificial intelligence, and machine learning. Participants engaged in hands-on training sessions focusing on the integration of various sensors with microcontrollers, as well as programming in MATLAB and Python software. Additionally, field visits to the Central Farm Machinery Training and Testing Institute in Budni and local farm machinery manufacturing plants were arranged to provide practical insights.

The valedictory function was held on January 23, 2024. Dr. Seema Jaggi, ADG (HRD), ICAR, New Delhi was the Chief Guest. Dr. KN Agrawal, Course Director, welcomed the guests and presented the winter school completion report. Dr. S Mangaraj, Director incharge, ICAR-CIAE, Bhopal, in his inaugural address, highlighted the importance of precision agriculture in production and post-production agriculture to ensure precise input applications using advanced tools and techniques. Dr. Seema Jaggi, ADG (HRD) emphasized the need for training in the area of artificial intelligence, machine learning, and deep learning for smart and digital agriculture. She opined that precision technologies based on sensor and electronic devices are highly relevant for Indian farms. She advised the participants to use the knowledge gained during this training program for further development of their expertise in the area of precision farming and help Indian farmers in reducing the cost of cultivation. The participants provided feedback about the training program, and subsequently, certificates were distributed to them. The program concluded with the vote of thanks proposed by Dr. Dilip Jat, Scientist & Course Co-Director.

