

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

LOK SABHA
UNSTARRED QUESTION NO. 1156
TO BE ANSWERED ON 11TH FEBRUARY, 2025

CLIMATE-RESILIENT AGRICULTURE

1156. DR. M P ABDUSSAMAD SAMADANI:

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

- (a) whether the Government is aware that climate change can reduce agricultural income by 15-25 percent in the country and it is high time for Climate-Resilient Agriculture (CRA) to be valued and implemented, if so, the details thereof; and
- (b) whether the Government has taken any measures for adaptation of appropriate mitigation technologies such as the cultivation of tolerant breeds to overcome climate stress and if so, the details thereof?

ANSWER

THE MINISTER OF STATE FOR AGRICULTURE AND FARMERS WELFARE
कृषि एवं किसान कल्याण राज्य मंत्री (SHRI RAMNATH THAKUR)

(a) & (b): Indian Council of Agricultural Research (ICAR) is implementing a project, National Innovations in Climate Resilient Agriculture (NICRA) that studies the impact of climate change on agriculture including crops, livestock, horticulture and fisheries. It also develops and promotes climate resilient technologies, which helps the regions prone to extreme weather conditions like droughts, floods, frost, heat waves, etc. The studies conducted under NICRA showed that in the absence of adaptation measures, climate change is likely to reduce yield of rainfed as well as irrigated rice, wheat, Kharif maize etc. Under NICRA, 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 for these 651 districts have been prepared to address weather aberrations and recommended location specific climate resilient crops and varieties and management practices. 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. Capacity building programmes are conducted to educate the farmers on various aspects of climate change for wider adoption of climate resilient technologies. Several schemes have also been initiated under National Mission on Sustainable Agriculture (NMSA) by the Government to deal with the adverse climate situations in the agriculture sector. To address the impact of climate change, the National Agricultural Research System under the aegis of ICAR has released a total of 2900 varieties during last 10 years (2014- 2024). Out of which, 2661 varieties are tolerant to one or more biotic and/or abiotic stresses. Climate resilient technologies such as system of rice intensification, aerobic rice, direct seeding of rice, zero till wheat sowing, cultivation of climate resilient varieties tolerant to extreme weather conditions such as drought and heat; in-situ incorporation of rice residues; etc. have been developed and demonstrated.
