

## India's Resilient Production Systems in Agriculture

*Mains: GS-III - Economy | Agriculture*

### Why in News?

India's agriculture and allied sectors have grown at an average annual rate of 4.4% (constant prices) over the past five years, driven by better farm practices, technological integration, and resilient production systems.

### What is India's agricultural production performance?

- **Socio-economic footprint** - Agriculture and allied activities account for nearly 20% of country's gross value added, employ approximately 46.1% of the workforce, and support close to 55% of the population.
- **Foodgrains (2024-25)** - Output of 357.73 MMT (up by 25.43 MMT from the previous year).
- **Key drivers** - Rice, wheat, maize, and coarse cereals (millets/Shree Anna), reflects productivity gains, better input use, and stronger institutional support.
- **Horticulture** - Output of 362.08 MT in 2024-25 (surpassing foodgrains) & long-term growth from 280.70 MT in 2013-14 to 367.72 MT in 2024-25.
- **Composition** - Fruits, Vegetables & Other crops.

### Global Agricultural Markets

- India's agricultural exports have grown steadily in recent years.
- **Agri export earnings** - Increased from USD 34.5 billion in FY20 to USD 51.1 billion in FY25, reflecting a CAGR of 8.2%.
- **Agri-food exports (FY25)** - Including processed food products, amounted to USD 49.43 billion, accounting for about 11.2% of total exports.
- **Processed food share** - It risen consistently, from 14.9% in FY18 to 20.4% in FY25, indicating a progressive shift within the agricultural export basket.

### What is India's position in the world when it comes to cereals, pulses, millets, horticulture & various cash crops?

Commodity	Global Rank	Major Producing States
Rice	Second	UP, Telangana, West Bengal
Wheat	Second	UP, MP, Punjab
Pulses	First	MP, Maharashtra, and Rajasthan

<b>Millets</b>	First	Rajasthan, Maharashtra, Karnataka.
<b>Fruits</b>	Second	AP, Maharashtra, UP, Gujarat, Karnataka, TN.
<b>Vegetables</b>	Second	UP, West Bengal, MP, Bihar, Gujarat.
<b>Dry Onions</b>	First (nearly 25% of total world output.)	Maharashtra, MP, Gujarat.
<b>Sugarcane</b>	Second	UP, Maharashtra
<b>Cotton</b>	Second	Karnataka, Maharashtra, Gujarat
<b>Tea</b>	Second	Assam, West Bengal, TN, Kerala, Karnataka
<b>Spices</b>	First	MP, Gujarat, AP.
<b>Coconut</b>	First (steady international demand)	Karnataka, TN, Kerala
<b>Coffee</b>	Seventh	Karnataka, Kerala, TN

### What are the key policy initiatives aimed at ensuring resilient agricultural growth?

- **Increased budget allocation** - Increased from Rs. 21,933.50 crore to Rs. 1,27,290.16 crore in 2025-26, representing a *six-fold increase* in allocation over 13 years.
- **Policy Priorities** in Union Budget 2026-27 - Focuses on promotion of high value crops includes
  - Coastal regions - Coconut, Sandalwood, Cocoa, Cashew
  - North Eastern states - Agar trees
  - Hilly areas - Almonds, Walnuts, Pine nuts
- **National Food Security and Nutrition Mission (NFSNM)** - A centrally sponsored scheme to increase the production of rice, wheat, pulses, and nutri-cereals/coarse cereals in the country.
- **Mission for Aatmanirbharta in Pulses (2025-31)** - Aims to achieve self-sufficiency in pulses by enhancing domestic production reduce import dependence & paved the way for an "Aatmanirbhar Bharat" in pulses.
- **National Mission on Edible Oils (NMEO)** - Including the Oil Palm & Oilseeds initiatives, aims to achieve self-reliance in edible oil production by 2030-31.
  - **Oilseed mission** - Recorded over 18% increase in oilseed area, nearly 55% in production, and *about 31% in productivity* between 2014-15 and 2024-25.
- **Sub-Mission on Seeds and Planting Materials (SMSP) initiative** - A centrally sponsored scheme under the "*Green Revolution - Krishonnati Yojana*".
- Approximately 6.85 lakh Seed Villages have been established, resulting in the production of 1,649.26 lakh quintals of quality seeds.
- **Soil Health Card Scheme** - Approximately 25.55 crore Soil Health Card have been issued (as of Nov 2025) to promote balanced and site-specific nutrient management.
  - **Parameters tested (12)** - Nitrogen, Phosphorus, Potassium, Sulphur, Zinc, Iron, Copper, Manganese, Boron, pH, Electrical Conductivity, Organic Carbon.
- **Pradhan Mantri Krishi Sinchayee Yojana (PMKSY)** - Gross irrigated area share has increased to 55.8% (2025), aims to improve on farm water efficiency by promoting drip and sprinkler irrigation systems.

## What are the measures related to Credit, Mechanisation, Technology and health?

- **Ground-level agri-credit disbursement** (FY 2024-25) - Rs.28.67 lakh crore reflecting the structural expansion of institutional finance to the farm sector.
- **Kisan Credit Cards (KCC)** - 7.72 crore operative accounts (as of March 2025).
- **Custom Hiring Centres (CHCs)** - 27,554 established (2014-15 to 2025-26) to enhance smallholder access to farm mechanisation services.
  - **CHC** - It is a unit comprising a set of farm machinery, implements, and equipment meant for hiring by farmers.
- **Livestock Technology & Health**
- **Vaccinations (since 2020)** - Approximately 125 crore against Foot and Mouth Disease (FMD).
- **Artificial inseminations** (2024-25) - 88.32 million.
- **Impact** - Boosts livestock productivity, disease resistance, and genetic improvement.

