

General Agriculture Data- 2024

AGRICULTURE PROFILE OF INDIA

- ❖ Total Geographical Area of the country- **329 Million Hectare (Mha)**
- ❖ Net sown area of the country- **139.35 mha (42.4% of total geographical area)**
- ❖ Culturable wasteland-**12.21Mha**
- ❖ Area put to non-agricultural uses- **27.34**
- ❖ Permanent pastures & other grazing lands- **10.37 Mha**
- ❖ Gross sown area of the country- **197.32 Million Hectare**
- ❖ Net Irrigated area in India- **71.55 Mha (2021)**
- ❖ Gross Irrigated area in India -**102.67 Million Hectare**
- ❖ % of Gross Irrigated Area over Gross Cropped Area- **52.03**
- ❖ % of Net Irrigated Area over Net Area Sown- **51.35**
- ❖ Cropping Intensity of India is- **141.6%**
- ❖ Barren and uncultivable land area in the country- **17.16 Mha**
- ❖ Fallow land- **14.53 Mha**
- ❖ Area under food crops- **126.95 Mha**; Area under non-food crops- **49.24 Mha**
- ❖ Degraded land area/Deforested/desertification area in the country- **97.85 Mha**
- ❖ Waste land area in the country- **55.7 mha (16.96% to TGA)**
- ❖ Share of Agriculture and allied sectors in GDP during 2021-22 was- **18.6%**
- ❖ The percentage of population dependent on agriculture for livelihood- **47%** (Economic survey, 2023)
- ❖ The share of agriculture in overall employment- **45.76%** (PLFS 2022-23)

Source: Annual report of Department of Agriculture 2022-23.

Micro-Irrigation:

- ❖ Top five states in area covered under micro irrigation (drip + sprinkler) is- **Karnataka (18.01 L ha) > Tamil Nadu (10.9 Lha) > Gujarat (10.8 Lha) > Maharashtra (9.38 Lha) > Andhra Pradesh (9.19 Lha)**
- ❖ The Top 3 States With The Highest Area Covered Under Drip Irrigation: **Maharashtra**

(1,414,185 ha) > Andhra Pradesh (1,400,780 ha) > Tamil Nadu (867,898 ha)

- ❖ The Top 3 States With The Highest Area Covered Under Sprinkler Irrigation: **Rajasthan (1,777,985ha) > Karnataka (1,604,399 ha) > Gujarat (788,672 ha)**
- ❖ Total Area covered under micro irrigation- **83.45 lakh ha**

Food grain Production Scenario (2023-24):



- ❖ Total food grain production in the country for the year 2023-24 (3rd Advance Estimates)- **328.85 Million Tonnes (MT)**
- ❖ Total food grain production in the country for the year 2022-23 (Final)- **329.68 Million Tonnes**
- ❖ Area under cultivation of millets in 2021-22 is- **15.48 million hectares**

Food grains Production for the year 2022-23 (Final Estimates):

Food grain production includes Cereals and Pulses only	
Total Cereals Production	303.62 MillionTonnes (MT)
Total Pulses Production	26.05 MT
Total Food grain Production	329.68 MT

Cereals	Production (Million Tonnes)
Rice	135.75
Wheat	110.55
Maize	38.08
Bajra	11.43
Jowar	3.81
Small millets	0.384
Shree anna/ Nutri cereals	17.32
Nutri/Coarse cereals	57.31
Total Cereals Production	303.62 MT
Pulses	

Gram/Bengal gram/Chickpea	12.26 MT
Tur /Red gram/Arhar	3.31 MT
Urad/Black gram	2.63 MT
Green gram/Moong	3.67 MT
Other pulses	2.61 MT
Total Pulses Production	26.05 MT
Total food grain Production (Kharif- 155.71 MT Rabi - 157.84 MT) Summer- 16.13 MT)	329.68 MT

Food grains Production for the year 2023-24 (Third Advance Estimates)

Food grain production includes Cereals and Pulses only	
Total Cereals Production	295.74 MillionTonnes (MT)
Total Pulses Production	27.5 MT
Total Food grain Production	328.85 MT

Cereals	Production (Million Tonnes)
Rice	136.70
Wheat	112.92
Maize	35.67
Bajra	10.66
Jowar	4.74
Small millets	0.43
Shree anna/Nutri cereals	17.40
Total Cereals Production	293.69
Pulses	
Gram/Bengal gram/Chickpea	11.57 MT
Tur /Red gram/Arhar	3.38 MT
Urad/Black gram	2.61 MT
Green gram/Moong	2.91 MT
Total Pulses Production	24.48 MT

Total food grain Production

328.85 MT

Area and Yield particulars of Principal Crops:

Crop	Area in Mha 2023-24	Yield (kg/ha) 2023-24	Top '5' producing states in 2023-4
Paddy	47.58	2873	1.Telangana 2.Uttar Pradesh 3.West Bengal 4. Punjab 5.Odisha
Wheat	31.23	3615	1.Uttar Pradesh 2.Madhya Pradesh 3. Punjab 4. Haryana 5. Rajasthan
Maize	10.74	3321	1.Karnataka 2.Bihar 3.Madhya Pradesh 4.Tamil Nadu 5.West Bengal
Sorghum	4.03	1175	1.Maharashtra 2.Karnataka 3.Uttar Pradesh

			4.Rajasthan 5.Andhra Pradesh
Bajra	7.36	1449	1.Rajasthan 2.Uttar Pradesh 3.Gujarat 4.Haryana 5.Madhya Pradesh
Finger millet	1.20	1300	1.Karnataka 2.Uttarakhand 3.Maharashtra
Nutri cereals/ Shree anna	22.70	2251	1.Rajasthan 2.U.P. 3.Maharashtra
Total cereals	99.44	2899	1. Uttar Pradesh 2. Madhya Pradesh 3.Rajasthan
Arhar/Redgram	4.90	861	1.Karnataka 2.Maharashtra 3.Uttar Pradesh 4.Gujarat 5.Jharkhand
Black gram	4.63	599	1.Madhya Pradesh 2.Uttar Pradesh 3.Andhra Pradesh 4.Tamil Nadu 5.Rajasthan
Bengal gram/gram	10.74	1261	1.Madhya Pradesh 2.Maharashtra 3.Rajasthan 4.Gujarat 5.Uttar Pradesh
Moong/green gram	5.55	570	1.Madhya Pradesh 2.Rajasthan 3.Bihar 4.Gujarat 5.Karnataka
Lentil (Masur)	1.41	899	1.Madhya Pradesh 2.Uttar Pradesh 3.West Bengal 4.Bihar 5.Jharkhand
Total pulses	30.73	888	1.M.P 2.Rajasthan 3.Maharashtra
Total food grains	124.78	2425	1. Uttar Pradesh

(Source: <https://upag.gov.in>)

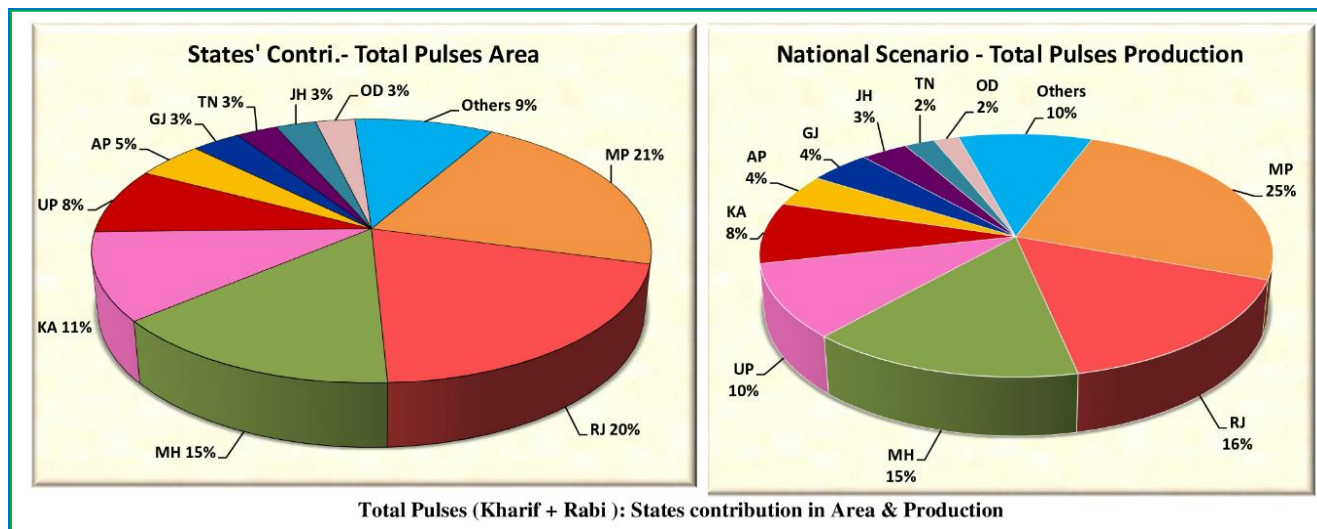


Fig: State wise Pulses area and production (source: <https://dpd.gov.in>)

Commercial crops production for the year 2022-23 & 2023-24:

- **Oil seeds: Includes Nine crops** i.e., Ground nut, castor, Mustard and Rape seed, Niger, linseed. Safflower, Sunflower, Soyabean and Sesamum.
- **Area, Production & Yield Particulars of Oilseeds:**

Crop	Area in Million hectare (Mha)	Production in Million Tonne (MT)	Yield kg/ha
Soyabean	13.22	13.05	987
Groundnut	4.72	10.28	1777
Rape seed & Mustard	9.12	13.16	2179
Sesamum	1.49	0.79	544
Castor seed	1.03	1.91	1844
Sunflower	0.014	0.06	1136
Niger seed	0.08	0.02	324
Safflower	0.06	0.05	739
Total nine oil seeds	29.73	39.27 MT	1312

