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FARM FIELD SCHOOL DEMONSTRATES METHANE REDUCTION TECHNOLOGIES IN RICE CULTIVATION AT SENGALARAIKARAI VILLAGE, ERODE DISTRICT

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The Centre for Agricultural and Rural Development Studies (CARDS), Tamil Nadu Agricultural University (TNAU), Coimbatore, in collaboration with the International Food Policy Research Institute (IFPRI), Washington, USA, organized a Farm Field School (FFS) on "Methane Reduction in Rice Farming Systems in Tamil Nadu" on 16th October 2025 at Sengalaraikarai Village, Gobichettipalayam Block, Erode District. The programme aimed to create awareness among farmers about climate-smart rice cultivation practices and to demonstrate field-level methane mitigation technologies for sustainable paddy farming.

The session began with Dr. V. Saravanakumar, Professor (Agricultural Economics), who welcomed the participants and emphasized the growing environmental importance of reducing methane emissions in rice ecosystems. He explained that continuous flooding in paddy fields contributes significantly to greenhouse gas emissions and highlighted the necessity of adopting sustainable irrigation and nutrient management practices to balance productivity with environmental care. He encouraged farmers to become key partners in the state's efforts toward low-emission, resource-efficient agriculture.

Following this, Dr. D. Suresh Kumar, Director, CARDS, outlined the objectives and broader vision of the methane reduction initiative. He elaborated on the integration of advanced farming technologies such as Direct Seeded Rice (DSR), Alternate Wetting and Drying (AWD), Soil Test Crop Response (STCR)-based fertilizer management and Pink Pigmented Facultative Methylotrophs (PPFM) foliar application. He explained how these methods reduce water consumption, lower methane emissions and enhance soil and crop health. The technologies, he noted, not only reduce environmental impact but also ensure economic gains through input savings and increased yields.

A major highlight of the event was the interactive experience by Mr. Vijayakumar, one of the demonstration farmers. He described how implementing DSR and AWD methods on his farm significantly reduced water use and labour requirements while maintaining strong crop

growth. His success story inspired other farmers, who raised insightful questions on topics such as weed management in DSR fields and irrigation scheduling under AWD.

The field visit allowed farmers to make side-by-side comparisons of crop establishment, tiller density and water-use efficiency under each management practice. The research team provided detailed explanations of the scientific rationale behind each technique, enabling a better understanding of how each contributes to methane reduction. During the field visit, Mr. Nanjappan C. M., a progressive farmer from the region, expressed strong interest in adopting DSR and AWD technologies on a larger scale.

He emphasized that these practices offer clear advantages in conserving irrigation water and improving yield potential. Other farmers echoed his enthusiasm, noting that AWD and related practices could be instrumental in addressing water scarcity while ensuring sustainable productivity.

The FFS concluded with an open discussion session where participants shared feedback and expressed their willingness to implement the demonstrated methods in the upcoming cultivation season. The scientists reiterated their commitment to providing continued technical guidance and monitoring support.

Overall, the Farm Field School at Sengalaraikarai Village served as an effective platform for hands-on learning and participatory knowledge exchange. The initiative reaffirmed the role of climate-smart practices in building low-methane, water-efficient rice farming systems and contributed to the larger mission of promoting sustainable and environmentally responsible agriculture in Tamil Nadu.