

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

LOK SABHA
UNSTARRED QUESTION NO.3808
TO BE ANSWERED ON THE 16TH JULY, 2019

EFFECTS OF CLIMATE CHANGE ON CROPS AND VEGETABLES

3808. MS. PRATIMA BHOUMIK:

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

- (a) whether there is any reduction in the amount of rainfall received in the seven North East States of Arunachal Pradesh, Nagaland, Manipur, Meghalaya, Assam, Tripura and Mizoram during each of the last five years from 2014-15;
- (b) if so, the measures taken by the Governments of these States to tide over the crisis;
- (c) the Action Plans drawn up to face the effects of climate change to boost up the production of food crops and vegetables in the seven North East States, State-wise; and
- (d) the manner in which farmers of the above seven North East States would benefit from such action plans to mitigate the effects of climate change?

ANSWER

MINISTER OF AGRICULTURE AND FARMERS WELFARE

कृषि एवं किसान कल्याण मंत्री (SHRI NARENDRA SINGH TOMAR)

(a): As per the IMD report, the overall trend of rainfall in the North East (NE) States of Arunachal Pradesh, Nagaland, Manipur, Meghalaya, Assam, Tripura and Mizoram has improved from 2014-15 to 2017-18. A slight deficit rainfall is noticed in NE States during 2018-19. However, there is no drastic change in the rainfall over last five years in NE States. The year-wise actual rainfall received in North Eastern States for five years from 2014-15 to 2018-19 is as under:

Year	Rainfall (in mm)
2014-15	14030.90
2015-16	15901.90
2016-17	15496.60
2017-18	20310.60
2018-19	14285.10

(b) & (c): NE States of Arunachal Pradesh, Nagaland, Manipur, Meghalaya, Assam, Tripura and Mizoram receive higher rainfall compared to rest of India which is enough to undertake crop production activities. However, based on the forecast of Weather, the appropriate cropping pattern adopted by the States in consultation with Indian Council of Agricultural Research (ICAR) / State Agricultural Universities (SAUs) responsible for the benefits of the farmers. The choice of crop and variety are considered more appropriate in highly complex rainfed crop production systems in the context of weather aberration for sustainable agriculture. ICAR- Central Research Institute of Dryland Agriculture (CRIDA) Hyderabad in collaboration with State Agriculture Universities has prepared crop contingency plan for 91 districts of North eastern States in the country to sustain agriculture production in the eventuality of any sudden change in weather. Besides, the departments of various Ministries are meeting every week to review the progress of sowing of crops, crop condition, rainfall situation, status of water storage and input availability in the States. Based on the Crop Weather Watch Report advisories are being issued to the States/ Union Territories for implementation of contingency plans. Besides there is also a system to send weather based advisory to registered farmers by SMS through m-kisan portal.

Government interventions to overcome adverse climatic conditions in the States

1. Incentives for distribution of certified seeds of the varieties tolerant to drought/Stress tolerant varieties.
2. Cluster demonstrations on stress tolerant varieties, direct seeded rice sowing techniques, System of Rice Intensification techniques, etc.,
3. Popularization of alternative crops and varieties in drought affected areas.
4. Incentives for water sowing devices like sprinkler, pumpsets, raingun etc.
5. Incentives on all types of water carrying pipes for conservation and efficient use of irrigation water.
6. Incentives on machineries for zero tillage, happy seeder & resource conservation machineries/tools etc.
7. Efficient utilization of moisture available in rice fallows for pulses & Nutri-Cereals and optimizing utilization by efficient irrigation system.

(d): With the application of Contingency plans, farmers can minimize crops damage due to adverse climatic conditions. The Government has also introduced yield based Pradhan Mantri fasal Bima Yojana (PMFBY) and Weather Index Based Restructured Weather Based Crop Insurance Scheme (WBCIS) from kharif 2016 to provide financial support to farmers suffering crop loss/damage arising out of adverse climatic aberrations to stabilize the income of farmers. PMFBY provides comprehensive risk insurance against crop damage from pre-sowing to post harvest of food crops and horticultural crops notified by the concerned state government. Immediate relief also provided to insured farmers in case of adverse seasonable conditions during the crop season due to which expected crop yield during the season is likely to be less than 50% of the threshold yield in the concerned insurance unit. Besides, in the eventuality of drought and other natural calamities, the State Government is empowered to initiate necessary relief measures from State Disaster Response Fund (SDRF) which is readily available with them. Additional financial assistance, over and above SDRF, is considered from National Disaster Response Fund (NDRF) on receipt of Memorandum from State Government and in accordance with extant norms and procedure.