➤ **Major Oil seeds producing states:**

Crop	Area (million hectares)	Production (million tonnes)	Top Producing States
Groundnut	5.18	10.28	1.Gujarat 2.Rajasthan 3.Madhya Pradesh 4.Tamil Nadu 5.Karnataka
Soybean	12.04	14.97	1.Madhya Pradesh 2.Maharashtra 3.Rajasthan 4.Karnataka 5.Gujarat
Sunflower	0.27	0.28	1.Karnataka 2.Haryana 3.Odisha 4.Telangana 5.Bihar
Rape seed & Mustard	8.86	12.49	1.Rajasthan 2.Uttar Pradesh 3.Madhya Pradesh 4.Haryana 5.West Bengal

➤ **Other Commercial Crops (2022-23 & 2023-24)**

Crop	Area in Million hectare (Mha)	Production Million Tonne (MT) 2022-23	Yield in kg/ha 2022-23	Area in Mha 2023-24	Production in MT in 2023-24	Yield in kg/ha 2023-24

	2022-23					
Sugarcane	5.18	490.53	84906	5.61	442.5 MT	78,749
Cotton	13.06	33.66 Million bale#	442.65	12.46	31.58 Million bales#	440.52
Jute & Mesta	0.67	9.39 Million bales ##	Jute	Mesta	0.60	9.49 Million bales##
			2795	2056		

(Note: #1bale= 170 Kgs; ##1bale= 180 Kgs)

Commercial crops top producing states: 2023-24

Crop	Area (million hectares)	Production (million tonnes)	Top Producing States	
Cotton	12.46	31.58	Gujarat Maharashtra Telangana Rajasthan Karnataka	
Jute and Mesta	0.60	9.49	Jute	Mesta
			West Bengal Bihar Assam Odisha	Bihar West bengal Assam Odisha
Sugarcane	5.61	442.5	Uttar Pradesh Maharashtra Karnataka Tamil Nadu Gujarat	
Tobacco	0.36	0.76	Gujarat Karnataka Andhra Pradesh	

(Source: <https://upag.gov.in/>)

Millet scenario in India

- ❖ Millets include three major Sorghum (*Jowar*), Pearl millet (*Bajra*), Finger millet (*Ragi*) and six minor crops (Barnyard (*Sanwa*), Proso (*Chenna/Barri*), Foxtail (*Kakum*), Kodo, Brown Top and Little (*Kutki/Shavan*).
- ❖ The United Nations General Assembly declared- **2023 the International Year of Millets (IYM 2023)**
- ❖ GOI has declared millets as- '**Powerhouses of nutrition**'/ **Nutri cereals/Climate resilient**

crops/next super food

- ❖ The country that ranks first in millet production is- **India** (accounts for 19% of world production).

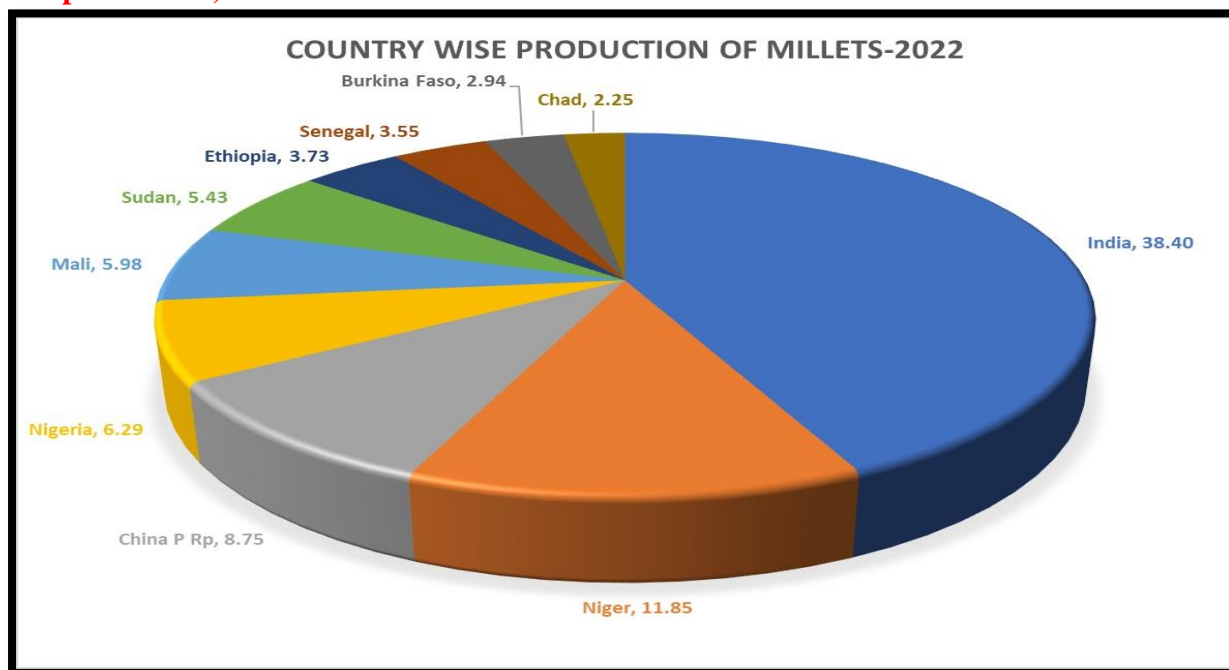


Fig: Country wise production of millets

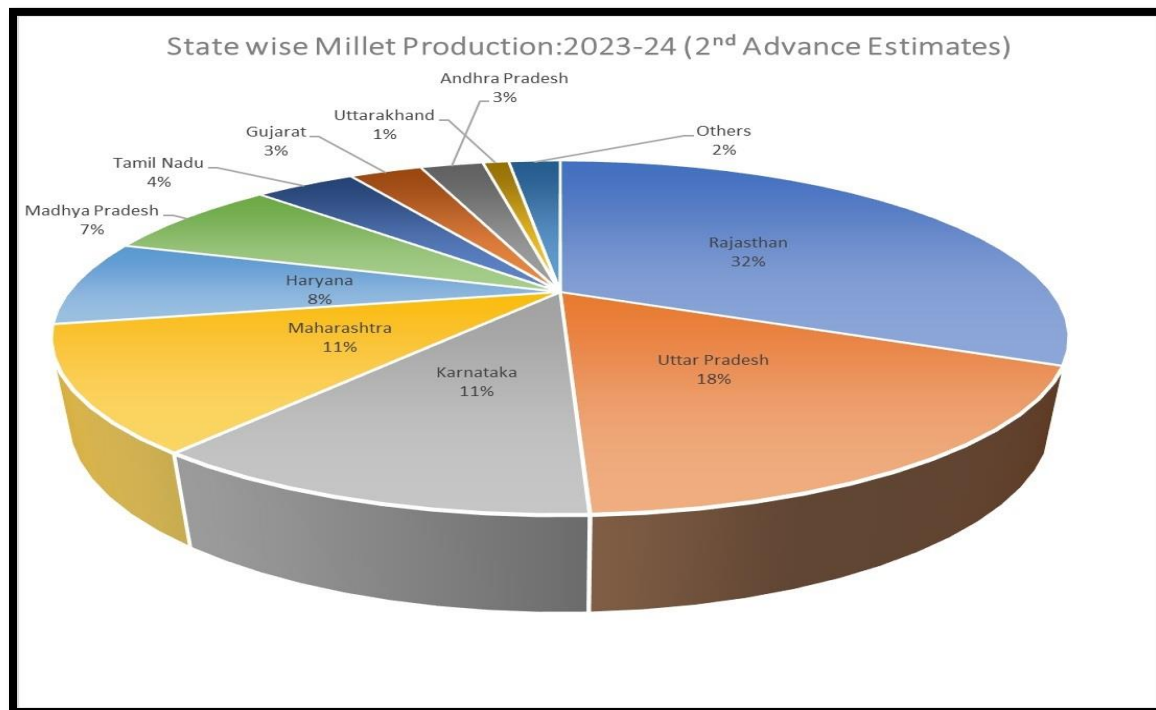


Fig: State wise millet production 2023-24

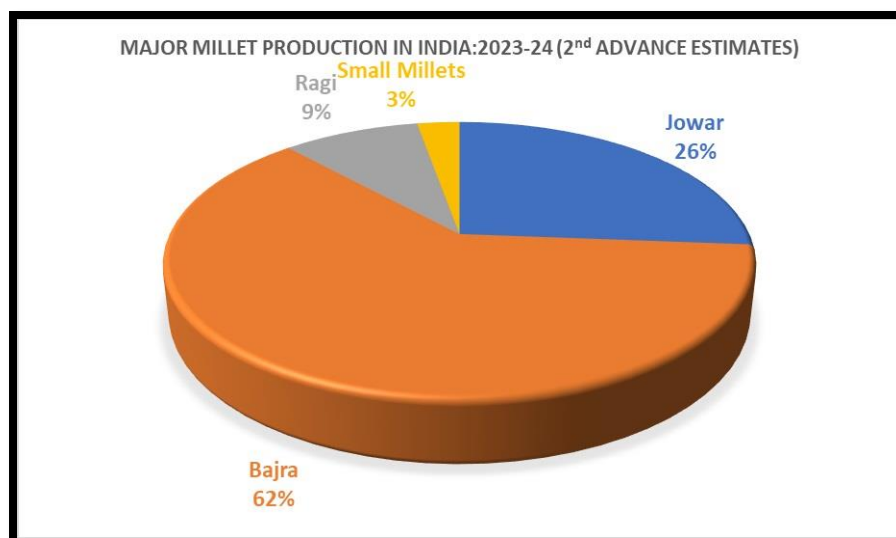


Fig: Major Millet production in India 2023-24

- ❖ Government of India (GOI) in Budget 2023-24 conferred ----- research institute as ‘Centre of Excellence’ for sharing best practices, research and technologies at the international level is- **Indian Institute of Millet Research, Hyderabad.**
- ❖ To make India a global hub for millets, GOI designated millets as- '**Shree Anna**