## What are the measures for sustainable agriculture, extension, and mission mode initiatives?

- **Natural farming** - Expanded to 17,632 clusters covering 6.39 lakh hectares, with 15.79 lakh farmers enrolled, promotes low-input, eco-friendly farming practices.
- **Kisan Call Centres** - Handled 30.65 lakh farmer queries in 2024-25
- **Ethanol blending** - India saved over Rs.1.44 lakh crore in foreign exchange as of August 2025, reflects a shift towards technology-driven, resource-efficient, and improved production systems.
- **Integrated Support for Farmers** - Securing stable farm incomes, institutionalising risk mitigation mechanisms, and strengthening cooperative networks.

## What are the Price and Income Support & Crop Insurance Protection measures taken?

- **Minimum Support Price (MSP)** - Announced for 22 mandated crops and *fixed at least 1.5 times the cost of production*, with upward revisions for the Kharif & Rabi Marketing Season to ensures remunerative prices, stabilizes farm incomes.
- **Pradhan Mantri Kisan Samman Nidhi (PM-KISAN)** - A Central Sector Scheme, over Rs.4.27 lakh crore has been disbursed in 22 instalments (as on 17th March 2026), providing direct income support to farmers.
- **Pradhan Mantri Kisan Maandhan Yojana (PMKMY)** - Aims to provide social security net for the Small and Marginal Farmers (SMF) by way of pension,
  - Enrolled 24.95 lakh farmers as of 2nd Feb 2026, extending social security coverage to small and marginal cultivators.
- **Pradhan Mantri Fasal Bima Yojana (PMFBY)** - A crop insurance scheme aiming to provide financial protection to farmers against crop loss due to natural disasters (hail, drought, famine), pests, and diseases.
  - Insured 4.19 crore farmers during 2024-25, covering 6.2 crore hectares.
- **Applications** (2016-17 to 2025) - 86 crore+ were processed with claims exceeding Rs.1.90 lakh crore disbursed.
- **Growth** - Coverage expanded by 32% compared to 2022-23.

## What are the few measures for strengthening Cooperatives & Collective Systems?

- **PACS Computerisation** - Of 67,930 Primary Agricultural Credit Societies (PACS) under computerisation, 54,150 have been onboarded onto Enterprise Resource Planning (ERP) platforms, with 43,658 operational.
- **New Multipurpose Cooperatives** - 18,183 registered (by March 2025).
- **Decentralised Grain Storage Programme** - Operational in 11 PACS, with 500 new godowns announced in 2024 to enhance local storage capacity.
- **Institutional Reforms**
  - National Cooperation Policy → governance strengthening.
  - Tribhuvan Sahkari University → cooperative capacity-building.

## What are the measures taken for market reforms, value-chain modernisation, and public food distribution?

- **Storage projects** (as of 28 Feb 2026) - 49,796 storage projects had received financial assistance amounting to Rs.4,832.70 crore.
- **Marketing infrastructure projects** - 25,009 marketing infrastructure projects had received subsidies totalling Rs.2,193.17 crore.
- **e-National Agriculture Market (e-NAM)** - Expanded its outreach to 1.8 crore farmers, 2.72 lakh traders & 4,724 Farmer-Producer Organisations (FPOs) across 1,656 mandis in 23 States and 4 UTs, enhancing digital price discovery and inter-market trade.
- **Formation & Promotion Scheme** (2020-2026) - 10,000 FPOs registered (by 28 Feb 2026).
- **Fisheries sector** - 2,195 Farmers' Fisheries Producer Organisations (FFPOs) formed.
- **Kisan Credit Card** - Benefits extended to 4.39 lakh fishers.
- **Food Processing Sector** - It accounts for 12.91% of organised manufacturing employment.
- **Pradhan Mantri Kisan Sampada Yojana (PMKSY)** - 1,185 projects had been completed, strengthening modern processing and cold-chain infrastructure.
- **PLI Scheme for the Food Processing Industry (PLISFI)** - Aims to modernise food processing, boost competitiveness, and promote high-growth product categories.
- Approved 169 applications, mobilising investments of Rs.9,207 crore, with incentives amounting to Rs.2,162.55 crore disbursed by 31 December 2025.
- **One Nation One Ration Card (ONORC)** - Achieved 99.8% Aadhaar seeding of ration cards, it has been operational in all 36 States & UTs.
- **Fair Price Shops (FPS)** - Over 99% of the 5.43 lakh FPS are equipped with electronic point-of-sale (ePoS) devices, facilitating the digitisation of *more than 98% of transactions* and strengthening transparency in distribution.
- **Direct Benefit Transfer (FY24)** - Rs.267.6 crore was transferred through DBT to over 10 lakh beneficiaries, improving targeting efficiency and accountability.
- **SDGs Linkages** - India's agricultural reforms align national priorities with global sustainability commitments, reinforcing resilience and inclusivity.
  - SDG 2 (Zero Hunger)
  - SDG 12 (Responsible Consumption & Production)
  - SDG 13 (Climate Action)

- SDG 9 (Industry, Innovation & Infrastructure)

### **What lies ahead?**

- India's agricultural transformation reflects a balanced approach that combines strong production growth, expanding global market presence, and targeted policy interventions across the farm-to-market value chain.
- As resilient production systems continue to evolve, the expanding role of agriculture provides a strong foundation for deeper integration with allied activities, further supporting rural livelihoods, value addition, and long-term economic stability.

### **Reference**

[PIB | India's Resilient Production Systems in Agriculture](#)

