

**GOVERNMENT OF INDIA
AGRICULTURE
LOK SABHA**

UNSTARRED QUESTION NO:4603

ANSWERED ON:23.04.2013

RICE VARIETIES

Adhi Sankar Shri ;Viswanathan Shri P.

Will the Minister of AGRICULTURE be pleased to state:

(a) whether agriculture scientists across the world have developed designer rice varieties to meet the ever-growing need for food and the Indian Council of Agricultural Research has started research on designer rice by implanting good resistance attributes in wild rice varieties and converting them into popular varieties;

(b) if so, the details thereof;

(c) whether the International Rice Research Institute has set up its regional centre in India to focus on research in breeding to meet the needs of India and other South Asian nations;

(d) if so, the details thereof; and

(e) the steps being taken by the Government to protect and preserve the rich agro-bio-diversity of the country?

Answer

THE MINISTER OF STATE IN THE MINISTRY OF AGRICULTURE AND FOOD PROCESSING INDUSTRIES (SHRI TARIQ ANWAR)

(a) No, Madam. So far, no scientist across the world has developed designer rice. However, mega varieties with high grain yield have been developed and released. Efforts are being made to develop designer rice with desirable traits through transgenic and other approaches.

(b) Several Genes/QTLs for tolerance to traits like submergence (SUB1), drought (DREB2, DREB1A), salinity tolerance (Saltol), bacterial leaf blight (Xa4, Xa13, Xa21), blast (Pi-kh), phosphorus deficiency (Pup1 QTL) and gall midge (gm3, Gm4) have been prospected from wild species/local materials to incorporate in to high yielding varieties. More efforts are being made to identify other genes of major importance to transfer them in high yielding varieties through molecular approaches to develop a designer rice e.g. C4 rice and biological nitrogen fixation in rice.

(c) & (d): Yes, Madam. It has been reported in media that International Rice Research Institute has set up its research centre at ICRISAT, Hyderabad.

(e) National Biodiversity Authority is the apex body in the country to protect the agro-biodiversity as per national laws. Any material either imported or exported or exchanged is done as per set rules. More than 90,000 cultivated as well as wild germplasm accessions of the country has been preserved in national Gene Bank at National Bureau of Plant Genetic Resources (NBPGR), New Delhi to protect the rice genetic diversity in rice. Some of the elite land races and released varieties of rice are being protected by registering them at NBPGR and Protection of Plant Varieties & Farmers Right Authority (PPVFRA).