Leading States with Millet Area, Production & Yield particulars

Crop	Top ‘3’ states in Area (Lakh ha)	Top ‘3’ states in production (Lakh tonnes)	Top ‘3’ states in Yield (kg/ha)
Jowar	1.Maharashtra 2.Karnataka 3.Rajasthan	1.Maharashtra 2. Karnataka 3. Rajasthan	1. Andhra Pradesh (3493 kg/ha) 2. Uttar Pradesh 3. Madhya Pradesh
Bajra	1.Rajasthan 2. Uttar Pradesh 3. Haryana	1. Rajasthan 2. Uttar Pradesh 3. Haryana	1. Tamil nadu (2578 kg/ha) 2. Madhya Pradesh 3. Andhra Pradesh
Ragi	1. Karnataka 2. Maharashtra 3. Uttarakhand	1.Karnataka 2. Tamil Nadu 3. Uttarakhand	1. Tamil Nadu (2989 kg/ha) 2. Uttarakhand 3.Karnataka
Small millets	1. Madhya Pradesh 2. Odisha 3. Chhattisgarh	1. M.P. 2. Uttarakhand 3. Uttar Pradesh	1. Gujarat (2321 kg/ha) 2. Uttarakhand

	4. Uttar Pradesh		3. Kerala
Total millets	1. Rajasthan 2. Maharashtra 3. Karnataka	1. Rajasthan 2. Uttar Pradesh 3. Karnataka	1.Andhra Pradesh (2672 kg/ha) 2.Haryana 3.Uttar Pradesh

Area and production data of Millets in 2023-24

Millet Crop	Area (Mha)	Production (MT)	Productivity (Kg/ha)
Jowar (Sorghum)	4.77	4.03	1106
Bajra	7.08	9.53	1360
Ragi	1.03	1.3	1336
Small millets	0.49	0.42	864
Total millets	12.18	15.37	1262

(Source: DA&FW; APEDA Millet portal)

Horticultural Crops Statistics for the year 2023-24

- ❖ Total Horticultural crops production for the year 2023-24- **352.23 Million Tonnes** (Second Advance Estimates)
- ❖ Total area under Horticultural crops for the year 2023-24- **28.63 Million hectares**
- ❖ Total Fruit production in India - **112.63 Million Tonnes**
- ❖ Total Vegetable production in India- **204.96 Million Tonnes**
- ❖ Total horticulture crops production during the year 2022-23- **355.25 Million Tonnes**
- ❖ Top '3' fruit producing states in India- **Andhra Pradesh (19 MT) > Maharashtra (12.4 MT) > Uttar Pradesh**
- ❖ Top '3' vegetable producing states in India- **Uttar Pradesh (19 MT) > West Bengal (12.4 MT) > Maharashtra**

Area and production particulars of principal horticultural crops:

Total Horticulture	2022-23 (Final estimate)	2023-24 (2 nd estimate)
Area (in Million hectares)	28.44	28.77
Production (in Million Tonne)	355.48	352.23
Productivity (Tonnes/ha)	12.49	12.24

Top “3” cultivated Vegetables in Area & Production	Top “3” cultivated Fruits in Area	Top “3” Fruits in Production
First- Potato	Mango	Banana
Second- Onion	Banana	Mango
Third- Tomato	Citrus	Citrus

Top “3” States in Vegetable Area	Top “3” States in Vegetable Production	Top “3” States in Fruit Area	Top “3” States in Fruit production
West bengal (1.53 Mha)	Uttar Pradesh (29.94 Mt)	Maharashtra (0.83 Mha)	Andhra Pradesh (18.99 Mt)
Uttar Pradesh (1.32 Mha)	West bengal (28.43 Mha)	Andhra Pradesh (0.78 Mha)	Maharashtra (12.46 Mt)
Maharashtra (1.17 Mha)	Madhya Pradesh (21.92 Mha)	Gujarat (0.43 Mha)	Gujarat (8.2 Mt)

Crop	Area (million hectares) 2022-23	Production (million tonnes) 2022-23	Area (million hectares) 2023-24	Production (million tonnes) 2023-24)
Citrus	1.1	14.6	1.09	14.7
Mango	2.3	20.8	2.40	22.54
Banana	0.9	36.6	0.99	37.47
Potato	2.3	60.14	2.32	56.76
Onion	1.74	30.20	1.53	24.21
Tomato	0.84	20.42	0.87	21.23

(<https://desagri.gov.in/statistics-type/advance-estimates/>)

MSP of Crops for Marketing Season 2024-25:

Kharif Crops	MSP (Rs.)
Paddy- Common	2300
Paddy Grade A	2320
Jowar-Hybrid	3371
Jowar- Maldandi	3421
Bajra	2625
Ragi	4290

Maize	2225
Tur/Arhar/Redgram	7550
Moong/Green gram	8682
Urad/black gram	7400
Groundnut	6783
Sunflower	7280
Soybean (Yellow)	4892
Sesamum	9267
Niger seed	8717
Cotton (medium staple)	7121
Cotton (Long Staple)	7521
Rabi Crops	MSP (Rs.)
Wheat	2275
Barley	1850
Gram	5440
Lentil (Masur)	6425
Rapeseed & Mustard	5650
Safflower	5800
Milling copra	11,160
Ball copra	12,000
Raw Jute	5050

Animal Husbandry, Dairy & Poultry

- Milk production in the country during 2022-23 was- **230.58 million tonnes**
- Highest milk producing State during 2022-23 was - **Uttar Pradesh** (with a share of **15.72 %** of total milk production)
- Top '5' milk producing states in India- **Uttar Pradesh > Rajasthan (14.44%) > Madhya Pradesh (8.73 %) > Gujarat (7.49 %) > Andhra Pradesh (6.70 %)**
- India ranks which position in the world in terms of total milk production- **First**.

- Per Capita Availability (Gram/Day)- **459 gram/day**
 - Egg production in the country during 2022-23 was - **138.38 billion nos**
 - Highest Egg producing state in India during 2022-23 was- **Andhra Pradesh (with a share of 20.13 % of total Egg production)**
 - Top '5' egg producing states in India - **Andhra Pradesh > Tamil Nadu (15.58 %) >Telangana (12.77 %) > West Bengal (9.94%) > Karnataka (6.51 %)**
 - Per Capita Availability (Nos per Annum)- **101**
 - Meat production in the country during 2022-23 was - **9.77million tonnes**
 - Top '5' meat producing states in India- **Uttar Pradesh (12.20 %) > West Bengal (11.93 %) > Maharashtra (11.50 %) > Andhra Pradesh (11.20 %) > Telangana (11.06 %)**
 - Total Wool production in the country during 2022-23 was- **33.61 million kg**
 - Top '5' wool producing states in India- **Rajasthan (47.98%) > Jammu & Kashmir (22.55%) > Gujarat (6.01%) > Maharashtra (4.73%) > Himachal Pradesh (4.27%)**
- (Source: Basic Animal Husbandry Statistics 2023)

Aquaculture Scenario 2023-24:

- ❖ India is the **Second largest producer of fish and Fresh water fish** in the world and accounts for **8.00 per cent of the global production**
- ❖ The total fish production in India during 2022-23- **175.45 lakh tons/17.54 Million Metric Tonnes (MMT) (Includes Inland fish production of 12.12 MMT and Marine fish production of 4.12 MMT)**
- ❖ The contribution fisheries sector to overall GVA was **1.09** and contribution to the agricultural GVA was- **6.72 per cent**
- ❖ Nodal agency to promote the export of marine products in India- **MPEDA (Marine Products Export Development Authority); HQ- Kochi, Kerala.**
- ❖ MPEDA statutory body under the- **Ministry of Commerce and Industry**
- ❖ India exported marine products during 2022-23 - **1.73 MMT worth Rs.63, 969 cr with Frozen shrimp largest exported among marine products followed by frozen fish.**
- ❖ India is the **third largest fish producing country in the world and second in aquaculture production** in the world.
- ❖ Leading state in Marine Fish production- **Gujarat**

- ❖ **Leading state in Inland Fish production- Andhra Pradesh (A.P)**
- ❖ **Five major fish producing states in India during 2022-23- A.P.> West bengal> Karnataka > Odisha > Gujarat**
- ❖ **World Fish Centre** headquarter located at- **Penang, Malaysia**
- ❖ **Central Marine Fisheries Research Institute- Kochin, Kerala**
- ❖ **Central Inland Fisheries Research Institute- Barrack pore, West Bengal**
- ❖ **Central Institute of Fisheries Education (CIFE)- Mumbai, Maharashtra**
- ❖ **Central Institute of Brackish water Aquaculture- Chennai**
- ❖ **The country that form the top destination for India's marine exports- USA> China> EU**

Fisheries Statistics

Global position	3rd in Fisheries 2nd in Aquaculture
*Contribution of Fisheries to GDP	1.09%
*Contribution of fisheries sector in agriculture	6.72
Per capita consumption of fish (Kg)	8.89
Present fish Production	17.54MMT
Inland	12.12 MMT
Marine	4.12 MMT

(Source: ICAR & NFDB)

Natural farming:

