

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

RAJYA SABHA
UNSTARRED QUESTION NO. 514
TO BE ANSWERED ON 07/02/2025

ADVERSE EFFECTS OF GLOBAL WARMING ON AGRICULTURE

514. SHRI RAJENDRA GEHLOT:

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

- (a) Weather Government has taken note of the adverse effects of global warming on agriculture in the country, which has led to abnormal trends like irregular rainfall and shrinking of forest area;
- (b) if so, the details thereof and the reaction of Government thereto; and
- (c) whether Government has taken any major steps during the last three years to mitigate the adverse effects of global warming and climate change on the farmers of the North Western plains of the country, particularly of Rajasthan, if so, the details thereof?

ANSWER

THE MINISTER OF STATE FOR AGRICULTURE AND FARMERS WELFARE

(SHRI RAMNATH THAKUR)

(a) to (c): Yes, the Government has taken several steps towards mitigation of adverse impact of global warming and climate change on agriculture in the country including Rajasthan. The National Action Plan on Climate Change (NAPCC) provides an overarching policy framework to enable the country to adapt to climate change and enhance ecological sustainability. One of the National Missions under NAPCC is the National Mission for Sustainable Agriculture (NMSA), which implements strategies to make agriculture more resilient to the changing climate. Several schemes have also been initiated under NMSA to deal with the adverse climate situations. Per Drop More Crop (PDMC) scheme increases water use efficiency at the farm level through micro irrigation technologies i.e. drip and sprinkler irrigation systems. Rainfed Area Development focuses on Integrated Farming System for enhancing productivity and minimizing risks associated with climatic variability. The Soil Health & Fertility scheme assists states in promoting integrated nutrient management through judicious use of chemical fertilizers including secondary and micronutrients in conjunction with organic manures & bio-fertilizers for improving soil health and its productivity. Mission for Integrated Development of Horticulture, Agroforestry & National Bamboo Mission also promote climate resilience in agriculture. Further, Pradhan Mantri Fasal Bima Yojana along with weather index based Restructured Weather Based Crop Insurance Scheme provide a comprehensive insurance cover against crop failure by providing financial support to farmers suffering crop loss/damage arising out of unforeseen natural calamities.

To address the impact of climate change, the National Agricultural Research System (NARS) under the aegis of Indian Council of Agricultural Research (ICAR) has released a total of 2900 varieties have been released during last 10 years (2014- 2024). Out of which, 2661 varieties are tolerant to one or more biotic and/or abiotic stresses. The Indian Council of Agricultural Research (ICAR) under Ministry of Agriculture and Farmers Welfare has launched a flagship network project namely National Innovations in Climate Resilient Agriculture (NICRA). The project conducts studies on the impact of climate change on agriculture including crops, livestock, horticulture and fisheries and also develops and promotes climate resilient technologies in agriculture for vulnerable areas of the country. Risk and vulnerability assessment of agriculture to climate change has been carried out at district-level for 651 predominantly agricultural districts as per Intergovernmental Panel on Climate Change (IPCC) protocols. Out of 310 districts identified as vulnerable, 109 districts have been categorized as 'very high' and 201 districts as 'highly' vulnerable. District Agriculture Contingency Plans (DACPs) for these 651 districts have also been prepared to address weather aberrations and recommending location specific climate resilient crops and varieties and management practices for use by the State Departments of Agriculture. For enhancing the resilience and adaptive capacity of farmers to climate variability, the Concept of "Climate Resilient Villages" (CRVs) has been initiated under NICRA. Location-specific climate resilient technologies have been demonstrated in 448 CRVs of 151 climatically vulnerable districts covering 28 states / UTs for adoption by farmers. Out of which, 35 CRVs and 13 Districts are from the State of Rajasthan. ICAR through its NICRA project creates awareness about impact of climate change in agriculture among farmers. Capacity building programs are being conducted to educate the farmers on various aspects of climate change for wider adoption of climate resilient technologies.
