

GOVERNMENT OF INDIA
MINISTRY OF AGRICULTURE AND FARMERS WELFARE
DEPARTMENT OF AGRICULTURE AND FARMERS WELFARE

LOK SABHA
UNSTARRED QUESTION NO. 2349
TO BE ANSWERED ON THE 10th DECEMBER, 2024

Integrating AI to improve Agriculture

2349. Shri Basavaraj Bommai:

Will the Minister of AGRICULTURE AND FARMERS WELFARE
कृषि एवं किसान कल्याण मंत्री be pleased to state:

- (a) whether the Government is planning to integrate Artificial Intelligence (AI) into irrigation practices to optimize water usage, improve crop productivity and reduce water wastage in agriculture;
- (b) if so, the details of specific AI-driven initiatives or schemes being considered or implemented in irrigation systems across the country;
- (c) whether the Government has initiated any pilot projects or collaborations with States or research institutions to test AI-based irrigation models; and
- (d) if so, the details thereof and if not, the reasons therefor?

ANSWER

MINISTER OF STATE FOR AGRICULTURE AND FARMERS WELFARE

कृषि एवं किसान कल्याण राज्य मंत्री (SHRI RAMNATH THAKUR)

(a) to (d): The Government has employed Artificial Intelligence (AI) methods to address various challenges in the agricultural sector to aid farmers. Some of the initiatives are given below:

- I. 'Kisan e-Mitra' an AI-powered chatbot to assist farmers with queries about the PM Kisan Samman Nidhi scheme. This solution supports multiple languages and is evolving to assist with other government programs.
- II. National Pest Surveillance System for tackling the loss of produce due to climate change. This system utilizes AI and Machine Learning to detect crop issues, enabling timely intervention for healthier crops.
- III. AI based analytics using field photographs for crop health assessment and crop health monitoring using Satellite, weather & soil moisture datasets for rice and wheat crop.

Further, Government is implementing a Centrally Sponsored Scheme of Per Drop More Crop (PDMC) in the Country from 2015-16. PDMC focuses on enhancing water use efficiency at farm level through Micro Irrigation namely Drip and Sprinkler Irrigation Systems. The Micro Irrigation helps in water saving as well as reduced fertilizer usage through fertigation, labour expenses, other input costs and overall income enhancement of farmers. The Government provides financial assistance @ 55% for small and marginal farmers and @ 45% for other farmers for installation of Drip and Sprinkler systems under the PDMC. Additionally, Indian Council of Agricultural Research (ICAR) has also developed IoT based irrigation system and tested it in the field for selected crops.