- ❖ The programme formulated by for up-scaling the Bharatiya Prakritik Krishi Paddhati (BPKP) to promote natural farming on larger scale across the country- **Natural Mission on Natural Farming (NMNF) during 2022-23.**
- ❖ The practices have evolved with time and farmers are also using innovations like **Pre Monsoon Dry Sowing (a method of multi-species green manuring)**, Green manuring and applying Farm Yard Manure (FYM), vermi-compost, etc. along with the Desi-cow based components of Natural Farming.
- ❖ **10,000 Bio-Input Resource Centers (BIRC):** will be set-up, creating a national-level distributed micro-fertilizer and pesticide manufacturing network. BIRC will facilitate **1 crore farmers to adopt natural farming.**
- ❖ **Knowledge partner** for natural farming extension- **National Institute of Agricultural**

Extension Management (MANAGE)

Climate change and environment:

- ❖ The 28th United Nations Climate Change Conference /Conference of the Parties (COP 28) was held from 30 November- 12 December 2023 in- **Dubai, United Arab Emirates (UAE).**
- ❖ The first conference of parties (COP1) was held in- **Berlin in 1995.**
- ❖ The declaration launched at COP28 aims to- **triple global nuclear energy capacity by 2050.**

Major engagements of India in COP 28:

❖ **Green Credit Initiative:**

- The Green Credit Initiative has been conceptualized as a mechanism to incentivize voluntary pro-planet actions, as an effective response to the challenge of climate change.
- It envisions the issue of Green Credits for plantations on waste/degraded lands and river catchment areas, to rejuvenate and revive natural ecosystems.

❖ **Global River Cities Alliance (GRCA):**

- It was launched at COP 28, led by the National Mission for Clean Ganga (NMCG) under the Ministry of Jal Shakti, Government of India.
- GRCA highlights India's role in sustainable river-centric development and climate resilience.
- This platform will facilitate knowledge exchange, river-city twinning, and dissemination of best practices.

❖ **Quad Climate Working Group (QCWG) on Localized Climate Action :**

- The event focused on recognizing and amplifying the role of local communities, and regional governments in supporting sustainable lifestyles.

❖ **India's achievements against the Nationally Determined Contributions (NDCs) targets:**

NDC (2015)	TARGET (2030)	ACHIEVEMENT
Reduce Emissions Intensity of its GDP	33-35% over 2005 level	33% (2019)
Non-fossil electric installed capacity	40% cumulative	43.8% (2023)
Additional Carbon sink	2.5 to 3 billion tonnes	1.97 billion tonnes (2021)

Fertilizer Scenario (2023-24):

- ❖ Total production of 'N' fertilizer nutrients in India during 2022-23- **15.74 million MT**
- ❖ Total production of 'P₂O₅' fertilizer nutrients in India during 2022-23- **5.01 million MT**
- ❖ Total production of 'NP' fertilizer nutrients in India during 2022-23- **20.75 million MT**
- ❖ Total production of 'Urea' in 2022-23 is- **28.50 million MT**
- ❖ Total production of 'DAP' in 2022-23 is- **4.35 million MT**
- ❖ Total production of 'SSP' in 2022-23 is- **5.65 million MT**
- ❖ **Total production of NP/NPKs fertilizer products- 9.29 million MT**
- ❖ **Total production of fertilizer products- 48.69 million MT**
- ❖ Total import of fertilizer products in 2022-23 is- **19.27 million MT** (Urea- 7.58 million MT; DAP- 6.58 million MT; NP/NPKs- 2.75 million MT; MOP- 1.87 million MT)
- ❖ **Total Consumption of nutrients in 2022-23- 29.84 million MT** (N- 20.21 million MT; P₂O₅- 7.92 million MT; K₂O- 2.53 million MT; K₂O- 1.72 million MT)
- ❖ Total Consumption of fertilizer products in 2022-23- : **63.92 million MT** (Urea- 35.73 million MT; DAP- 10.53 million MT; MOP- 1.63 million MT; NP/NPK complex fertilizers- 10.07 million MT; SSP- 5.02 million MT)
- ❖ All-India NPK use ratio during 2022-23 is- **11.8:4.6:1**
- ❖ Per hectare consumption of total fertilizer nutrients (N+ P₂O₅+ K₂O) is- **141.2 kg/ha**
- ❖ Top 5 fertilizer consuming states in India are- **Uttar Pradesh> Maharashtra > Madhya Pradesh > Karnataka> Punjab**

Nutrient Based Subsidy (NBS): scheme started in the Year 1 April, 2010

- Where a fixed rate of subsidy is announced on nutrients. The NBS covers three macro nutrients (Nitrogen, Phosphorus and Potassium) and one secondary nutrient (Sulphur).

➤ **NBS for nutrient N, P, K and S (Rs. per kg.) w.e.f 01.04.2024 to 30.09.2024.**

Nitrogen (Rs. per Kg Subsidy)	Phosphorous (Rs. per Kg Subsidy)	Potash (Rs. per Kg Subsidy)	Sulphur (Rs. per Kg Subsidy)
47.02	28.72	2.38	1.89

- ❖ Three grades of fertilizers included in the NBS w.e.f 01.04.2024 are:
 - a) **NPK (11-30-14)** fortified with Magnesium, Zinc, Boron and Sulphur (additional subsidy

for fortified/coated fertilizer grades of fertilizers **Boron- Rs.300/MT; Zinc- Rs.500/MT)**

b) Urea-SSP Complex (5-15-0-10)

c) SSP (0-16-0-11) fortified with Magnesium, Zinc and Boron

(Source: <https://www.fert.nic.in/>)

Pesticide consumption scenario (2023-24):

- ❖ **Total Insecticides/ pesticides registered in India is- 339**
- ❖ **Pesticide Formulations Registered For Use In The Country:**
 - A. **Approved Formulations of Solo Pesticides:** Insecticides formulations (271), Herbicides formulations (107), Plant growth regulators (27), Fungicides (107), Bio-Insecticides (72), bio fungicides (32)
 - B. **Formulations of Combination of Pesticides:** Insecticides (137), fungicides (99), herbicides (75), Insecticide + Fungicide (12), Plant growth regulators (02), Plant growth regulator + Fungicide (01), Nematicide (03).
- ❖ **Pesticides / Formulations Banned In India: as on 31 March, 2024**
 - A. Pesticides Banned for manufacture, import and use: **49**
 - B. Pesticide / Pesticide formulations banned for use but continued to manufacture for export: **05**
 - C. Pesticides Withdrawn : **08**
- ❖ Pesticides restricted for use in the country- **16**
- ❖ Pesticides Refused Registration: **18**
- ❖ Top pesticide consumption states in India are- **Uttar Pradesh (11,824 Metric Tonnes) > Maharastra (6,814 Metric Tonnes) > Punjab (5,130 MT) > Telangana (4,920 MT) > Haryana (4066 MT)** accounting to 42.3% of pesticide consumption in India (52,466 MT).
- ❖ The least pesticide consumption State/UT in India is- **Goa (34 MT) & Mizoram (31 MT)**
- ❖ The total consumption of bio-pesticides in 2022-23 at the national level stood at- **7,248 MT (West Bengal was the major consumer with 1234 MT > Tamil Nadu (907 MT) > Chhattisgarh (740 MT)**

(Source: <http://ppqs.gov.in/statistical-database>)

Public Distribution System (PDS):

- ❖ **Central government has decided to distribute millets such as “Jowar and Bajra through Public distribution system to improve nutrition security of the poor.**

- ❖ **Total number of Beneficiaries in India under PDS system are- 80.93 crore**
- ❖ **Major commodities distributed in PDS system are- Rice (Rs.3/kg), Wheat (Rs.2/Kg) & coarse cereals (Rs.1/kg)**
- ❖ **The Revamped Public Distribution System (RPDS) was launched in- 1992**
- ❖ **The Targeted Public Distribution System (TPDS) was introduced with effect from- June 1997**
- ❖ **The buffer stock maintained/Procurement made by FCI in the crop year 2022-23 is- 106.2 million metric tonnes (MMT) (Rice-67.5 MMT; Wheat- 30.73 MMT)**
Note: Normal buffer stock capacity of FCI is- **41.12 mmt**
- ❖ **The total storage capacity available with Food Corporation of India (FCI) and the State Agencies (both owned and hired capacity) is- 145 MMT**
- ❖ **Nodal Agency that deals in Procurement, Processing, Distribution, export & import of selected agricultural commodities- NAFED (Oct, 1958)**
- ❖ **Nodal agency for undertaking price support operations for pulses & oilseeds and market intervention operation for other agricultural commodities is- NAFED**
- ❖ **GoI decided to extend Pradhan Mantri Garib Kalyan Anna Yojana (PMGKAY) for another 5 years till- 1 January 2024 to 31 December, 2028. Expenditure for the scheme would be around Rs. 11.8 lakh crore for the next five years.**

Note: PMGKAY in March, 2020 during the COVID-19 pandemic provides free food grains to about 81.35 crore people. From January 1, 2023, the PMGKAY had subsumed other schemes under the National Food Security Act such as the Antyodaya Anna Yojana (AAY) and Priority Households (PHH). AAY card holders will get 35 kilograms of food grains per family per month and PHH scheme beneficiaries will get five kilogram's per person per month.

