

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

RAJYA SABHA
UNSTARRED QUESTION NO- 3375
TO BE ANSWERED ON THE 01/04/2022

USE OF TECHNOLOGY IN AGRICULTURE SECTOR

3375. GEN. (DR.) D.P. VATS (RETD.):
SHRI VIJAY PAL SINGH TOMAR:
SHRI HARNATH SINGH YADAV:

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

- (a) whether Government has taken rational measures to increase the use of technology in agriculture and to reduce agricultural cost;
- (b) if so, the details thereof;
- (c) Whether Government is emphasizing on concerted policy efforts with all the stakeholders to promote agricultural techniques including drone to improve the supply chain; and
- (d) If so, the details thereof?

ANSWER

MINISTER OF AGRICULTURE AND FARMERS WELFARE

(SHRI NARENDRA SINGH TOMAR)

(a) & (b): Government encourages the use of technology and innovation in the agriculture sector in the country through various schemes such as National e-Governance Plan in Agriculture (NeGPA), Sub Mission on Agriculture Mechanization (SMAM), Rastriya Krishi Vikas Yojana (RKVY), Promotion of Agriculture Mechanisation for in-situ Management of Crop Residue, National Mission for Sustainable Agriculture (NMSA), Pradhan Mantri Krishi Sinchai Yojana (PMKSY) etc. The details of the some of the activities for the use of technology under the various scheme is as under:

- i. The Department has constituted a high level Task Force, which is in the process of finalizing a report on India Digital Ecosystem of Agriculture (IDEA) which would lay down the architecture of Digital AgriStack with unique ID for farmers, and standards for interoperability between various data streams in the Agristack. This would open up possibilities for developing services and solutions.
- ii. To promote make in India innovation in farming technology, the Government promotes startups in agriculture sector. To nurture agri-entrepreneurs 50 Agri Business Incubators have been established in different ICAR Institutes and Agricultural Universities. So far, a total of 1617 Start-ups including 818 by DARE/ ICAR and 799 by DA&FW have been developed so far. Hackathons are also organised involving Students/ Scientists/ Entrepreneurs and Innovators to encourage development of agricultural technologies and innovations. As part of Make in India initiative, ICAR Institutes developed 117 new machines/ equipments during

last 7 years. A total 13,78,755 farm machines prototypes have been provided to farmers during 2014-21. The cost effective and energy efficient improved equipment has resulted in saving of costly inputs (seeds, fertilizers, fuel, chemicals, water, electricity) up to 20-40% ensuring higher productivity and reduced losses.

