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

LOK SABHA
UNSTARRED QUESTION NO. 2662

TO BE ANSWERED ON THE 16TH DECEMBER 2025

IMPROVING THE AGRICULTURE SECTOR THROUGH TECHNICAL INITIATIVE

2662. SHRI RAMVIR SINGH BIDHURI:

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

(a) the details of the efforts being made to improve the agriculture sector through technological initiatives such as drones and Artificial Intelligence (AI);
(b) whether any campaigns have been launched to create awareness among farmers about the said these technological initiatives and if so, the details thereof; and
(c) the response and acceptance of these technological initiatives like drones and AI among farmers?

ANSWER

THE MINISTER OF STATE FOR AGRICULTURE AND FARMERS WELFARE

कृषि एवं किसान कल्याण राज्य मंत्री (SHRI RAMNATH THAKUR)

(a) to (c): The Department of Agriculture & Farmers Welfare (DA&FW) is actively promoting the adoption of new technologies in agriculture such as precision farming, drone technology, climate smart agriculture, Artificial Intelligence (AI) through several schemes and initiatives in the States/UTs. Artificial Intelligence (AI) and drones have been used to improve crop productivity, sustainability and farmer livelihoods and to address various challenges in the agricultural sector. Some of the initiatives are given below:

(i) “Kisan e-Mitra” is a voice-based AI-powered chatbot, developed to assist farmers with responses to their queries on PM Kisan Samman Nidhi scheme, PM Fasal Bima Yojana and Kisan Credit Card. This solution supports 11 regional languages and it handles over 8000 farmer queries daily. More than 93 lakh queries have been answered so far.

(ii) The National Pest Surveillance System, for tackling the loss of produce due to climate change, utilizes AI and Machine Learning to detect pest infestation in crop issues, enabling timely intervention for healthier crops. This tool, currently used by over 10,000 extension workers, allows farmers to capture images of pests to help them mitigate pest attacks and reduce crop losses. At present, it supports 66 crops and over 432 pests.

(iii) An AI-based pilot was conducted in collaboration with India Meteorological Department (IMD) and Development Innovation Lab India on agriculturally relevant local monsoon onset forecasts across parts of 13 states in India for Kharif 2025. Local monsoon onset forecasts were sent via SMS through the M-Kisan portal to 3,88,45,214 farmers in 13 states in five regional languages. Telephonic farmer feedback surveys were conducted in Madhya Pradesh and Bihar through Kisan Call Centres after the forecasts were sent and the survey revealed that 31–52% farmers adjusted their planting decisions, primarily through changes in land preparation and sowing timing, which included crop and input choice.

(iv) Under Sub-Mission on Agricultural Mechanization (SMAM), individual small and marginal farmers, as well as women farmers are provided 50% subsidy (up to Rs. 5.00 lakhs) for purchasing drones. Financial assistance is also provided to establish Custom Hiring Centres (CHCs), which provide agricultural machinery including drones and other new technology farming equipment on rent to farmers who cannot afford individual ownership. Under SMAM, during the period from 2023-24 to 2025-26 (as on 30 November 2025), 2122 number of drones have been approved for distribution to individual farmers and CHCs.

(v) The Government approved Central Sector Scheme 'NAMO DRONE DIDI' for providing drones to the Women Self Help Groups (SHGs) with a view to provide sustainable business and livelihood support to them. 1094 drones have been distributed to SHGs by the Lead Fertilizer Companies in 2023-24 utilizing their internal resources. Out of these 1094 drone, 500 drones have been distributed to SHGs under Namo Drone Didi scheme. The study carried out by Agricultural Development and Rural Transformation Centre (ADRTC), Bangalore on these 500 drones indicates that the SHGs earlier were primarily engaged in agriculture and allied activities and the drones provided to them has expanded their niche to modern agricultural practices through drone technology, enhancing their efficiency and productivity. Overall, the adoption of drones has diversified SHG activities, improved agricultural practices, and increased income opportunities for women in rural communities.

(vi) The Indian Council of Agricultural Research (ICAR) institutions are actively involved in dissemination of drone technology. During the period from 2023-24 to 2025-26 (as on 30 November 2025), the ICAR through various ICAR institutions, State Agricultural Universities (SAUs) and Krishi Vigyan Kendras (KVKs) have conducted drone demonstrations on the farmers' fields in 41010 hectare area benefitting 452291 farmers.

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