(Source: <https://dfpd.gov.in>)

Indian Food Processing Sector at a glance:



- ❖ **Total number of Mega Food Parks in India- 42**

- ❖ Cold storage capacity of Mega food parks- **32 Mt**
- ❖ Minimum Land required for setting up a Mega Food Park is- **50 acres**
- ❖ The Food Processing Industry contribution to Agricultural sector is - **9%**
- ❖ The Food Processing Industry contribution to Manufacturing sector is - **10%**
- ❖ Share of processed food exports in agri-exports - **25.6%**
- ❖ According to UN Environment Programme, India's per capita food waste stood at- **55 kg per year** (78.2 - million tonnes every year)
- ❖ Employment provided by food processing industry in the organized/registered manufacturing sector- **12.22%**
- ❖ The Gross Value Added (GVA) of food processing sector- **Rs.2.08 lakh crore**
- ❖ Post-harvest losses in cereals and Pulses accounts for- **4-6 per cent**
- ❖ Post-harvest losses in vegetables accounts for- **7-12 per cent**
- ❖ Post-harvest losses in fruits accounts for- **6-18 per cent**
- ❖ Wastage of food item from farm to fork/consumer- **25%**

Genetically Modified crops/Transgenic crops/Biotech crops:



- Total Global Genetically Modified Crop Area- **206.3 Million ha**
- Top '3' globally cultivated GM crops- **Soybean (100.9 Mha) > Maize (69.3 Mha) > Cotton (24.1 Mha)**
- Top '3' leading countries in GM crops cultivation- **USA (74.4 Mha) > Brazil (66.9 Mha) > Argentina (23.1 Mha) > India (12.1 Mha)**
- * Government during 147th meeting of Genetic Engineering Appraisal Committee (GEAC) on 18 October, 2022 approved environmental release of GM Mustard for its seed production and testing is- **Dhara Mustard Hybrid (DMH)-11**.
- GEAC approval makes **GM mustard only the second approved transgenic crop in India** after Bt cotton and the **first such food crop that can be commercially cultivated by farmers**.
- **DMH-11** is indigenously developed **Herbicide Tolerant (HT) mustard**.
- DMH-11 is a result of a cross between Indian mustard variety 'Varuna' and East European 'Early Heera-2' mustard.
- DMH contains **two alien genes ('barnase' and 'barstar')** isolated from a soil

bacterium called- **Bacillus amyloliquefaciens**.

- DMH-11 developed by the- **Centre for Genetic Manipulation of Crop Plants (CGMCP) at Delhi University**.
- **Barnase** in Varuna induces a **temporary sterility**.
- **Barstar** in Heera blocks the effect of barnase allowing seeds to be produced.
- **Area under transgenic plants in India (2023-24)- 12.46 Million Hectares (Mha)**
- **India's rank in Cultivation of GM crops- 4th**
- **Bt-Cotton is the only GM crop** Cultivated in India with an area of- **12.46 Million Hectares**
- ***Central Government recently approved field trials of Indigenous Bt Brinjal Varieties- Janak and BSS-793 (Developed by IARI contains Bt Cry1Fa1 gene) (IMP)**
- Which state government recently issued a no-objection certificate (NOC) to conduct field trials on Mahyco **BG-2 RRF (herbicide tolerant Bt cotton)- Haryana**

Agricultural Exports and Imports:



- India's total agricultural exports during 2023-24 stood at- **USD 48.82 billion**
- India's total agricultural imports during 2023-23 stood at- **USD 32.87 billion**
- **The agricultural trade surplus during 2023-24 is- USD 15.95 billion**
- ***India's largest exported agricultural commodity in terms of its value- Marine products (7.37 billion\$) > Basmati rice (5.84 billion\$) > Non-basmati rice (4.57 billion \$) Spices (4.24 billion\$)> Buffalo meat (3.74 billion\$)**
- **Highest exported :Cereals (basmati rice &Non basmati rice) >Marine Products > Spices > Buffalo meat > Sugar**
- **Highest imported: Vegetable oils (14.87 billion\$) > Pulses (3.74 billion\$) > Cashew (1.8 billion\$)> Fresh fruits (2.73 billion \$) Spices (1.45 billion\$)**

(Source: The ministry of commerce and industry, 2024)

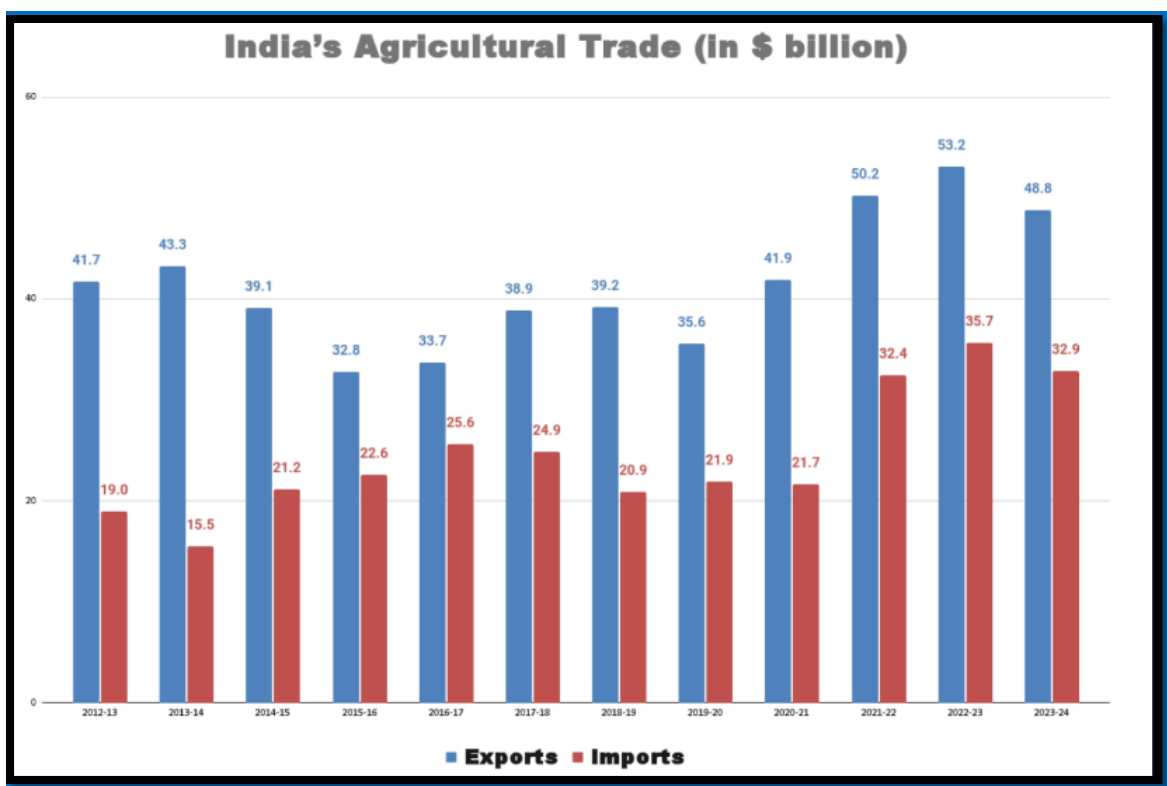


Fig: Agricultural Exports-Imports for the year 2023-24

Organic Farming Scenario:

- ❖ Total organic agricultural land globally- **96.4 million hectares**
- ❖ Total Organic agricultural land in India- **4.78 Million hectares**
- ❖ Total area under the organic certification in India was:
 - A. Cultivated Area (Organic)- **1.76 Mha**
 - B. Cultivated Area (In conversion)- **3.62 Mha**
 - C. Wild Harvest Collection Area- **4.78 Mha**
- ❖ Total certified organic production in India:
 - A. Farm Production(Organic)- **2.66 Million Tonne**
 - B. Farm Production(In conversion)- **0.28 Million Tonne**
 - C. Wild Harvest Production- **0.019 Million Tonne**
- ❖ Total number of organic producers in India- **4.43 million**

- ❖ Total organic export value- **Rs.5525 cr**, Export quantity- **3.12 Lakh Tonne (Processed food > medicinal plant products > Cereals & millets > Oil seeds)**
- ❖ The state with largest area under organic certification is- **Madhya Pradesh (1.51 Mha) > Maharashtra (1.28 Mha) > Gujarat (0.93 Mha) > Rajasthan (0.58 Mha)**
- ❖ The leading states with highest organic production- **Madhya Pradesh (82.5 Lakh Tonne) > Maharashtra (79 LT) > Rajasthan (32.2 LT)> Karnataka (23.7 LT)> U.P (21.7 LT)**
- ❖ Total certified organic production in India- **2.95 MT**
- ❖ Highest number of organic producers in the world - **India** (More than 30 per cent of world's organic producers are in India)
- ❖ India's rank in terms of organically cultivated area is- **4th**; first rank in terms of Organic Producers.
- ❖ Largest produced organic commodities was- **Fibre (27.9 LT) > Oil seeds (6.04 lakh tonnes)> Cereals & Millets (2.32 lakh tonnes)**

(Source: <https://apeda.gov.in>)

Important Snippets:

- Agriculture credit target for 2024-25- **Rs. 20 lakh crore**
- *The **WTO's 13th Ministerial Conference (MC13)** took place from- **26 February to 2 March 2024 in Abu Dhabi, United Arab Emirates.**

Note: The **Ministerial Conference** is the **top decision making body** of the **World Trade Organization (WTO)** which usually meets every two years. **Ministerial Conference** can take decisions on all matters under any of the multilateral trade agreements.