- iii. The Government supports farmers for adopting farming related technologies under various schemes. Most of the schemes are implemented through the respective State Governments. The total funds allocated for 18 major Agricultural Technology related schemes during 2020-21 were 11329.31 crores and the expenditure was 10758.30 crores.
- iv. For promoting new technologies under National e-Governance plan, Government provided funding support to the tune of Rs. 30 crores to the States during 2020-21 and 2021-22.
- v. The technology in use include high yielding, stress tolerant, nutrient fortified and/or processable varieties of field and horticultural crops, improved breeding, feeding and health management technologies in livestock, poultry and fisheries sector. At present, a total of 1330 field crop varieties are indented by States and total of 1.15 lakh quintals of breeder seeds is produced and supplied every year. Micro irrigation has been adopted by the farming community of the country on a large scale and a total of 12.5 million ha has been brought under micro irrigation in the country till date. Government provides subsidy for the adoption of new varieties/ technologies under various schemes. The amount of subsidy varies from Scheme to Scheme. In the scheme for Promotion of Agricultural Mechanization for in-situ Management of Crop Residue, a subsidy of 50% was given to the individuals and 80% for community purchase of related farm machinery. Subsidy for the establishment of sprinkler system is 75% and that for construction of polyhouse through State Governments is 50%. For construction of plastic lined pond, Government gives 50% subsidy.
- vi. Krishi Vigyan Kendras (KVKs) and Agricultural Technological Management Agency (ATMA) at district level undertake training, demonstrations, exhibitions and skill development programs etc. provide information to the farmers, farm women, and rural youth. During 2014-2021, 91.43 crores advisories were provided to the farmers by KVK's, a total of 100.05 lakhs farmer and 9.50 lakhs extension personnels were trained by KVKs. Besides 2.44 lakhs on farm trials of new improved technologies were conducted at farmers field by KVKs. A total 34.06 lakh technology demonstrations were also organised by Agricultural Technology Management Agency (ATMA) during the last 7 years. State Agricultural Universities (SAUs) and ICAR Institutes are also involved in the transfer of new technology. Mass media and ICT based tools like mobile SMS, Videos, Mobile Apps etc. are also used to provide information to farmers on large scale. Kisan Call Centre, Agri-clinics and Agribusiness management centers, DD Kisan channel, M-kisan, Farmers portal established by the Government also disseminate the latest information to the farmers.
- vii. Government is actively encouraging and promoting various innovations in the Agriculture sector through different schemes/programs like digital agriculture mission, Kisan Drones, E-NAM, Agri-startups, mechanization, solar pumps, micro-irrigation, bio-fortification etc. The input efficient technology like use of laser guided land leveller for increasing water use efficiency, roto-till-drill and zero till drill for sowing wheat under no tillage conditions, Broad- bed-furrow seeder for farming broad bed and seeding on bed, ridge-furrow seeder for sowing soybean on ridges etc. have increased farmers efficiency and income. To encourage

sustainable development and reducing input costs, natural farming is promoted in the country through Research Institutes, Agricultural Universities and Krishi Vigyan Kendras.

- viii. Sub Mission on Agricultural Mechanization (SMAM) is being implemented w.e.f April,2014 through States/UTS Governments.The scheme aims at 'reaching the unreached' by bringing to the small and marginal farmers in the core and giving the benefits of farm mechanization, by Promoting 'Custom Hiring Centers' , creating hubs for hi-tech & high value farm equipments, distribution of various agricultural equipments, creating awareness among stakeholders through demonstration and capacity building activities, and ensuring performance testing and certification at designated testing centers located all over the country.
- ix. A special Scheme to support the efforts of the Governments of Haryana, Punjab, Uttar Pradesh and the NCT of Delhi to address air pollution due to stubble burning and to subsidize machinery for the farmers for in-situ management of crop residue, a new Central Sector Scheme on 'Promotion of Agricultural Mechanization for In-Situ Management of Crop Residue in the States of Punjab, Haryana, Uttar Pradesh and NCT of Delhi (CRM) has been introduced wef 2018-19.

(c) to (d): Looking into the unique advantages of Drone technologies in agriculture, the Department of Agriculture & Farmers Welfare has released the Standard Operating Procedures (SOPs) for use of drones in pesticide and nutrient application.

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 under Sub-Mission on Agricultural Mechanization (SMAM) to the Farm Machinery Training & Testing Institutes, Institutions of Indian Council of Agricultural Research, Krishi Vigyan Kendra (KVK) and State Agricultural Universities (SAUs) for its demonstration on the farmer's fields. Farmers Producers Organizations (FPOs) are provided grants @ 75% for purchase of drones for its demonstration on the farmers' fields. In order to provide agricultural services through drone application, financial assistance @ 40% of the basic cost of drone and its attachments or Rs.4 lakhs, whichever less is also provided for drone purchase by existing and new Custom Hiring Centers (CHCs) under Cooperative Society of Farmers, Farmers Producer Organizations (FPOs) and Rural entrepreneurs. The agriculture graduates establishing CHCs are eligible to receive financial assistance @ 50% of the cost of drone up to a maximum Rs.5.00 lakhs. Through these initiatives, it has been envisaged that the use of drones in agriculture will provide ample opportunities to provide employment to people in rural areas.
