GOVERNMENT OF INDIA
MINISTRY OF SCIENCE AND TECHNOLOGY
DEPARTMENT OF SCIENTIFIC AND INDUSTRIAL RESEARCH
LOK SABHA
UNSTARRED QUESTION No. 4288
(TO BE ANSWERED ON 21.03.2018)

# CRISPY FRUIT TECHNOLOGY INVENTED BY CSIR

**4288. SHRI PANKAJ CHAUDHARY:**

**Will the Minister of SCIENCE AND TECHNOLOGY be pleased to state:**

(a) whether CSIR has invented crispy fruit technology to make fruits and vegetables crispy which can also be preserved for 3 to 4 months;
(b) if so, the details thereof;
(c) the quantity of fruits and vegetables which perish every year on an average; and
(d) whether the Government is likely to promote this technology to save the fruits and vegetables from being perished and if so, the details thereof?

ANSWER

MINISTER OF SCIENCE AND TECHNOLOGY AND EARTH SCIENCES

(DR. HARSH VARDHAN)

(a) Yes, Madam. CSIR has developed the technology to make fruits and vegetables crispy. The technology is based on either Freeze drying or vacuum frying. The Freeze drying technology has been optimized for a variety of fruits viz; apple, banana, mango, orange, pineapple and sapota and vegetables like beetroot, beans, corn, carrot, ginger and pumpkin. The vacuum frying technology is optimized for banana, bread fruit, jack fruit, potato, okra, beetroot, plantain, brinjal, bitter gourd, etc.

(b) The unique features of the technology are:
- Prolonged shelf-life (3-4 months);
- Retains near to original colour, texture, aroma, nutritional values;
- Technology does not involve addition of any chemical/ preservatives;
- Ease of transportation due to reduction in 70-80 percent of original weight of fresh fruits.

(c) The estimated losses are about 15 - 25% of overall production.

(d) Yes, Madam. The technology has potential to reduce the wastage and enhancing the overall utilization as value added products. CSIR is promoting these technologies and has signed separate MoUs with Uttarakhand Council of Science and Technology (UCOST), Dehradun, and Ministry of Development of North Eastern Region (DoNER) to deploy the technology in their respective areas.

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