- **Abu Dhabi ministerial conference declaration:** Reform of the Deliberative and Negotiating Functions, E-Commerce, TRIPS Non-Violation and Situation Complaints, Fisheries Subsidies, Sustainability-Related Initiatives, Domestic Regulation of Services, Plurilateral Agreements and Initiatives, COVID-19-related TRIPS Waiver, Special and Differential Treatment.
- The Ministry of Chemicals and Fertilizers, Department of fertilizers has introduced **Sulphur coated Urea** under the brand name- '**Urea Gold**'

- **Introduction of Sulphur coated urea in 40 kg bag at the same MRP as that of 45kg bag of Neem coated urea i.e. Rs.266.50. The new sulphur coated urea will address Sulphur deficiency in the Indian soil.**
- **Indian Farmers Fertilizer Cooperative Ltd. (IFFCO) has signed an agreement with US based company for export of Nano liquid urea to the USA is- California-based Kapoor Enterprises Inc.**
- **The programme launched by IFFCO for development of 5,000 rural entrepreneurs who are identified and trained for spraying drones-‘IFFCO Kisan Drones’.**
- **IFFCO receives FCO approval for innovative Nano-formulations aim to combat zinc and copper deficiencies in agriculture- Nano Zinc & Nano Copper liquids under the Fertilizer (Inorganic, Organic, Mixed) Control Order.**
- **An advanced formulation of Nano Urea developed by IFFCO in which nutrition is redefined to meet crop nitrogen requirement at critical growth phases- Nano Urea Plus**
Note: Nano Urea Plus in liquid form with **16 per cent nitrogen content in weight by weight, and pH value of 4-8.5 and viscosity of 5-30.** (Currently Nano urea has 1-5% weight-by-weight nitrogen content).
- **Target set by GoI of installing –renewable energy capacity by 2030- 500 GW**
- **The average MGNREGA wage across India for 2024-25 will be- Rs.289/day**
- **Under MGNREGA scheme the state that get maximum wage in absolute terms- Haryana @Rs. 374 per day.** The lowest has been fixed for Arunachal Pradesh and Nagaland at Rs. 234 per day.
- **GoI formulated new Programme for ‘Development of Semiconductors and Display Manufacturing Ecosystem in India’ with a total outlay of Rs. 76,000 crore for setting up a three semiconductor units in- Sanand and Dholera in Gujarat and Morigaon, Assam.**
- **The first state in the country to obtain Organic Certification for Kiwi under Mission Organic Value Chain Development for North East Region (MOVCDNER) - Arunachal Pradesh**
- **United Nations General Assembly is declaring 2026 as the- International Year of the Woman Farmer.**
Note: Aims to increase awareness of the crucial role that women farmers around the world play in agrifood systems, as well as their contributions to food security, nutrition and poverty eradication.

- According to the World Trade Organization (WTO) data, the country that emerged as **second largest exporter of agro chemicals** in the world- **India** (India's agrochemical exports reached a new high of **US\$ 5.5 billion** for the financial year 2022-23). China is the largest exporter of agro chemicals in the world.
- Per ha agrochemical consumption in India - **400gm/ hectare** of agrochemicals as compared to the **global average of 2.6 Kg/ hectare**.
- **2024 world food prize awarded to- Cary Flower and Geoffrey Hatwin**
Note: Cary Flower and Geoffrey Hatwin decades long dedication to preserving crop biodiversity (preserving >6,000 species of crops and culturally important plants) has not only reshaped global food security but also united the world towards a common goal.
- India's first pig school established by the Bodoland Territorial Council (BTC), aims to stimulate the local economy and improve pig farming methods at- **Assam's Bodoland Territorial Region (BTR)**
- *The first government TV channel '**DD Kisan**' of the country deployed two **Artificial Intelligence anchors** namely- **AI Krish and AI Bhoomi**
 (The farmer viewers will be able to see these anchors in all the states of the country from Kashmir to Tamil Nadu and from Gujarat to Arunachal, these AI anchors will provide every necessary information about agricultural research happening in the country and global level, trends in agriculture mandis, changes in the weather or any other information of government schemes. One special thing about these anchors is that they can speak in fifty languages of the country and abroad).
- **5th World Coffee Conference (WCC)** hosted by- **India (for the first time) at Bangalore, Sep 25-28, 2023.**
- According to Periodic Labour Force Survey, 2022- 2023, **the share of agriculture in the rural female work force** is- **76.2 %** (skilled agriculture labor- 59.4%, elementary agriculture labors- 16.6%)
- According to Periodic Labour Force Survey, 2022- 2023, **the share of agriculture in the rural male work force** is- **49.1%**
- **GI Tag bestowed Agricultural products during 2023-24**

GI tag product	Location
Authoor betel leaves	Thoothukudi district, Tamil Nadu

Chokuwa rice (magic rice)	Assam
Koraput Kalajeera Rice (Prince of Rice)	Koraput district of Assam
Salem Sago (locally known as “Javvarisi”, is derived from the wet starch powder extracted from tapioca roots).	Salem, Tamil Nadu
Matti Banana (larger-than human finger-sized fruit with a sweet aroma and honey-like taste)	Kanyakumari, Tamil Nadu
Rajouri Chikri Wood Craft	Rajouri, Jammu and Kashmir
Mushqbudji Rice variety	Anantnag district, Jammu and Kashmir
Northeast’s Mithun -Food animal tag	
Ladakh Sea Buckthorn (Wonder Plant/Ladakh Gold)	Ladakh, Jammu and Kashmir
Kachchhi Kharek (Date Palm)	Kutch, Gujarat
Riyawan Lahsun (Garlic is renowned for its unique quality and high yield, with each bulb containing five to six cloves)	Ratlam district, Madhya Pradesh

- The digital portal launched by Ministry of Agriculture and Ministry of Finance **to provide subsidized loans to farmers under the Kisan Credit Card (KCC) scheme- Kisan Rin Portal**
- An advanced agricultural data management platform by the Ministry of Agriculture and Farmers Welfare designed to generate crop estimates and integrate with other systems generating Agriculture Statistics such as Price, Trade, Procurement, Stock etc - **Unified Portal for Agricultural Statistics (UPAg)**
- Digital platform launched by Horticulture to disburse subsidies to horticulture farmers under the Cluster Development Programme (CDP) to promote horticulture crops- **CDP-SURAKSHA (System for Unified Resource Allocation, Knowledge, and Secure Horticulture Assistance)**
- The institute that developed biodegradable natural polymer based microgels for sustainable agriculture- **IIT Mandi**
(Natural polymer-based multifunctional smart microgels for the slow release of urea over a longer period).

- **First Artificial Intelligence powered agricultural news platform developed by Union Agriculture Ministry**, in collaboration with the Wadhvani Institute for Artificial Intelligence is -**Krishi 24/7**
- **First-ever AI-powered solution for automated agricultural news monitoring and analysis**, with support from Google.org- **Krishi 24/7**
- Wheat flour brand launched by Union Minister for Consumer Affairs, Food, and Public Distribution to provide affordable wheat flour to consumers - **Bharat Atta** (to offer a cost-effective alternative to the market prices, contribute to price moderation @ Rs.27.50/Kg)
- Digital platform launched by Ministry of Textiles, Cotton Corporation of India to provide essential information and updates on cotton initiatives- **‘Kasturi Cotton Bharat’ Portal**
- 63rd council meeting, Chair of International Sugar Organization (ISO) for 2024 to be hosted by- **India** (International Sugar Organization (ISO) headquartered in London)
- National Bank for Agriculture and Rural Development (NABARD) and Asian Development Bank (ADB) collaborates with Gates Foundation to establish- **Technical Support Unit (TSU) to address climate change challenges, focusing on agriculture and rural livelihood sectors in India**
- The first vice chairperson of the incoming bureau of the Sub-Committee on Fisheries Management (SCFM) of FAO- **Dr. Balaji** (India will serve as a member of the FAO Fisheries Bureau on Capture Fisheries for first time in 57 years. The SCFM provides a forum for national, regional, and international discussion on fishery management.)
- The country that Chair’s FAO Intergovernmental Group (IGG) on Tea for a period o two years- **India**
- The Food Safety and Standards Authority of India (FSSAI) approved various amendments in food safety regulations **to eliminate the Bureau of Indian Standards (BIS) and Agmark certification for food products**. In line with the concept of **“One Nation, One Commodity, One Regulator”**. Food business will only require mandatory FSSAI certification.
- The state that launched state **funded MSP (Minimum Support Price) scheme LABHA (Laghu Bana Jatya Drabya Kraya) Yojana for minor forest produce- Odisha**
- ICAR- NBFGR have identified two new specimens of congrid eels (Anguilliformes) namely- **Ariosoma Kannani and Ariosoma Gracile, off the coasts of Tamil Nadu (TN) and Kerala**

- The portal launched by NITI Aayog to significantly boost the promotion of Agroforestry initiatives by government bodies- **Greening and Restoration of Wasteland with Agroforestry (GROW)**

Note: Agroforestry covers 8.65% of India's total area, about 28.42 million hectares.

- NITI Aayog Unveils **GROW Initiative** for **Agroforestry Transformation**
- The **GROW report aims to** facilitate restoration projects for achieving national commitments of Land Degradation Neutrality and **restoring 26 million hectares of degraded land by 2030**, as well as creating an **additional carbon sink of 2.5 to 3 billion tonnes of carbon dioxide** equivalent.
- Ministry of Fisheries, Animal Husbandry, & Dairying, Government of India, **excluded the income tax for the Dairy Cooperative Society** under the Income Tax Act, 1961, to provide relief to the cooperative societies.
- The scheme and portal launched by Haryana, to encourage community participation in tree plantation activities on non- forest lands- **Van Mitra scheme**
- On February 9, 2024, GoI announced 'Bharat Ratna' India's highest civilian honor, for their revolutionary work uplifting the nation's farmers and rural economy- **Renowned agricultural scientist M.S. Swaminathan and former Prime Minister Chaudhary Charan Singh**
- Union Minister of Science & Technology inaugurated 'National Speed Breeding Crop Facility' at- **National Agri-Food Biotechnology Institute (NABI) in Mohali.**
- Eighteenth meeting of G20/2023 G20 meeting held at- **9-10 September 2023, New Delhi**

Main Theme: 'One Earth, One Family, One Future'/'Vasudhaiva Kutumbakam'.

