

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

**LOK SABHA**  
**UNSTARRED QUESTION NO.628**  
TO BE ANSWERED ON THE 25<sup>TH</sup> JUNE, 2019

**EFFECT OF CLIMATE CHANGE ON FOOD GRAIN PRODUCTION**

628. SHRI KANAKMAL KATARA:

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

- (a) whether it is true that there has been adverse impact on foodgrains production in the country due to irregular climate;
- (b) if so, the steps taken by the Government to control adverse impact of climate on agriculture production by using better and favourable scientific techniques; and
- (c) whether agriculture research institutes like Indian Council of Agricultural Research have started unique research projects for developing meaningful measures to tackle the irregular climate impact for different crops, fruits and vegetables of Rabi and Kharif, if so, the details thereof?

**ANSWER**

MINISTER OF AGRICULTURE AND FARMERS WELFARE

कृषि एवं किसान कल्याण मंत्री ( SHRI NARENDRA SINGH TOMAR)

(a) & (b): Occurrence of events like drought, frost, floods, hailstorms etc, due to climatic aberrations may impact the food grain production. However, due to preparedness and introduction of resistant varieties, total food grains production have increased from 251.57 million tonnes in 2015-16 to 283.37 million tonnes in 2018-19 (3<sup>rd</sup> Advance Estimates) and horticulture production from 286.19 million tonnes in 2015-16 to 314.80 million tonnes 2018-19 (2<sup>nd</sup> Advance Estimates).

The National Mission for Sustainable Agriculture (NMSA), one of the ten Missions under National Action plan for Climate Change (NAPCC), includes programmatic interventions like Soil Health Card (SHc), Paramparagat Krishi Vikas Yojana (PKVY), Mission Organic Value Chain Development for North Eastern Region (MOVCDNER), Rainfed Area Development (RAD), National Bamboo Mission (NBM) and Sub-mission on Agro Forestry (SMAF). These and other programmes including Prime Minister Krishi Sinchai Yojana (PMKSY) are ensuring judicious use of natural resources. Assistance is provided under National Food Security Mission (NFSM) for inter alia stress tolerant/climate resilient varieties of food grains.

The progress of ten deliverables are reported quarterly namely i) Area under organic farming, ii) Production of Bio-fertilizers, iii) Precision Irrigation , iv) SRI/ Direct Seeded Rice from Transplantation , v) Crop diversification, vi) Additional Area under plantation in Arable land , vii) Climate Resilient Varieties (CRV) Identified/ Released , viii a) Identification of genotypes of crops with enhanced CO<sub>2</sub> fixation potential and less water consumption & Nutrients , viii b) Climate Resilient genotypes with greater adaptation to drought, flood, salinity and high temperature , ix) Coverage of milch animals under ration balancing programme and x) Establishment of bypass protein feed making unit .

Indian Council of Agricultural Research (ICAR) has developed 45 models for climate resilient Integrated Farming Systems (IFS) which are replicated in Krishi Vigyan Kendras (KVKs) for demonstration and extended through the Rainfed Area Development (RAD) programme. Climate resilient villages have been developed, one in each of 151 districts under the project National Innovations in Climate Resilient Agriculture (NICRA). This follows a multi-pronged strategy encompassing strategic research on adaptation, mitigation and demonstration of technologies on farmers' fields to create awareness, aiming mainly to evolve crop varieties tolerant to climatic stresses like floods, droughts, frost, inundation due to cyclones and heat waves. An atlas on vulnerability of Indian agriculture to climate change has been prepared by Central Research Institute of Dryland Agriculture (CRIDA), Hyderabad. District Agriculture Contingency Plans for 648 districts have been prepared for managing weather aberrations for sustainable agriculture.

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