



Interventions under National Food Security Mission

For Prelims: [National Food Security Mission](#), [Green Revolution](#), [National Mission on Edible Oils - Oil Palm](#), [Pradhan Mantri Krishi Sinchayee Yojana](#), [Climate change](#), [Malnutrition](#)

For Mains: Major Interventions Under National Food Security Mission, Major Challenges Related to Food Security in India.

Source: [PIB](#)

Why in News?

- Recently, the **Union Minister of Agriculture and Farmers' Welfare** provided valuable insights into the **developments under the National Food Security Mission** during a written reply in the Lok Sabha.

What is the National Food Security Mission?

- **About:**
 - [National Food Security Mission \(NFSM\)](#) is a **Centrally Sponsored Scheme launched in 2007** based on the recommendations of the agriculture sub-committee of **National Development Council (NDC)**.
 - The committee pointed out the **need for improved agricultural extension services, technology transfer and decentralized planning** as a result of which NFSM was conceptualized as a mission mode program.
- **Thrust Areas:**
 - Sustainable increase in the production of targeted crops such as **rice, wheat, pulses primarily and then extended to coarse cereals, nutri-cereals, and oilseeds** as well.
 - Restoration of soil fertility and productivity at the individual farm level.
 - Rise in farm level net income.

What are the Major Interventions Under the National Food Security Mission?

- **Cluster Demonstrations and Improved Practices:** Assistance is extended to farmers through States/Union Territories to conduct cluster demonstrations that **showcase improved packages of agricultural practices**.
 - These demonstrations highlight techniques for optimized crop cultivation and management.
- **Seed Production and Distribution:** [High-yielding varieties](#) and **hybrids** are developed, produced, and distributed to farmers to enhance the quality and quantity of agricultural output.
- **Farm Mechanization and Resource Conservation:** The **implementation of modern and efficient farm machinery** and resource conservation tools fosters enhanced agricultural

practices while optimizing resource utilization.

- Investments in **processing and post-harvest equipment** enhance the overall value chain and reduce post-harvest losses.
- **Plant Protection and Nutrient Management:** Measures to safeguard crops against pests and diseases, coupled with effective **nutrient management** and soil amelioration strategies, contribute to healthy plant growth.
- **Focused Approach to Oilseeds Production:** To bolster oilseed production and achieve self-sufficiency in edible oil, the **NFSM-Oilseeds initiative is designed. It involves:**
 - **Seed Subsidies and Distribution:** Financial incentives and subsidies facilitate the purchase and distribution of quality seeds, ensuring better crop yields.
 - **Demonstrations and Training:** Block demonstrations, front-line demonstrations, and cluster front-line demonstrations serve as platforms for showcasing effective oilseed cultivation practices.
 - **Infrastructure and Input Distribution:** Provision of essential resources like **water-carrying devices, plant protection equipment, soil enhancers**, micro-nutrients, and bio-agents fortifies oilseed cultivation.

Note:

- **National Mission on Edible Oils - Oil Palm (NMEO-OP):** To reduce edible oil imports led to the establishment of NMEO-OP in August 2021.
 - The mission emphasizes the expansion of **oil palm cultivation**, aiming to augment crude palm oil production, increase productivity, and ease the country's import burden.
- **Water Management for Sustainable Agriculture:**
 - **Per Drop More Crop (PDMC):** Launched in 2015-16, PDMC focuses on water use efficiency through micro-irrigation systems like drip and sprinkler irrigation.
 - It also emphasizes the **adoption of location-specific scientific techniques** and modern agronomic practices.
 - **Command Area Development & Water Management (CADWM):** Part of the **Pradhan Mantri Krishi Sinchayee Yojana**, CADWM aims to enhance irrigation efficiency.
 - It includes the construction of lined field channels and underground pipelines for last-mile connectivity.
 - **Bureau of Water Use Efficiency (BWUE):** Established to regulate efficient water use in various sectors, the BWUE promotes strategies to improve water use efficiency in **irrigation, industries, and domestic settings**.
 - **National Water Mission (NWM):** NWM launched the 'SahiFasal' campaign in 2019, which encourages farmers in water-stressed regions to cultivate crops that are **economically viable, water-efficient, and aligned with agro-climatic conditions**.

What are the Major Challenges Related to Food Security in India?

- **Agricultural Challenges:** India's agricultural sector is vulnerable to various challenges such as unpredictable weather patterns due to **climate change, pest infestations, and soil degradation**.
 - These factors can lead to reduced crop yields and contribute to food scarcity.
- **Land Fragmentation: Subdivision of land due to inheritance laws** has led to small and fragmented land holdings.
 - This hampers the **adoption of modern farming techniques** and technologies that could increase productivity.
- **Lack of Diversification:** Over-reliance on a few staple crops limits dietary diversity. A diverse diet is essential for proper nutrition, and the **emphasis on a few crops like rice and wheat can contribute to malnutrition**.
- **Rising Food Prices:** Fluctuations in global and domestic food prices can make essential food items unaffordable for vulnerable populations.
 - Supply chain disruption led price volatility can lead to **sudden spikes in food insecurity**.

Way Forward

- **Agro-Ecological Zoning:** Create detailed agro-ecological zoning maps using advanced geospatial analysis.
 - This would help **identify the most suitable crops for specific regions based on their natural characteristics**, thus optimizing resource use and reducing the risk of crop failure.
- **Edible Landscaping in Urban Areas:** Encourage urban residents to convert their lawns and unused spaces into edible landscapes, growing fruits and vegetables.
 - This **decentralized approach** contributes to local food production and enhances community involvement.
- **Nutrient Recovery from Wastewater:** Implement systems to extract nutrients from wastewater and organic waste, then **convert these nutrients into fertilizers**.
 - This **reduces the need for synthetic fertilizers** and tackles water pollution simultaneously.
- **Artificial Intelligence Pest Detection:** Develop AI-powered cameras and sensors that can **detect pest and disease outbreaks early by analyzing subtle changes in plant health**, allowing for targeted interventions and reducing the need for widespread pesticide use.
- **Integrated Energy Farming:** Combine **agriculture with renewable energy production**.
 - Solar panels can be placed above crops, providing shade and reducing water evaporation, while generating clean energy to power agricultural equipment.

UPSC Civil Services Examination Previous Year Question (PYQ)

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 subsidized 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)

Mains:

Q.1 In what way could replacement of price subsidy with Direct Benefit Transfer (DBT) change the scenario of subsidies in India? Discuss. **(2015)**