

Gamma rays irradiation of Onions

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In news-The Centre is planning to irradiate onions with Gamma rays before sending them into cold storage on a pilot basis.

Why irradiation?

- **Post-harvest losses of onion** in India are significant.
- **Onion noticeably gets rotted and starts sprouting even in cold storage.**
- To reduce post-harvest losses to 10-12% from prevailing 25%, the government will send freshly procured onion to irradiation plants and then to cold storage.
- According to govt irradiation prevents sprouting and thus brings down post-harvest losses.
- **The perishable nature of onions, combined with lower processing penetration** and sub-optimal storage infrastructure causes post-harvest losses.

How is it done?

- The **Centre is considering irradiating around 4,000 tonnes of rabi season onion** after it kicks off procurement from April.
- In the 2023-24 rabi marketing season, the Centre aims to procure about 300,000 tonnes of onion in anticipation of a bumper crop, beating last year's record procurement of 250,000 tonnes.
- Onion production in 2022-23 (July-June) is estimated to be 31.8 million tonnes compared to 31.7 MT.
- Currently, red onions are being procured by the National Agricultural Cooperative Marketing Federation of India and National Cooperative Consumers' Federation of India to support farmers amid falling prices.
- **Kharif and late kharif onion or red onion is highly**

perishable and cannot be stored for over a month. Therefore, the **rabi variety, which accounts for 65% of the onion harvest and has a longer shelf life of about 5-7 months, would be considered for irradiation.**

- Rabi onion will be sent to Krushi Utpadan Sanrakshan Kendra at Lasalgaon, Nashik and Avantee Maga Food Irradiation in Indore within seven days of procurement.
- **Gamma ray irradiation is an effective form of preservation that extends the shelf life of the crops and reduces spoilage.**
- The process also **benefits the consumer by reducing the risk of illnesses caused by foodborne diseases.**
- If the pilot project succeeds, the recovery rate of onion is expected to increase to about 88-90%, leading to an extension in shelf life of rabi onion.

Note:

Maharashtra is the leading onion producing state, followed by Madhya Pradesh, Karnataka and Gujarat. These states account for about 80% of India's total production.