

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

RAJYA SABHA

UNSTARRED QUESTION NO. 190

TO BE ANSWERED ON 21/07/2023

CLIMATE RESILIENT AGRICULTURE

190. SMT. SANGEETA YADAV:

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

- (a) the steps taken by Government to make agriculture climate resilient in the last five years;
- (b) steps taken to reduce dependency of agriculture on monsoon;
- (c) action taken to prepare for excess rainfall and other extreme climatic conditions in several parts of the country;
- (d) whether Government has drawn any strategy or taken any action to address the aforementioned issues in the last five years and the current year; and
- (e) if, so, the details thereof?

ANSWER

THE MINISTER OF AGRICULTURE AND FARMERS WELFARE

(SHRI NARENDRA SINGH TOMAR)

(a): The Government of India is implementing the National Action Plan on Climate Change (NAPCC) which provides an overarching policy framework for climate action in the country. National Mission for Sustainable Agriculture (NMSA) is one of the Missions within the National Action Plan on Climate Change (NAPCC). The mission aims to evolve and implement strategies to make Indian agriculture more resilient to the changing climate. NMSA was approved for three major components i.e. Rainfed Area Development (RAD); On Farm Water Management (OFWM); and Soil Health Management (SHM). Subsequently, four new programmes were introduced namely Soil Health Card (SHC), Paramparagat Krishi Vikas Yojana (PKVY), Mission Organic Value Chain Development in North Eastern Region (MOVCDNER) and Per Drop More Crop. In addition to aforementioned programmes under NMSA, restructured National Bamboo Mission (NBM) was launched in April 2018.

Indian Council of Agricultural Research (ICAR) under Ministry of Agriculture and

Farmers Welfare, Government of India has launched a flagship network project namely National Innovations in Climate Resilient Agriculture (NICRA) to promote climate resilient agricultural practices. NICRA project is a multi-sectoral, multi-location program carrying the major mandate of addressing climate change and variability, and addressing range of stake holders needs across the country. Research, demonstration and capacity building are the three major components, besides providing policy briefs on several aspects related to agriculture and climate change.

The salient achievements of ICAR on climate resilient agriculture includes the following;

- In total, 1888 climate resilient crop varieties including 891 of cereals, 319 of oilseeds, 338 of pulses, 103 of forage crops, 182 of fibre crops, 45 of sugar crops, and 10 of other crops have been developed.
- Participatory technology development of climate resilient practices has been undertaken involving farmers in risk assessment, demonstration and adaptation techniques in 151 clusters covering 454 villages, with a footprint of 2.13 lakh households, on 2.36 lakh hectares of land.
- 68 climate resilient technologies have been demonstrated in 454 villages on 15857 farmers' fields during 2014-23.
- 88 biocontrol agents, 31 biopesticides and 41 Biofertilizers have been documented and circulated. Drip fertigation schedules for 35 crops and cropping systems for achieving higher water and nutrient use efficiency have been standardized. Also District Agriculture Contingency Plans (DACPs) for 650 Districts have been developed.

(b): Under NMSA 'Per Drop More Crop'(PDMC) is component of Pradhan Mantri Krishi Sinchayee Yojana (PMKSY), which aims for enhancing water use efficiency at farm level through precision/micro irrigation (Drip and Sprinkler Irrigation). Besides promoting precision irrigation and better on-farm water management practices to optimize the use of available water resources, PDMC also supports micro level water storage or water conservation/management activities. Rainfed Area Development (RAD) scheme focuses on Integrated Farming System (IFS) for enhancing productivity and minimizing risks associated with climatic variability. Under this system, crops/cropping system is integrated with activities like horticulture, livestock, fishery, agro-forestry, apiculture etc. to enable farmers not only in maximizing farm returns for sustaining livelihood, but also to mitigate

the impacts of drought, flood or other extreme weather events with the income opportunity.

(c) to (e): India Meteorological Department (IMD) runs an operational Agrometeorological Advisory Services (AAS) viz., Gramin Krishi Mausam Sewa (GKMS) scheme for the benefit of farming community in the country. Under the scheme, medium range weather forecast for rainfall, maximum and minimum temperature, Relative humidity, cloud cover, wind speed and direction at district and block level for next five days is generated and based on the forecast, 130 Agromet Field Units (AMFUs), located at State Agricultural Universities, institutes of Indian Council of Agricultural Research (ICAR) and Indian Institute of Technology (IIT) etc., prepare Agromet Advisories on every Tuesday and Friday for the districts under their jurisdiction and for the blocks of the district of their location and communicate to the farmers to take decision on day-to-day agricultural operations for reduction of crop damage and loss due to unusual weather as well as taking advantages of benevolent weather conditions. Weather based advisories are also helpful in adopting appropriate livestock management strategies. Weather based Agromet Advisories are being disseminated to the farmers through multichannel dissemination systems like print and electronic media, Door Darshan, radio, internet etc. including SMS through Kisan Portal and also through private companies under Public Private Partnership (PPP) mode.

With the advancement of Information Communication Technology (ICT), Farmers access weather information including alerts and related agromet advisories specific to their districts through the mobile App viz., 'Meghdoot' launched by the Ministry of Earth Sciences, Government of India. These weather details are also accessible to farmers through 'KisanSuvidha' App launched by MoA&FW. Also, a few AMFUs have developed their own mobile Apps to facilitate quick dissemination of agromet advisories to the farmers of their region.
