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

RAJYA SABHA
UNSTARRED QUESTION NO. 1128
TO BE ANSWERED ON 16/12/2022

USE OF DRONES IN AGRICULTURE SECTOR

1128. SHRI B. PARTHASARADHI REDDY:
SHRI K.R. SURESH REDDY:

Will the Minister of AGRICULTURE AND FARMERS WELFARE be pleased to state:

(a) whether Government is keen to utilize drones in crop disease detection and crop damage assessment in order to achieve accurate crop yield prediction;

(b) whether drones could be helpful to farmers in optimizing the use of seeds, fertilizers and water to improve crop productivity and save time;

(c) if so, initiatives taken by Government to promote usage of drones in agriculture sector; and

(d) the steps taken by Government in educating the farmers about benefits of drones in agriculture sector?

ANSWER

MINISTER OF AGRICULTURE AND FARMERS WELFARE

(SHRI NARENDRA SINGH TOMAR)

(a) to (d): Yes, Sir. Scientific studies are carried out and data supporting the drone application are generated. Pilot studies with different approaches like use of remote sensing technology including satellite data and drone based images especially for crop cutting experiments planning, direct yield estimation at Gram Panchayat level, risk mapping of district and for dispute/area discrepancy resolution etc. have been conducted through Mahalanobis National Crop Forecasting Centre (MNCFC).

The use of drone in agriculture is helpful to farmers as it have some distinct advantages such as high field capacity and efficiency, less turnaround time and other field operational delays, wastage reduction of pesticide and fertilizers due to high degree of atomization, water saving due to ultra-low volume spraying technology in comparison to traditional spraying methods, reduction in cost of spraying and fertilizer application in comparison to conventional methods etc. besides reduction of human exposure to hazardous chemicals.

Looking into the advantages of drone technologies in agriculture, the Department of Agriculture & Farmers Welfare (DA&FW) has released the Standard Operating Procedures (SOPs) which provide concise instructions for effective and safe operations of drones for pesticide and nutrient application. The Central Insecticides Board & Registration Committee (CIB&RC) has prescribed the guidelines/protocols for registration requirements of pesticides for drone application. It has also finalized the test protocols for phyto-toxicity evaluation and for bio-efficacy evaluation of pesticide formulation. In order to promote the use of drone technology in agriculture, the following provisions have been made under the guidelines of Sub-Mission on Agricultural Mechanization (SMAM) being implemented by DA&FW:

(i) Financial assistance @ 100% of the cost of agriculture drone up to a maximum of Rs. 10 lakhs per drone is provided for purchase of drones by institutes under Indian Council of Agricultural Research, Krishi Vigyan Kendras (KVKs), State Agriculture Universities (SAUs), State and other Central Government Agricultural Institutions/Departments and Public Sector Undertakings (PSUs) of Government of India engaged in agricultural activities. The Farmers Producers Organizations (FPOs) are provided grants up to 75% of the cost of agriculture drone for its demonstrations on the farmers' fields. A contingency expenditure of Rs.6000 per hectare is provided to implementing agencies that do not want to purchase drones but will hire drones for demonstrations from Custom Hiring Centres, Hi-tech Hubs, Drone Manufacturers and Start-Ups. The contingent expenditure to implementing agencies that purchases drones for drone demonstrations is limited to Rs.3000 per hectare.

(ii) In order to make available drone services to farmers on rental basis, financial assistance @ 40% up to a maximum of Rs. 4.00 lakhs are provided for purchase of drones by Custom Hiring Centers under Cooperative Society of Farmers, FPOs and Rural entrepreneurs. Agriculture graduates establishing Custom Hiring Centers are eligible to receive financial assistance @ 50% of the cost of drone up to a maximum of Rs.5.00 lakhs per drone.

(iii) For individual purchase of drones, the Small and Marginal, Scheduled Caste/Scheduled Tribe, Women and North Eastern State farmers are provided financial assistance @ 50% of the cost up to a maximum of Rs. 5.00 lakhs and other farmers @ 40% up to a maximum of Rs. 4.00 lakhs.

Funds amounting to Rs. 52.50 Crores have been released to the Indian Council of Agricultural Research (ICAR) for taking up of large scale demonstration of drone technology on the farmers' fields in the country through 100 Kishi Vigyan Kendras, 75 institutions under ICAR and 25 State Agricultural Universities. Funds amounting to Rs. 70.88 Crores have also been released to various State Governments for demonstration, providing subsidy to the farmers and establishment of Custom Hiring Centres for providing drone services to the farmers.

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