Theme: 1.Strong, Sustainable, balanced, and inclusive growth

Theme 2: Accelerating Progress on Sustainable Development Goals (SDGs)

Theme 3: Green Development Pact for A Sustainable Future

Theme 4: Multilateral Institutions for the 21st Century

Theme 5: Technological Transformation and Digital Public Infrastructure

Theme 6: International Taxation

Theme 7: Gender Equality and Empowering All Women and Girls

- **G-20 Agriculture Ministers' Meeting** held at- **Hyderabad from 15th to 17th June 2023.**

The themes of the G20 Agriculture Ministers' meeting held in Hyderabad from 15th - 17th June 2023 were:

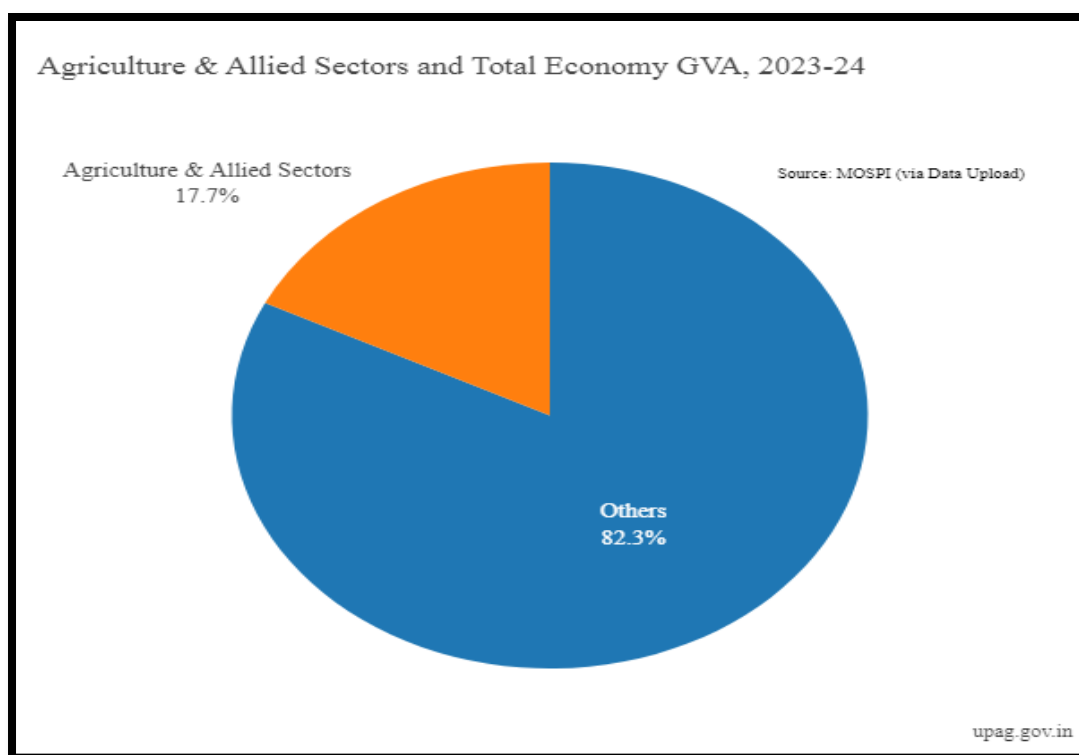
1. 'Sustainable agriculture for nutritional food'
2. Role of women in farming expansion and agriculture' in connection with biodiversity

The following issues were discussed during the G20 Agriculture Ministers' Meeting:-

- (i) **Food security and nutrition,**
 - (ii) **Sustainable agriculture with climate smart approach,**
 - (iii) **Inclusive agri-value chains and food systems and**
 - (iv) **Digitalization for agricultural transformation**
- 1st meeting of "G-20 Agriculture Working Group" held at Indore from- **13th-15th February 2023 at Indore, M.P.**
- The two key outcomes of the G20 Agriculture ministers meeting are: (i) **Deccan High Level Principles on Food Security and Nutrition 2023** and (ii) **International Millets and Other Ancient Grains Research Initiative (MAHARISHI)**
- **G20 Agriculture working group main focus on- Embracing Millets: The Key to Enhancing Food Security and Nutrition**

ECONOMIC DIMENSIONS OF AGRICULTURE \$

- **Agriculture and allied sectors Share in Total Economy GVA 2023-24**
- **Share of agriculture & allied sectors in total economy GVA during 2023-24- 17.7% (Rs.47.25 lakh cr)**
 - **Contribution of Crops to Agriculture GVA- 55.28% (Rs. 24.78 lakh cr)**
 - **Contribution of Livestock to Agriculture GVA-30.22% (Rs.13.55 lakh cr)**
 - **Contribution of Forestry & logging to Agriculture GVA- 7.24% (Rs.3.24 lakh cr)**
 - **Contribution of Fishing & Aquaculture to Agriculture GVA - 7.248% (Rs.3.25 lakh cr)**



Agriculture and allied sectors Share in Total Economy GVA, 2023-24 (at 2011-12 prices)	
Total economy GVA growth rate	7.22
Agriculture & Allied sectors Growth rate	1.44
Agriculture & Allied sectors contribution to total GVA	14.5%
Total economy GVA	158.73 Lakh cr
Agriculture & allied sectors GVA	23.04 Lakh cr
Agriculture and allied sectors Share in Total Economy GVA, 2023-24 (at current prices)	
Total economy GVA growth rate	8.53
Agriculture & Allied sectors Growth rate	5.37
Agriculture & Allied sectors contribution to total GVA	17.7%
Agriculture & allied sectors GVA	47.25 lakh cr
Total economy GVA	267.62 Lakh cr

Agriculture and allied sectors GVA (Lakh cr in value) 2023-24 at 2011-12 prices

Fishing & Aquaculture	1.65 lakh cr
Livestock	6.90 lakh cr
Forestry & Logging	1.86 lakh cr

Crops	12.30 lakh cr
Agriculture and allied sectors GVA (Lakh cr in value) 2023-24 at current prices	
Fishing & Aquaculture	3.25 lakh cr
Livestock	13.55 lakh cr
Forestry & Logging	3.24 lakh cr
Crops	24.78 lakh cr

Agricultural Exports and Imports:

ICMR dietary guidelines for Indians: According to the guidelines, for a 2000 kcal intake a day, people should eat about:

Food group	Daily intake (gms/day)
Cereals & Nutri cereals	250
Vegetables	400
Fruits	100
Pulses, Eggs & Flesh foods	85
Nuts & Seeds	35
Milk/Curd	300 ml
Fats & oils	27

(Source: Unified Portal for Agricultural Statistics)



- The number of people working agriculture worldwide, including forestry and fishing employed- **873 million, or 27% of the global workforce**
- The share of agriculture in global GDP has been stable at around- **4%**
- Agriculture value added to- **USD 3.7 trillion**
- Agricultural use of inorganic fertilizers was- **195 million tonnes of nutrients**, of which 56% was nitrogen.
- Per ha consumption of inorganic fertilizers per ha cropland area -**119 kg of nutrients per hectare (highest in Asia, at 176 kg/ha)**
- The global agricultural land area was- **4.79 billion hectares**
- Global Per capita agriculture land - **0.20 ha**
- The global land area equipped for irrigation is- **352 million ha**
- Average women represented- **37.8 percent of all agricultural workers**

- Global pesticides consumption - **3.5 million tonnes**
- Global pesticides use per cropland area -**2.0 kg/ha** (highest in USA (4.7 kg/ha))
- The production of primary crops was- **9.5 billion tonnes**

International Comparison for selected Crops: 2022-23

Crops	India			World			Share of India in world (%)	
	A	P	Y	A	P	Y	A	P
Total cereals	99.6	355.1	3567	731.6	3059.6	4182	13.6	11.6
Total pulses	36.1	27.7	766	96.0	96.0	1000	37.6	28.8
Paddy	46.4	196.2	4229	165.0	776.5	4705	28.1	25.3
Maize	10.0	33.7	3387	203.5	1163.5	5718	4.9	2.9
Soybean	12.1	13.0	1069	133.8	348.9	2608	9.1	3.7
Groundnut	5.7	10.1	1777	30.5	54.2	1776	18.7	18.7
Sorghum	3.8	4.2	1092	40.8	57.6	1413	9.3	7.2

Note: A- Area in million hectares, P- Production million tonnes, Yield in kg/ha

(Source: Food and Agriculture Organization, 2024)

Agriculture Programs launched during 2023-24:

- The Warehousing Development and Regulatory Authority (WDRA) launched an online digital platform to empower farmers with access to pledge finance against harvested commodities- **e-Kisan Upaj Nidhi**
- In the National Creators Award 2024 'Most Impactful Agri-Creator' awarded to- **Lakshya Dabas** (creates short videos on improving agricultural practices with the use of innovation and technology, focusing on natural farming)
- The program launched by Chhattisgarh to provide input assistance to farmers- **'Krishak Unnati Yojna'**
- **NAMO Drone Didi scheme:** A groundbreaking effort to revitalize farming practices and uplift rural women in India. By **providing drones to 15,000 women-led Self Help Groups (SHGs)**, the initiative seeks to revolutionize agriculture and empower women as key players in the rural economy. 15,000 Women Self Help Groups to provide rental services to farmers for agriculture purposes.

The government announced and it has approved an outlay of **Rs. 1,261 crore** for the period from **2024-25 to 2025-26** for the scheme.

