

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

LOK SABHA
UNSTARRED QUESTION NO. 377
TO BE ANSWERED ON 4TH FEBRUARY, 2025

CLIMATE-RESILIENT CROP VARIETIES

377. SHRI BENNY BEHANAN:

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

- (a) whether the Government encouraging the development of climate-resilient crop varieties suited to Kerala's agro-climatic conditions, if so, the details thereof;
- (b) the steps being taken to integrate water management policies across departments to ensure a holistic approach to water and agriculture challenges; and
- (c) whether the Government has set up adequate monitoring and early warning systems in Kerala to mitigate the impact of extreme weather events on agriculture, if so, the details thereof?

ANSWER

THE MINISTER OF STATE FOR AGRICULTURE AND FARMERS WELFARE
कृषि और किसान कल्याण राज्य मंत्री (SHRI BHAGIRATH CHOUDHARY)

(a): National Agricultural Research System (NARS) including ICAR Institutes and State/Central Agricultural Universities (CAU/SAU) under the aegis of Indian Council of Agricultural Research (ICAR) has developed 2900 varieties of different crops during 2014-2024, out of which 2661 varieties are climate resilient. During this period, 63 field crop varieties have been developed for Kerala state, comprising of 23 of cereals, 2 of oilseeds; 10 of pulses; 15 of forage crops and 13 of sugarcane of which 58 are climate resilient.

(b): Centrally Sponsored Scheme of Per Drop More Crop (PDMC) of Govt. of India, has been implemented since 2015-16 which focuses on enhancing water use efficiency at farm level through micro Irrigation system like drip and sprinkler Irrigation systems. The PDMC was implemented as a component of Pradhan Mantri Krishi Sinchayee Yojana (PMKSY) during 2015-16 to 2021-22 and under the Rashtriya Krishi Vikas Yojana (RKVY) from 2022-23 onwards. The various components of this scheme helps in water saving as well as reduced fertilizer usage through fertigation, labour expenses, other input costs and overall income enhancement of the farmers. The Government provides financial assistance @ 55% to the small and marginal farmers and @ 45% to other farmers for installation of drip and sprinkler systems under the PDMC.

(c): To help the farmers for taking decisions on day-to-day agricultural operations for reduction of crop damage and loss due to extreme weather as well as taking advantages of benevolent weather conditions, India Meteorological Department (IMD) runs a scheme - Gramin Krishi Mausam Sewa (GKMS) to render weather forecast based operational Agrometeorological Advisory Services (AAS) in collaboration with Indian Council of Agricultural Research (ICAR), State Agriculture Universities

(SAUs) and other institutions for the benefit of farming community. Under this scheme, presently 130 Agromet Field Units (AMFUs), located at SAUs, institutes of ICAR and Indian Institute of Technology (IIT) etc. are operational across the country. Along with the biweekly bulletins, daily weather forecast and nowcast information are also disseminated to the farmers by Regional Meteorological Centers (RMCs) and Meteorological Centers (MCs) of IMD. Out of the 130 AMFUs, 5 AMFUs viz. Ambalavayal, Pillicode, Thrissur, Vellayani and Kumarakom are preparing the district level AAS bulletins for all agriculturally important districts of Kerala. These units are also involved in dissemination of AAS to the farmers through multichannel dissemination system like print and electronic media, Door Darshan, radio, internet etc. including SMS using mobile phones through Kisan Portal and also through private companies under Public Private Partnership (PPP) mode. SMS-based alerts and warnings along with suitable remedial measures are being sent during extreme weather events like cyclone, deep depression etc. through Kisan Portal.

Farmers access weather information including alerts and related agromet advisories specific to their districts through the mobile App viz., 'Meghdoot' and 'Mausam' launched by Govt. of India. To extend real-time weather updates to farmers for taking appropriate decisions on farm operations, AMFUs also use Social media platforms like 'WhatsApp', 'Facebook', 'YouTube' etc. In Kerala, these services have been integrated in Agriculture Information Management System (AIMS), Department of Agriculture & Farmers Welfare, Govt. of Kerala. About 40 lakhs farmers are accessing the information in English and regional language from this platform.

Recently, Ministry of Earth Sciences (MoES), in collaboration with the Ministry of Panchayati Raj (MoPR), has launched Panchayat-level weather forecasts for nearly all Gram Panchayats in India on 24th October 2024. These forecasts are accessible on digital platforms such as e-Gramswaraj (<https://egramswaraj.gov.in/>), the Meri Panchayat app, e-Manchitra of MoPR, and Mausamgram of IMD, Ministry of Earth Science.

For drought monitoring, Department of Agriculture & Farmers' Welfare (DA&FW) has developed a Geoportal in collaboration with Space application Centre (SAC), ISRO. This Geoportal hosts data of multiple drought indicators related to rainfall, soil moisture, remote sensing based crop condition, water storages etc. This portal is a single window digital platform which provide drought indicators and enable various stakeholders towards easy, timely and objective assessment of drought situation at district or tehsil level. It also helps in identifying potential drought conditions enabling timely interventions to support effective drought management strategies.
