

GOVERNMENT OF INDIA  
MINISTRY OF AGRICULTURE AND FARMERS WELFARE  
DEPARTMENT OF AGRICULTURAL RESEARCH & EDUCATION

**LOK SABHA**  
**UNSTARRED QUESTION NO. 329**  
TO BE ANSWERED ON 19<sup>th</sup> July, 2022

**IMPROVING FARMERS INCOME**

329. SHRIMATI SARMISTHA SETHI:

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

- (a) whether the Government is aware of research studies which recommend that drones and artificial intelligence should be used to improve productivity in agriculture sector;
- (b) if so, the details thereof and the action plan thereon; and
- (c) the details of the steps taken by the Government to improve farmers' income during the last three years?

**ANSWER**

THE MINISTER OF AGRICULTURE AND FARMERS WELFARE  
कृषि और किसान कल्याण मंत्री (SHRI NARENDRA SINGH TOMAR)

**(a) & (b):** Yes sir, use of Drones for the Crop-protection in India is new and the country is gaining experience. Indian Council of Agricultural Research (ICAR) initiated a network program during September, 2021 where in Research on use of Drones and Artificial Intelligence (AI) for timely monitoring of crop growth, health and managing it with enhanced input use efficiency were taken up. Drone and AI technology are used to monitor near real time crop health. Drone is also used for variable rate technology for pesticide and liquid fertilizer applications, mapping of water spread area, water sampling, mapping macrophyte infestation and aquaculture management practices, etc. Drone and AI technology are also used for precision livestock farming, particularly its health monitoring.

**(c):** For enhancing farmers' income, the emphasis is on adopting a multi-dimensional strategy, which includes increase in production through creation of resources for improving irrigation; effective use of inputs; reduction of post-harvest losses; value addition; reforms in agriculture marketing; minimizing risk and providing security and assistance, and promotion of allied activities. The Government has adopted several developmental programmes, schemes, reforms and policies that focus on higher incomes for the farmers. All these policies & programmes are being supported by higher budgetary allocations, non-budgetary financial resources such as creating Corpus Funds like Micro

Irrigation Fund etc. There have been several reforms to unleash the potential, e.g. Formation and Promotion of 10,000 FPOs along with necessary financial support under Atma Nirbhar Package (Agriculture). Under Atma Nirbhar Bharat special attention is being paid for creation of infrastructure for which “Agri Infrastructure Fund (AIF) has been created with a size of Rs.100,000 crore. Other special initiatives include Supplementary Income transfers under PM-KISAN; Pradhan Mantri Fasal Bima Yojna (PMFBY); Pradhan Mantri Krishi Sinchai Yojana (PMKSY); Increase in Minimum Support Price (MSPs) for all Kharif & Rabi Crops ensuring a minimum of 50 percent of profit margin on the cost of production, Bee-Keeping; Rashtriya Gokul Mission; Blue Revolution; Interest Subvention Scheme; Kisan Credit Card (KCC) that now offers production loan to even dairy & fishery farmers besides agricultural crops etc. The adoption of Drone technologies in agriculture has a potential to revolutionize the Indian agriculture. In order to make Drone technology affordable to the farmers and other stakeholders of this sector, financial assistance @ 100% cost of drone together with the contingent expenditure is extended to ICAR/SAU/State Governments/State Government Institutions under Sub-Mission on Agricultural Mechanization (SMAM) for its demonstration on the farmer’s field. Apart from this, farmers are getting timely information and advisory services through online and telecom mediums such as Kisan Call Centre and Kisan Suvidha App so that farmers can make decision for increasing crop productivity. During last three years (2019-2021) a total of 946 field crop varieties have been released comprising of 379 of cereals, 146 of Oilseeds, 168 of Pulses, 55 of Forage Crops, 158 of Fibre Crops, 26 of Sugarcane and 14 of other crops (potential/minor crops). In addition, 288 varieties of Horticultural crops were also released. These improved varieties are helping farmers to increase their income.

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