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

RAJYA SABHA
UNSTARRED QUESTION NO. 809
TO BE ANSWERED ON 09/02/2024

APPLICATION OF LATEST TECHNOLOGIES TO ACHIEVE SDG 12.3 GOALS

809. SHRI AYODHYA RAMI REDDY ALLA

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

(a) whether Government will balance the pursuit of SDG 12.3 with other socio-economic considerations, ensuring a holistic and sustainable approach to agricultural development in Goa;

(b) the role of data analytics and artificial intelligence in optimizing agricultural processes and minimizing wastage, leveraging these cutting-edge technologies in the pursuit of SDG 12.3; and

(c) the long-term policy frameworks established by Government to sustainably integrate SDG 12.3 principles into core of agricultural practices, fostering a lasting impact on food supply chain in Goa beyond the immediate goals?

ANSWER

THE MINISTER OF AGRICULTURE AND FARMERS WELFARE

(SHRI ARJUN MUNDA)

(a): The Government of India is committed to achieving the Sustainable Development Goals (SDGs), including SDG 12.3, which focuses on reducing food waste. The pursuits of this goal are aligned with other socio-economic considerations to ensure a holistic and sustainable approach to agricultural development in the country. The Government is promoting Agriculture, Horticulture, Fisheries and Dairy along with skill development under various Centrally Sponsored Schemes, in the country including Goa. Further, the state of Goa is also promoting sustainable agricultural development through its state schemes under "Atmanirbhar Bharat – Swayampoorn Goa" initiative largely.

Ministry of Food Processing Industries (MoFPI) has conducted a Study to Determine Post-Harvest Losses of Agri Produces in India. Further, Indian Agricultural Statistics Research Institute of Indian Council of Agricultural Research (ICAR-IASRI) has prepared an Assessment Report on

Compilation of Food Loss Index for India. To facilitate monitoring of SDG Target 12.3 i.e. "By 2030, halve per capita global food waste at the retail and consumer level and reduce food losses along production and supply chains, including post-harvest losses", two national indicators namely 12.3.1: Per capita food availability and 12.3.2: Post harvest storage and distribution losses of central/states pool stocks of wheat and rice, have been identified in the National Indicator Framework (NIF).

(b): The integration of data analytics and Artificial Intelligence (AI) plays a crucial role in optimizing agricultural processes and minimizing wastage. The below mentioned projects, related to application of AI and other related technologies in post-harvest sector, is being implemented:

- Vision guided AI-enabled robotic apple harvester under national programme on electronics and ICT applications in agriculture and environment.
- AI enabled automatic fruit grader with integration of washing.
- Development of 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.
- 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.

(c): Integrating SDG 12.3 principles into core of agricultural practices, will foster a lasting impact on food supply chain in the country. The Government has launched National Mission on Sustainable Agriculture (NMSA) which is one of the Missions within the National Action Plan on Climate Change (NAPCC) aims to evolve and implement strategies to make Indian agriculture more resilient to the changing climate for sustainable production. NMSA was approved for three major components i.e. Rainfed Area Development (RAD); On Farm Water Management (OFWM); and Soil Health Management (SHM). Subsequently, new programmes such as namely Soil Health Card (SHC), Paramparagat Krishi Vikas Yojana (PKVY), Mission Organic Value Chain Development in North Eastern Region (MOVCDNER), Per Drop More Crop, National Bamboo Mission (NBM) etc. were also included. The Soil Health Card Scheme of NMSA focuses on soil health management through balanced fertilizer application. Healthy soils and climate-resilient practices reduce crop losses and enhance food availability. Per Drop More Crop (PDMC) scheme focuses on improving water use efficiency through better irrigation practices. Efficient irrigation reduces crop losses due to water scarcity and enhances overall yield. Under Paramparagat Krishi Vikas Yojana (PKVY) organic farming /natural farming are being promoted which encourages practices like crop rotation, intercropping,

and natural pest control. These practices minimize chemical inputs, enhance soil health, and promote biodiversity leading to healthier crops and less waste. Rashtriya Krishi Vikas Yojana (RKVY) supports state-level agricultural development by encouraging sustainable practices that contributes to long-term food security. National Food Security Mission (NFSM) aims to enhance food security by increasing production and productivity of major crops by promoting efficient resource utilization which indirectly contributes to reducing food waste. Digital Platforms promotes the use of digital tools for market access, weather forecasting, and crop advisories. Timely information helps farmers make informed decisions, minimizing losses. To educate the farmers about sustainable practices, post-harvest management, and waste reduction, Capacity Building and Training programs are being conducted through Krishi Vigyan Kendras (KVKs) and Agricultural Technology Management Agency (ATMA) which results in knowledge dissemination and long-term change in the attitude towards food waste. Government of Goa along with promoting maximum production of various agricultural and horticultural crops is also providing marketing facilities to rural vegetable farmers through Goa State Horticultural Corporation Limited and providing Assured Market for some crops as Paddy, Coconut, Cashew, Areca nut and Alsondo (Cowpea) through registered agencies/traders.

*****