



Food Irradiation

[Source: BS](#)

Why in News?

The government of India plans to use **radiation processing** (Food Irradiation) to extend the shelf life of a 100,000 tonne onion [buffer stock](#) this year, aiming to prevent shortages and price hikes.

- India, a major onion exporter, is facing a **16% decline in onion output** for the 2023-24 season, bringing production down to an estimated 25.47 million tonnes.

Note

In India, irradiated food is regulated in accordance with the **Atomic Energy (Control of Irradiation of Food) Rules, 1996**.

What is Food Irradiation?

- **About:**
 - Food irradiation is the process of exposing food and food products to **ionising radiation, such as gamma rays, electron beams, or X-rays**.
 - It is used in food processing to help ensure food safety.
- **Need:**
 - **Seasonal overstocking and long transport times** lead to food waste.
 - India's hot, humid climate is a breeding ground for **spoilage-causing insects and microbes**.
 - **Post-harvest losses** in India amount to about **40-50%** in food and food grains, mostly caused by insect infestation, microbiological contamination, sprouting, ripening, and poor shelf life.
 - **Seafood, meat, and poultry** can harbour harmful bacteria and parasites that make people sick.
- **Applications:**
 - It prevents spoilage, kills germs, stops pests (eliminates bugs in stored food), delays sprouting, etc.

Onion Production in India

- India is the **second-largest** (after China) onion-growing country in the world, famous for its pungent onions available year-round.
- **Major Onion Producing States:**
 - Maharashtra, Karnataka, Orissa, Uttar Pradesh, Gujarat, Andhra Pradesh, and Tamil Nadu are the major onion-producing states.
 - Maharashtra **ranks first in Onion production with a share of 42.53%** followed by Madhya Pradesh with a share of 15.16% in 2021-22 (3rd Advance Estimate).

- **Export Destination:** Major export destinations of Indian onion include Bangladesh, Malaysia, the United Arab Emirates, Sri Lanka and Nepal.

UPSC Civil Services Examination Previous Year Questions (PYQs)

Prelims:

Q. With reference to the provisions made under the National Food Security Act, 2013, consider the following statements: (2018)

1. The families coming under the category of 'below poverty line (BPL)' only are eligible to receive subsidised food grains
2. The eldest woman in a household, of age 18 years or above, shall be the head of the household for the purpose of issuance of a ration card.
3. Pregnant women and lactating mothers are entitled to a 'take-home ration' of 1600 calories per day during pregnancy and for six months thereafter.

Which of the statements given above is/are correct?

- (a) 1 and 2 only
- (b) 2 only
- (c) 1 and 3 only
- (d) 3 only

Ans: (b)

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