



# Food Irradiation

## 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** in 2024, **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.

## Key Points

- Food irradiation is the **process of exposing food and food products to ionising radiation, such as gamma rays, electron beams, or X-rays.**
  - In India, irradiated food is regulated in accordance with the **Atomic Energy (Control of Irradiation of Food) Rules, 1996.**
- **Significance:**
  - It is used in food processing to help ensure food safety.
  - 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.
  - Seafood, meat, and poultry can harbour harmful bacteria and parasites that make people sick.

## 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.