

**GOVERNMENT OF INDIA  
AGRICULTURE AND FARMERS WELFARE  
LOK SABHA**

STARRED QUESTION NO:22

ANSWERED ON:01.12.2015

Impact of Climate Change on Agriculture

Chavan Shri Ashok Shankarrao;Kachhadia Shri Naranbhai

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

- (a) whether sudden change in weather pattern has resulted in crop damage, poor yield and loss of income to the farmers;
- (b) if so, the total loss incurred by farmers during each of the last three years and the current year in each State/UT on this account;
- (c) whether the sudden change of climate has also resulted in heavy rains, hailstorms, cyclones, deficient rains, drought etc., if so, the regions prone to this abnormal weather pattern; and
- (d) the contingency plan drawn by the Government to overcome climate change and the action initiated by Agricultural Universities/Institutions to produce seeds which can withstand the severe weather pattern?

**Answer**

THE MINISTER OF AGRICULTURE AND FARMERS WELFARE  
(SHRI RADHA MOHAN SINGH)

(a) to (d): A Statement is laid on the Table of the House.

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STATEMENT IN RESPECT OF PARTS (a) to (d) OF LOK SABHA STARRED QUESTION NO. 22 TO BE ANSWERED ON 01/12/2015 REGARDING "IMPACT OF CLIMATE CHANGE ON AGRICULTURE"

(a) Yes, Madam.

(b) Sudden change in weather pattern has resulted in crop damage, poor yield and loss of income to farmers. The losses to crops in the affected states are assessed by the Inter-Ministerial Central Teams (IMCTs). On the recommendation of IMCTs Government of India approved central assistance to states under National Disaster Response Fund (NDRF). In total, assistance of Rs.4464.64 crore during 2012-13, Rs.2854.19 crore during 2013-14 and Rs.9017.99 crore during 2014-15 has been approved to affected states. During Kharif 2015, in view of the deficit rainfall states like Karnataka, Chhattisgarh, Madhya Pradesh and Maharashtra, Uttar Pradesh and Odisha have submitted Memoranda seeking total financial assistance of Rs.23739.79 crore. Telangana has declared drought in 231 mandals of 7 districts and submitted an interim Memorandum for Rs. 1846.60 crores for financial assistance under NDRF. Final financial memorandum for the state is awaited. The state-wise details are in Annexure-I.

(c) Anomalous weather and climate events in various regions could have been influenced due to global warming and long-term climate change besides natural variability of climate system. However, from the available meteorological data in the country, it is difficult to draw a definite relationship between climate change and extreme weather events experienced in the recent past. State-wise details of districts declared drought affected during 2015-16 is in Annexure (IIa). ICAR-CRIDA mapped 572 districts of the country for their vulnerability to extreme events due to climate change. The vulnerability was assessed high to very high in 230 districts, medium in 114 districts and low to very low in 228 districts. Details are annexed (Annexure-IIb).

(d) The Indian Council of Agricultural Research (ICAR) in collaboration with State Agricultural Universities and concerned state departments has developed district contingency plans including crops advisories to tackle any eventuality due to change in weather pattern affecting the agriculture sector across the country. So far, contingency plans for 600 districts covering 25 states have been prepared and uploaded at [www.farmer.gov.in](http://www.farmer.gov.in), [www.crida.in](http://www.crida.in) and [www.agricoop.nic.in](http://www.agricoop.nic.in). The contingency plans are also being constantly updated to meet the emerging situations.

To operationalize the contingency plan a National Consultation Meeting besides interface meetings with 11 states (Maharashtra, Jharkhand, Chhattisgarh, Gujarat, Telangana, Madhya Pradesh, Rajasthan, Andhra Pradesh, Karnataka, Uttar Pradesh and Haryana) were conducted during May-June, 2015.

The National Agricultural Research System comprising ICAR, Central Agricultural Universities and SAUs are taking adequate steps in development of suitable varieties, which can withstand the severe weather aberrations including deficient rainfall/drought. Short duration varieties have also been released to escape or overcome the vagaries of weather. The details are presented in Annexure-III.

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