

**GOVERNMENT OF INDIA
AGRICULTURE
LOK SABHA**

UNSTARRED QUESTION NO:6328

ANSWERED ON:04.05.2010

GM SEEDS

Choudhary Shri Harish

Will the Minister of AGRICULTURE be pleased to state:

- (a) whether Genetically Modified Seeds are being developed by altering the genes (DNA) of the host plant with alien DNA for desired strains;
- (b) if so, the details thereof;
- (c) whether such genes make the crops more tolerant to the roundup herbicide;
- (d) if so, the details thereof;
- (e) whether such genes are producing toxic proteins which affects the human health;
- (f) if so, the details thereof;
- (g) whether effects of such genes on human health have been tested in the laboratories in the country;
- (h) if so, the details of the findings of the tests; and
- (i) the reactions of the Government thereon?

Answer

THE MINISTER OF STATE IN THE MINISTRY OF AGRICULTURE AND MINISTER OF STATE IN THE MINISTRY OF CONSUMER AFFAIRS, FOOD & PUBLIC DISTRIBUTION (PROF. K.V. THOMAS)

(a) Yes, Madam.

(b) A number of crops are being modified through the intervention of biotechnological tools by using alien DNA from different sources for making these resistant/tolerant to various biotic and abiotic stresses and value addition. More than 30 such crops are at different stages of development in various institutions/laboratories in the country. Following traits have been introduced in plant species:-

- (i) Herbicide resistance
- (ii) Pest resistance
- (iii) Viral resistance
- (iv) Slow-ripening
- (v) Fungal and bacterial resistance
- (vi) Abiotic stress tolerance (Drought, salinity, temperature, flooding etc.)
- (vii) Quality improvement (Starch, protein and oil)
- (viii) Value addition (vitamins, micro and macro-elements)
- (ix) Pharmaceutical and therapeutic proteins
- (x) Edible vaccines
- (xi) Industrial importance
- (xii) Phytoremediation

Bt. Cotton is the only crop commercialized in the country since March, 2002.

(c) Yes, Madam. A category of such genes make the crops more tolerant to the roundup herbicide.

(d) Herbicide tolerant soybean, cotton, maize, canola, wheat, rice, sugarbeet etc. are being cultivated in several countries since 1995. List of herbicide tolerant crops approved for cultivation in the countries other than India is enclosed as Annexure I.

(e) No, Madam. Such genes do not produce toxic proteins, which affect human health.

(f) Does not arise.

(g) Effects of such genes on human health (toxicity and alergenicity) are being tested in the laboratories in the country in relation to Roundup Ready Flex Bt cotton of Mahyco.

(h) & (i): The tests are underway as per Review Committee on Genetic Manipulation (RCGM) guidelines.