

Strategies to Protect Farmers from Climate Change

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The Government through, Indian Council of Agricultural Research (ICAR) is implementing a project-National Innovations in Climate Resilient Agriculture (NICRA) that studies the challenges posed by climate change on agriculture. Under the project, vulnerability assessment to climate change has been carried out for 651 agricultural districts as per Intergovernmental Panel on Climate Change (IPCC) protocols. 310 districts were identified as vulnerable out of which 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 enhancing the resilience and adaptive capacity of farmers to climate variability, location-specific climate resilient technologies such as system of rice intensification, aerobic rice, direct seeding of rice, cultivation of climate resilient varieties tolerant to extreme weather conditions such as drought and heat etc. have been demonstrated under the project through KVKs in 151 districts covering 448 Climate Resilient Villages. Capacity building for establishing village level seed banks and community nurseries is undertaken under NICRA to enable availability of seed in the adopted villages. Drought and flood tolerant climate-resilient varieties of rice, wheat, soybean, mustard, chickpea, sorghum, gram, and foxtail millet were demonstrated in several NICRA villages. Besides, training programmes are conducted under Agricultural Technology Management Agency (ATMA) on various issues of agricultural practices. Under NICRA, technical assistance for small and marginal farmers is extended to additional vulnerable districts beyond the 151 currently covered districts, to promote adoption of climate-resilient practices. To address the impacts of climate change, ICAR has released 2,900 crop varieties during 2014–2024, out of which 2,661 are tolerant to one or more biotic and/or abiotic stresses.

Further, Ministry of Agriculture & Farmers Welfare is implementing various programmes to address the challenges of climate change such as droughts and floods. Per Drop More Crop scheme is implemented to promote water use efficiency at farm level through Micro Irrigation technologies i.e. drip and sprinkler irrigation systems. Rainfed Area Development scheme is being implemented to promote Integrated Farming System for enhancing productivity and minimizing risks associated with climatic variability. The Soil Health and Fertility scheme assists states in promoting Integrated Nutrient Management through judicious use of fertilizers. Organic farming is promoted through Paramparagat Krishi Vikas Yojana and natural farming through National Mission on Natural Farming scheme. "Mission for Aatmanirbharta in Pulses", National Mission on Edible Oils – Oilseeds, and National Food Security & Nutrition Mission promotes crop diversification. Mission for Integrated Development of Horticulture, Agroforestry & National Bamboo Mission also promote climate resilience in agriculture.

Pradhan Mantri Fasal Bima Yojana along with weather index based Restructured Weather Based Crop Insurance Scheme provide a comprehensive insurance cover against failure of the crop by providing financial support to farmers suffering crop loss/damage arising out of unforeseen natural calamities and

adverse weather incidence. As on 31.12.2025, since the inception of the scheme in 2016, total claims amounting to ₹1.92 lakh crore have been paid under PMFBY (2016–17 to 2024–25).

This information was given by Minister of State for Agriculture and Farmers Welfare, Shri Ramnath Thakur in a written reply in Rajya Sabha today.

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