

**Breakthrough in decoding genome of 'Kabuli chana'**

23. SHRI H.K. DUA: Will the Minister of AGRICULTURE be pleased to state:

(a) whether Government is aware that the Hyderabad-based International Crops Research Institute for the Semi-Arid Tropics (ICRISAT) has achieved a breakthrough in decoding genome of Kabuli chana the highest consumed legume in the country;

(b) if so, the steps Government is taking to use the outcome of the research carried out by our scientists for increasing the production of this high protein lentil, considering that the country is short of pulses; and

(c) the extent of shortage of pulses in the country being carried out to increase production of pulses?

THE MINISTER OF STATE IN THE MINISTRY OF AGRICULTURE  
(SHRI TARIQ ANWAR): (a) Yes, Sir.

(b) Development of high yielding climate resilient chickpea varieties is an important area of research with the Indian Council of Agricultural Research (ICAR). Decoding of chickpea genome will provide clues in faster discovery of genes associated with agronomic traits, such as seed yield, disease resistance, and heat and drought tolerance and breeding of improved varieties of chickpea.

(c) There is a shortage of 25-30 lakh tonnes of pulses in the country. ICAR has taken several initiatives to conduct basic and applied research. As a result, a total of 124 climate resilient high yielding varieties of pulses have been released during 2007-2012. With these efforts, the production of pulses has increased from 142 lakh tonnes in 2006-07 to 172 lakh tonnes in 2011-12.

**Frequency of drought in Telangana and Rayalseema**

24. SHRI DEVENDER GOUD T.: Will the Minister of AGRICULTURE be pleased to state:

(a) whether it is a fact that as per the study of rain pattern in peninsular India submitted by ICAR, there is drought once in 2.5 years in Telangana and Rayalaseema and once in every 5 years in Coastal Andhra regions of Andhra Pradesh;

(b) if so, the details of the study;

(c) the reasons that peninsular India, particularly Andhra Pradesh, witnessed El Nino in 2002, 2004, 2006 and 2009; and

(d) in light of the above Report, how the Ministry is planning to address this issue?

THE MINISTER OF STATE IN THE MINISTRY OF AGRICULTURE (SHRI TARIQ ANWAR): (a) Yes, Sir.

(b) The study conducted by ICAR through Central Research Institute for Dryland Agriculture (CRIDA), Hyderabad revealed frequency of occurrence of drought once in 2-3 years in Rayalseema, once in 3-4 years in Telangana and once in 4-5 years in Coastal Andhra Pradesh. However, the drought occurrence differs significantly in districts within the region.

(c) El-Nino occurs due to abnormal warming of Sea water in equatorial Pacific Ocean modulating and modifying weather in different parts of the world including peninsular India and Andhra Pradesh.

(d) The Indian Council of Agricultural Research has prepared district-wise contingency plans to cope with climatic aberrations including El-Nino effects. The plans cover agro-advisories to state department of agriculture for adoption by the farmers. Besides, the Council and State Agricultural Universities are carrying out research on development of climate resilient cultivars and agronomic management practices to address this issue. The promising technologies are disseminated to farmers through training and frontline demonstrations.

#### **National Dairy Plan**

25. SHRI C. M. RAMESH: Will the Minister of AGRICULTURE be pleased to state:

(a) the aims and objectives of the National Dairy Plan (NDP) launched recently;

(b) the special emphasis proposed to be made on less developed States;

(c) the details of projects proposed to be taken up under the NDP, particularly in Andhra Pradesh; and

(d) the special emphasis given on animal breeding to increase milk production?