

**Answer to the Lok Sabha Question Dy. No. 208 raised by Shrimati Jayshreeben Patel regarding "Effect of EL-Nino on agriculture"**

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**a) Whether the Government has made any assessment regarding effect of El-Nino in all parts of the country;**

Yes

**b) if so, the details thereof;**

- CRIDA under ICAR has studied the impact of El Niño on agriculture in Andhra Pradesh, Gujarat, West Bengal and Himachal Pradesh. The details are given below:

#### **Andhra Pradesh**

- Generally, rainfall during the monsoon is showing a negative deviation in most of the sub-divisions during El Niño years. Whereas in post monsoon period, the rainfall is showing an increasing trend
- The detailed study on Andhra Pradesh state showed that during El Niño years, the south-west monsoon rainfall was less compared to normal years. However, rainfall during north-east monsoon is higher in coastal Andhra Pradesh during El Niño years
- Except Nellore district, the total foodgrain production in the state showed declining trend during El Niño years. The decrease in production was found to be more than 10% in several districts
- The impact of rainfall deviation on rice during El Niño years was not significant, when the total annual production was considered. However, the yields of dryland crops were significantly affected in most of the El Niño years

#### **Gujarat**

- Rice was highly influenced by El Niño episodes. Impact was more in Vadodara district, may be due to more upland cultivation
- Groundnut productivity appears to be more sensitive to El Niño in Jamnagar and Junagadh districts
- Maize yield was more sensitive during El Niño events in Panchmahal district
- Strong El Niño events exerted more negative impact on cotton yields especially in districts viz. Ahmedabad, Bharuch and Rajkot
- Strong El Niño events adversely influenced sugarcane and pearl millet productivity
- Castor and mustard productivity was largely influenced by moderate El Niño events
- Wheat yields declined by about 25% in the El Niño years compared to non-El Niño years

## **West Bengal**

- No precise quantitative associations between the occurrence of El Niño and changes in agricultural production have been established
- Moderate and strong El Niño years affect the rainfall situation in southern West Bengal, but as the amount of seasonal rainfall of the region is very high (more than 1000 mm), no significant effect on yield was observed

## **Himachal Pradesh**

- Either the southwest monsoon season rainfall or the annual rainfall was observed to be less than average during El Niño years. Hence, El Niño might serve as a strong indicator of deficit rainfall for the state
- The effect of decreasing tendency of the southwest monsoon rainfall on cereal grain productivity during El Niño years is visible on larger part of the state barring Mandi and Solan districts
- Strong El Niño event had more positive influence on linseed production than weak or moderate El Niño

**c) Whether the Government has prepared any policy to protect the interests of farmers in the event of El-Nino?**

N.A.

**d) If so, the details thereof;**

N.A.

**e) The steps taken by the Government to emphasize comprehensive improvement in the agricultural policy?**

N.A.