

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

LOK SABHA
STARRED QUESTION NO. 132
TO BE ANSWERED ON 28TH JULY, 2026

**IMPACT OF CLIMATE CHANGE ON CROP PRODUCTIVITY AND
FOOD SECURITY**

*132. SMT PRIYANKA GANDHI VADRA:

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

- (a) whether the Government has assessed the long-term impact of climate change on crop productivity and food security in the country, if so, the details thereof;
- (b) whether the Government is taking any action to accelerate research on climate resilient crop varieties;
- (c) if so, the details thereof, including support extended to ICAR, and crops developed and commercialised since 2019, year-wise;
- (d) whether the Government offers incentives to farmers to adopt climate-resilient varieties, if so, the details thereof; and
- (e) whether the Government has assessed if the Pradhan Mantri Fasal Bima Yojana (PMFBY) adequately covers crop losses arising from increasing climate induced extreme weather events, if so, the findings thereof?

ANSWER

THE MINISTER OF AGRICULTURE AND FARMERS WELFARE
कृषि एवं किसान कल्याण मंत्री (SHRI SHIVRAJ SINGH CHOUHAN)

(a) to (e): A statement is laid on the Table of the House.

STATEMENT IN RESPECT OF PARTS (a) TO (e) OF LOK SABHA STARRED QUESTION NO. 132 TO BE ANSWERED ON 28TH JULY, 2026 REGARDING “IMPACT OF CLIMATE CHANGE ON CROP PRODUCTIVITY AND FOOD SECURITY”

(a) to (c): The Government is taking various measures to promote sustainable agricultural practices and effectively address the climate change-related challenges. The Indian Council of Agricultural Research (ICAR) is implementing the National Innovations in Climate Resilient Agriculture (NICRA) project, which studies the impact of climate change on agriculture, conducts district-level risk and vulnerability assessment of agriculture to future climate change, and undertakes integrated simulation modelling studies for estimating future climate change projections. Under the project, risk and vulnerability assessment of agriculture to climate change has been carried out at the district level for 651 predominantly agricultural districts as per the Intergovernmental Panel on Climate Change (IPCC) protocols. Based on the assessment, 310 districts have been identified as vulnerable, of which 109 districts have been categorized as 'very high' and 201 districts as 'highly' vulnerable. District Agriculture Contingency Plans (DACPs) have been prepared for all the 651 districts to address weather aberrations by recommending location-specific climate-resilient crops, varieties and management practices. Further, to enhance resilience to climate variability, location-specific climate-resilient technologies, including the System of Rice Intensification (SRI), aerobic rice, direct-seeded rice, zero-till wheat, climate-resilient crop varieties, and in-situ crop residue management, are being demonstrated for adoption by farmers under NICRA. Climate-resilient technologies are being demonstrated in 448 Climate Resilient Villages across 151 vulnerable districts in 28 States/UTs, supported by village-level seed banks and community nurseries to enhance farmers' resilience and ensure timely availability of quality seeds. Technical assistance is also provided to small and marginal farmers through Village Climate Risk Management Committees (VCRMCs), while capacity-building and training programmes are conducted under the Agricultural Technology Management Agency (ATMA).

ICAR is continuously undertaking research for the development of crop varieties tolerant to biotic and abiotic stresses. To address the challenges of climate change, ICAR has released 2,900 varieties during last 10 years (2014-2024). Out of these 2,661 varieties are tolerant to one or more biotic and/or abiotic stresses., which include 1,258 cereal varieties, 368 oilseed varieties, 410 pulse varieties, 157 forage crop varieties, 358 fibre crop varieties, 88 sugarcane varieties, and 22 varieties of other crops.

During the last seven years (2019-2026), 1,59,600.3 quintals of breeder seed were produced in climate-resilient varieties including extreme climate resilient, drought-tolerant

and rainfed field crop varieties. Further, 3,82,855.8 quintals of quality seeds of climate-resilient varieties including, extreme climate resilient, drought-tolerant and rainfed field crop varieties were produced and distributed to farmers across the country. Year wise details are as under :

Year	Breeder seed Production (q) in climate-resilient varieties	Quality seed Production (q) in climate-resilient varieties
2019-20	10086.9	31272.7
2020-21	14113.2	26155.5
2021-22	14078.1	39786.6
2022-23	19996.5	62179.6
2023-24	28562.8	60929.1
2024-25	32843.4	76997.4
2025-26	39919.5	85534.9
Total	159600.3	382855.8

The Government extends continuous support to ICAR for agricultural research and education, including research on climate-resilient technologies, crop improvement, natural resource management, and climate adaptation etc. under its programmes, including NICRA.

Further, Government is promoting resilience in agriculture through sustainable agricultural practices under various schemes, such as Per Drop More Crop (PDMC) for improving water-use efficiency through micro-irrigation; Rainfed Area Development (RAD) for promoting Integrated Farming Systems; Soil Health & Fertility scheme for judicious use of fertilizers; Paramparagat Krishi Vikas Yojana (PKVY) for organic farming; National Mission on Natural Farming (NMNF) for natural farming; Mission for Aatmanirbharta in Pulses, National Mission on Edible Oils–Oilseeds (NMEO-OS) and National Food Security & Nutrition Mission (NFSNM) that also promote crop diversification; Mission for Integrated Development of Horticulture (MIDH) for horticulture development; Agroforestry for farmland ecology etc.

(d): The Government is implementing National Food Security and Nutrition Mission (NFSNM) with the objective of increasing the production and productivity of Shree Anna, Rice, Wheat, Coarse Cereals (Maize & Barley) and Commercial Crops (Jute and Sugarcane). Newly released high yielding, climate resilient, bio-fortified varieties of crops are being promoted under the Mission, apart from demonstration of these varieties and latest agricultural technologies. Under NFSNM, financial assistance is being provided to the farmers, through the States/UTs, for demonstrations on crop production & protection technologies, for distribution of certified seeds, for production of certified seeds (Shree Anna), for Integrated Nutrient and Pest Management measures, for capacity building of

farmers through cropping system-based trainings, etc involving newly released and notified high-yielding, climate-resilient, bio-fortified varieties, resistant to insect, pest and diseases of the aforesaid crops.

(e): The Pradhan Mantri Fasal Bima Yojana (PMFBY), along with the Restructured Weather Based Crop Insurance Scheme (RWBCIS), provides comprehensive insurance coverage against crop losses arising from natural calamities and adverse weather events, thereby mitigating climate-related risks faced by farmers. PMFBY covers crop losses from pre-sowing to post-harvest due to non-preventable natural risks, including drought, flood, inundation, landslide, heat wave, hailstorm, cyclone, storm, lightning, natural fire, cloudburst, unseasonal rainfall and prevented sowing, as per the Operational Guidelines. RWBCIS provides insurance protection against adverse weather incidences such as deficit/excess rainfall, high/low temperature, humidity, frost, heat wave, cold wave, etc., particularly for notified horticultural and other crops. As on 30.06.2026, a total of 92.68 crore farmer applications have been enrolled under PMFBY and RWBCIS, and claims amount ₹2.02 lakh crore have been paid against 25.58 crore farmer applications since the inception of the schemes in 2016. Further, about 86% of the total unique farmer applications enrolled under the schemes are from small and marginal farmers.
