ICAR-IARI–SMSF Collaborative Project Launched

15th September 2025

The ICAR–Indian Agricultural Research Institute (IARI), New Delhi, in collaboration with the S M Sehgal Foundation (SMSF), Gurugram, formally launched a **collaborative project on "Application of Advanced Technologies for Improved Productivity and Resource-use Efficiency in Regenerative Agriculture Production Systems"** on 15th September, 2025. The event brought together eminent experts and stakeholders who shared their vision on the future of Indian agriculture and the role of regenerative technologies vis-à-vis automation enabled sub-surface-drip fertigation.

Padma Bhshan Dr. R. S. Paroda, President, TAAS and former Secretary, DARE & DG, ICAR, delivered the keynote address, emphasizing the urgent need to move from conventional intensive farming towards regenerative agriculture. He cautioned that factor productivity of key inputs, especially nitrogen and phosphorus fertilizers, is on the decline, threatening the long-term sustainability of Indian agriculture. Reflecting on the success of the Green Revolution, which made India self-sufficient in food production, he highlighted that the next revolution must restore natural resources and improve input-use efficiency. Drawing examples from the soybean–corn system of the USA, Dr. Paroda suggested that India must diversify from the rice–wheat system to alternatives, such as soybean–wheat or Arhar–wheat, which are more resource-efficient and sustainable.

Mr. R. Jay Sehgal, Chairperson, S M Sehgal Foundation, underlined the pressing challenges faced by small-scale agriculture in India. He stressed the importance of automation in reducing labour drudgery and enhancing farm productivity. Highlighting water scarcity as a global concern, he called for urgent innovations in water management. Mr. Sehgal also emphasized the role of artificial intelligence and forecasting tools in risk management for farmers, while drawing attention to the need for minimizing post-harvest losses to ensure food security.

Dr. Ch. Srinivasa Rao, Director and Vice-chancellor, ICAR-IARI (deemed to be University), focused on the twin challenges of climate change and water scarcity, calling them the most critical issues for Indian agriculture today. He highlighted the importance of enhancing resource-use efficiency and underscored the role of soil carbon management in achieving both productivity gains and environmental sustainability. He also emphasised the role of micro-irrigation in general and subsurface drip fertigation in saving precious water and fertilizer resources while improving crop yields and soil environment, and reducing greenhouse gas emissions.

Ms. Anjal Makhija, Trustee and CEO, SFSF, highlighted the importance of the project and the collaborations not only for the current project and also hoped for collaborations in future. She insisted on the empowerment of farm women through women friendly technologies.

Dr SS Rathore, Head, Division of Agronomy, also emphasized that, regenerative agriculture with modern technologies is the need of the hour and should be taken up. This project is very timely to do such research and he is very confident about the project team to come out with farmer friendly, scalable technologies.

Dr. Anchal Dass, Principal Scientist & Principal Investigator of the project, provided an overview of the collaborative initiative. He assured the dignitaries that the project will address the challenges identified, through the application of precision input management, sensor-based technologies, and regenerative practices, thereby achieving greater productivity, efficiency, and sustainability.

The event concluded with the formal launch of the project at the Division of Agronomy, research farm, marking the beginning of a partnership that aims to build climate-resilient and resource-efficient agricultural production systems for the future.

Source: ICAR-Indian Agricultural Research Institute, New Delhi