

**GOVERNMENT OF INDIA  
ATOMIC ENERGY  
LOK SABHA**

UNSTARRED QUESTION NO:4897  
ANSWERED ON:13.08.2014  
IRRADIATION OF FOODGRAINS  
Ahlawat Smt. Santosh

**Will the Minister of ATOMIC ENERGY be pleased to state:**

- (a) whether any discussion has been held by the Bhabha Atomic Research Centre (BARC) with Food Corporation of India (FCI) officials regarding the use of irradiation process to enhance the life of foodgrains stored in the FCI godowns;
- (b) if so, the details and the outcome thereof;
- (c) whether it is technically feasible to irradiate bulk commodities like foodgrains;
- (d) if so, the details thereof;
- (e) whether the BARC has developed any pilot project primarily for foodgrains irradiation to extend their life; and
- (f) if so, the details and the outcome thereof?

**Answer**

THE MINISTER OF STATE FOR PERSONNEL, PUBLIC GRIEVANCES & PENSIONS AND PRIME MINISTER'S OFFICE  
(DR. JITENDRA SINGH):

(a)&(b) No, Sir.

(c)&(d) Yes, Sir. The major problem encountered during post-harvest storage of Agricultural commodities is insect infestation. Radiation processing technology can be used for insect free storage of food grains, cereals, pulses and their products. Preservation of food by radiation involves controlled application of energy of ionizing radiation to food and agricultural commodities for improving storage life, safety, and meeting phytosanitary requirements in international trade. The technology employs either gamma rays emitted by radioisotope sources such as cobalt-60 or high energy electrons and X-rays generated from machine sources. The foodgrains are pre-packed in sealed polyethylene bags and exposed to low doses of ionizing radiation in a biologically shielded chamber in a radiation processing plant. After irradiation the commodities can be stored for extended periods under ambient conditions without loss of quality. Radiation processing provides an effective alternative to chemicals, for preservation of food stocks.

(e) No, Sir.

(f) Does not arise.