

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

LOK SABHA
UNSTARRED QUESTION NO. 1298
TO BE ANSWERED ON THE 3RD DECEMBER 2024

INTEGRATING CUTTING-EDGE TECHNOLOGIES INTO AGRICULTURE

1298. SHRI S JAGATHRATCHAKAN:

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

- (a) whether the Government is committed to integrating cutting-edge technologies into agriculture;
- (b) if so, the details of the steps that have been taken/proposed to be taken by the Government in this regard;
- (c) whether the Government is cognizant that drones can revolutionize farming by reducing the excessive use of water, pesticides, and herbicides, maintaining soil fertility and enhancing productivity while minimizing manual labour; and
- (d) if so, the details of the initiatives that have been taken/being taken by the Government to make drone technology affordable to the stakeholders of the agricultural sector?

ANSWER

THE MINISTER OF STATE FOR AGRICULTURE AND FARMERS WELFARE
कृषि एवं किसान कल्याण राज्य मंत्री (SHRI BHAGIRATH CHOUDHARY)

(a) and (b): The Institutes under the Indian Council of Agricultural Research (ICAR) are working in the area of different cutting edge-technologies for production and post-production agriculture such as use of sensor, Artificial Intelligence (AI) and robotics in development of farm mechanization technologies/ machines, vision guided AI-enabled robotic apple harvester, image (visual and x-ray) based mango sorting and grading system and sensor-based monitoring system with block chain technology for supply chain of banana, Internet of Things (IoT)-based real-time intelligent monitoring and controlling system for cold storage, real-time fruit quality monitoring using digital twins and machine learning during storage, Phase Change Material (PCM) based energy efficient vending cart for fruits and vegetables, visible light induced composite photocatalytic reactor for ethylene degradation etc.

(c) and (d): Use of drones in agriculture have distinct advantages like increased efficiency, cost effectiveness due to reduction in cost of spraying, saving of fertilizers and pesticides due to high degree of atomization, saving of water due to ultra-low volume spraying etc. besides reduction of human exposure to hazardous chemicals. The use of drones in agriculture also have catalytic effect in creating both direct as well as indirect employment in the agriculture sector.

The Department of Agriculture and Farmers Welfare (DA&FW) is promoting adoption of Kisan Drones by the farmers. Financial assistance under the Sub-Mission on Agricultural Mechanization (SMAM) is provided for demonstration of kisan drones on farmers' fields, purchase of drones by the farmers on individual ownership basis and establishment of Custom Hiring Centres of Kisan drones for providing services of drones to farmers on rental basis.

The Government has also approved 'Namo Drone Didi' as Central Sector Scheme for providing drones to the Women Self Help Groups (SHGs) with an outlay of Rs. 1261 Crores for the period from 2023-24 to 2025-26. Under this scheme, there is a provision of Central Financial Assistance (CFA) @ 80% of the cost of drone and accessories/ancillary charges up to a maximum of Rs. 8.00 lakhs per drone to the selected women SHGs. Out of the total 15,000 drones targeted to be supplied under the scheme, the first 500 drones have been procured by Lead Fertilizer Companies (LFCs) in 2023-24, using their internal resources and distributed to the selected SHGs. During the financial year 2024-25, the target is to distribute drones to 3090 SHGs in the first phase.
