

**GOVERNMENT OF INDIA  
AGRICULTURE  
LOK SABHA**

UNSTARRED QUESTION NO:1593  
ANSWERED ON:21.08.2012  
RESEARCH FOR TOMATO GENOME BY SCIENTISTS  
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**Will the Minister of AGRICULTURE be pleased to state:**

(a) whether the Indian scientists sequenced tomato genome which will help to boost tomato production and to have crop better equipped to tackle pests and droughts;and

(b) if so, the details thereof?

**Answer**

MINISTER OF THE STATE IN THE MINISTRY OF AGRICULTURE, FOOD PROCESSING INDUSTRIES AND PARLIAMENTARY AFFAIRS (SHRI HARISH RAWAT)

(a) A team of 24 Indian scientists working at National Research Centre for Plant Biotechnology, IARI Campus and National Institute of Plant Genome Research, New Delhi and Delhi University South Campus were involved in International tomato genome Sequencing Programme which was completed in May, 2012.

(b) Tomato (*Solanum lycopersicum*) is a major vegetable crop plant. A high quality genome sequence of domesticated tomato and a draft sequence of its closest wild relative, *Solanum pimpinellifolium* have been deciphered and published recently.

Comparison of sequence of cultivated tomato with *S. pimpinellifolium* has revealed a wealth of information on the fruit size, texture, flavor and nutritional quality.

About 80% of the estimated 35,000 genes present on all 12 chromosomes of tomato have been annotated. Genes involved in disease and pest resistances have been identified.

The tomato genome and gene sequences will help in developing DNA markers. Specific markers can be employed by the breeders for development of high yielding, pest and disease resistance tomato varieties.