

**ICAR-Central Research Institute for Dryland Agriculture**

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**Answer to the Lok Sabha Q Dy. No. 14181**

**a) Whether the sudden and severe change in the climate conditions and global warming are causing intense damage to crops and is affecting the productivity of crops also; if so, the details thereof and the preventive measures taken Government in this regard;**

- Yes. A recent study by ICAR-CRIDA on effect of rise in minimum temperature over India on agricultural production revealed that Annual mean minimum temperature showed warming @ 0.24° per decade (10 years) on all India basis. The magnitude of rise in seasonal mean temperatures is more during *rabi* (0.28 °C 10 yr<sup>-1</sup>) compared to *kharif* (0.19 °C per decade). *Kharif* paddy yields in 268 districts across the country (57.2% of paddy growing area) were influenced by a rise in minimum temperature. Declines in *kharif* paddy yield ranged between 411 and 859 kg ha<sup>-1</sup> per 1 °C rise in minimum temperature across regions.

Another study by ICAR-CRIDA on sensitivity of wheat yields to temperature in India revealed that Indian wheat yields were observed to be prone to continual heat stress and especially to short-term temperature extremes. Mean wheat yields for the period 1980–2011 declined by 7% (204 kg ha<sup>-1</sup>) for each 1 °C rise in minimum temperature.

- All India Coordinated Research Project on Agrometeorology (AICRPAM) under Indian Council of Agricultural Research is issuing weekly bulletins on ‘Status of monsoon, progress in *kharif* sowing and agromet advisories for deficit/excess rainfall areas’ of the country during southwest monsoon season. For policy makers, AICRPAM in collaboration with India Meteorological Department (IMD) is issuing weekly National Agromet Advisory Services’ (NAAS) bulletins, which provides a national level picture of weather and crop status and impact of extreme weather events on agriculture.

- Once the extreme weather event has happened, to compensate for the crop damage, Ministry of Agriculture and Farmers Welfare has started ‘**Pradhan Mantri Fasal Bima Yojana**’. The main highlights of the scheme are mentioned below.

- There will be a uniform premium of only 2% to be paid by farmers for all *Kharif* crops and 1.5% for all *Rabi* crops. In case of annual commercial and horticultural crops, the premium to be paid by farmers will be only 5%. The premium rates to be paid by farmers are very low and balance premium will be paid by the Government to provide full insured amount to the farmers against crop loss on account of natural calamities.
- There is no upper limit on Government subsidy. Even if balance premium is 90%, it will be borne by the Government.