➤ **Green Credit Program (GCP): 13th October 2023**

- ❖ **Innovative market-based mechanism designed to incentivize voluntary environmental actions/pro planet actions** across diverse sectors, by various stakeholders like individuals, communities, private sector industries, and companies- **Green Credit Program**
- ❖ GCP envisions the issue of **Green Credits for plantations on waste/degraded lands and river catchment areas**, to rejuvenate and revive natural ecosystems.
- ❖ GCP's governance framework is supported by an inter-ministerial Steering Committee and **The Indian Council of Forestry Research and Education (ICFRE) serves as the GCP Administrator**, responsible for program implementation, management, monitoring, and operation.
- ❖ The scheme launched by Ministry of Environment, Forest and Climate Change to encourage environmentally friendly practices rooted in tradition and conservation; reflecting the ideas of LiFE concept- **Green Credit Program (GCP) and Ecomark Scheme**
- ❖ The Ministry of Environment, Forest and Climate Change has introduced two pioneering initiatives that indicate the country's pro-active approach to climate change, sustainability and promotion eco-conscious practices- **Green Credit Program (GCP) and Ecomark Scheme**

➤ **Ecomark Scheme: 13th October 2023**

- ❖ It provides **accreditation and labeling for household and consumer products that meet specific environmental criteria while maintaining quality standards as per Indian norms**. Products accredited under the Ecomark Scheme will adhere to specific environmental criteria, ensuring minimal environmental impact
 - ❖ Products accredited under the Ecomark Scheme will adhere to specific environmental criteria, ensuring minimal environmental impact.
- Department of Agriculture and Farmers welfare and Department of School Education and Literacy have undertaken a pilot project on- **School soil health programme**. Under the project, 20 soil labs were set up in 20 schools of Kendriya and Navodaya Vidyalaya of rural areas & now updated to 1000 schools. Study modules were developed and training was given to students and teachers.
- **Krishi Sakhi (Women associates in the farm sector): August 30, 2023.**
- **Certified Krishi Sakhis become Para-extension workers, community resource persons for creating awareness and building capacity of farmers and also acts as a link between farmers, research institutions, KVKs, Agriculture and Allied Departments.**

- **Aim:** To uplift rural women by providing them with additional income opportunities but also seeks to enhance agriculture extension services practically through localized support.
- **Target:** to train **90,000 Krishi sakhis**
- Krishi sakhis are drawn from Self help groups are trained in all aspects of agriculture so that they become certified Para extension workers.
- Krishi Sakhis play a pivotal role in implementing schemes like National Mission of Natural Farming (NMNF), Bio Resource Centres, Pradhan Mantri Fasal Bima Yojana (PMFBY) etc.

PM Kisan AI Chatbot Kisan-eMitra:

- PM Kisan AI Chatbot Kisan-eMitra, Farmer's digital assistance to address their scheme related queries in 11 available languages.

Ministry of Cooperation:

- Prime Minister launched the world's largest grain storage plan in the cooperative sector with storage capacity of- **700 lakh tonne will be created in the next five years, with an investment of Rs.1.25 lakh crore.**

Note: Total Food Grain Production in India is 330 MMT and total Storage Capacity in India is only 145 MMT, i.e, there is a shortage of 185 MMT Storage. There is surplus Storage capacity in other countries 131%, while in India there is a shortfall of 47%.

- The model promoted by government to empower small & marginal farmers and other marginalized sections- **Cooperative-based economic development model**
- **Computerization of 63,000 Primary Agricultural Credit Societies (PACS)** with an investment of Rs. 2,516 crore.
- Mandate of new cooperation ministry- **'Sahakar Se Samridhi' (Prosperity through Cooperation)**
- **National cooperative database** is being developed for- **Country-wide mapping of cooperative societies**
- **Total number of registered cooperatives in the country is- 8.54 lakh cooperatives (with >29 cr members).**
- Cooperative societies operational in the agricultural sector- **1,00,428 with maximum under Maharashtra (20,788).**
- New co-operatives that commence manufacturing activities till 31.3.2024 shall get the benefit

of a lower tax rate of **15 per cent**

- Higher limit for member of PACS/ PCARDBs for cash deposits to and loans in cash is- **Rs.2 lakhs**
- The Union Cabinet has given its approval for the establishment of the **"world's largest grain storage plan"** in the **cooperative sector** with an outlay of around **Rs.1 lakh crore** by introducing modern storage facilities and embracing cooperative principle. The initiative aims to curb crop damages, prevent distress sales by farmers and bolster the country's food security.

National Cooperative Exports Limited (NCEL): October, 2023

- ❖ Ministry of Cooperation has set up National Cooperative Exports Limited (NCEL) under the Multi-State Cooperative Societies (MSCS) Act, 2002. **NCEL will provide a complete ecosystem for the promotion of exports mainly of agri commodities (organic products). It aims to provide a global platform for organic products.**
- ❖ NCEL is launched in the cooperative sector with 6 objectives of increasing exports, prospering the farmer, changing the crop pattern, providing a global market for organic products, gaining a place for India in the global market for biofuel and strengthening the cooperative sector.

Bharatiya Beej Sahakari Samiti Ltd (BBSSL): October, 2023

- National level Multi-state cooperative seed society
- **Authorized share capital:** Rs 500 crore
- **Initial paid-up share capital:** Rs 250 crore, shared equally by IFFCO, Kribhco, Nafed, National Co-operative Development Corporation (NCDC), and National Dairy Development Board (NDDB).
- BBSSL aims **to help in increasing the production of quality seeds in India through cooperatives thereby reducing the dependence on imported seeds, enhancing agriculture production and provide boost to rural economy.**
- Of the 787 lakh quintal seeds required annually, only 372 lakh quintal is available through organized retail, leaving an untapped potential for 415 lakh quintal (estimated value of Rs 40,000 crore), for which farmers rely on their own crops and that of their neighbours.

***National Cooperative Organic Limited (NCOL)**

- ❖ Authorized share capital: **Rs.500 cr**
- ❖ Initial paid-up share capital: **Rs.100 cr** (equally shared by NDDB, NCCF, NCDC, GCMMF & NAFED)
- ❖ **Headquarter:** Anand, Gujarat
- ❖ Ministry of cooperation has established NCOL on 17 Jan, 2023.
- ❖ Chief Promoter: **NDDB**
- ❖ Promoters: NCDC, NCCF, NAFED, GCMMF
- ❖ **Objective:** to help India realize its potential to become a global leader in organic products.
- ❖ **Aim:** to propel India's share (currently less than 3 per cent) in the global organic market estimated at Rs.10 lakh crore.

Farmer Producer Organizations (FPOs):

- Govt. of India launched '**Formation and promotion of FPOs**' under which by **2027-28**, about **10,000 new FPOs** are to be created. (Major role has to be played by NABARD)
- (U.P. has highest no. of FPOs registered under Formation and Promotion of FPOs. 7,597 FPOs has been registered in India, under the scheme. In Uttar Pradesh, around 1,150 FPOs have been registered, followed by Madhya Pradesh (566), Maharashtra (521), Punjab (475) and Bihar (474).)
- FPOs are formed on the Model: **Sustainable business model and Augmented Income**
- Most **appropriate institutions to mobilize small and marginal farmers** and build their capacity to **collectively leverage their production and marketing** is- **FPO**
- The concept of producer companies introduced in the year- **2002**
- Nodal Agency for growth and Promotion of FPOs is- **Department of Agriculture and Cooperation (DAC)**
- **Single window for providing technical and all round support to FPOs** is - **SFAC** (Small Farmers Agribusiness Consortium a society under DAC).
- Total number of FPOs in India- **5000** (out of this 910 affiliated to SFAC, 3000 affiliated to NABARD & remaining created and run by Private firms).
- Highest number of FPOs registered in- **Maharashtra (1940)** followed by U.P (750) Tamil Nadu (528), M.P (458).

- Total number of SHGs is- **6.6 million** (Source: NRLM)
- Fund created by NABARD to promote new FPOs and support their initial financial requirements, to make them credit worthy, commercially vibrant and sustainable business enterprise of farmers- **'Producers Organization Development and Upliftment Corpus' (PRODUCE) Fund (2014-15)**
- Fund created by NABARD to support FPOs for credit facilitation, capacity building and market linkage support-**Producers Organization Development Fund (PODF) (2014-15)**

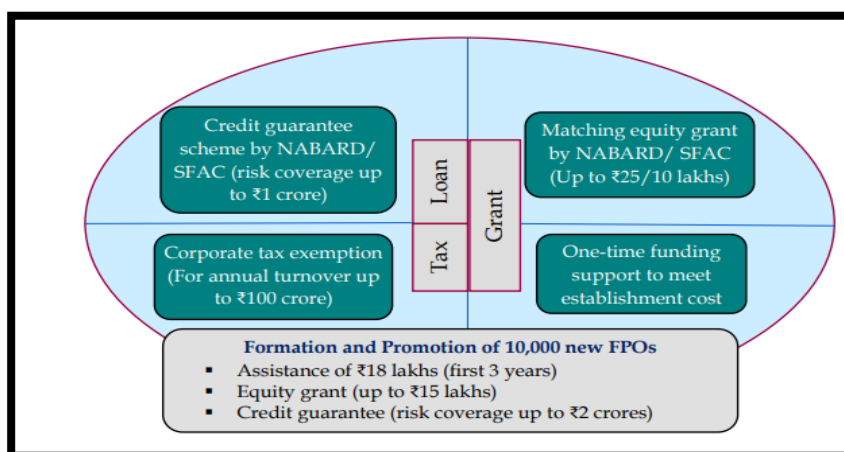


Fig: Government Schemes related to financial support to the FPO

ICAR NEWS

- ❖ Total number of KVKs at present is- **731** (as of June, 2024)
- ❖ KVKs are under the administration control of- **DDG of Agricultural extension**
- ❖ Present DDG of Agricultural Extension- **Dr. Udham Singh Gautam**
- ❖ For effective functioning and monitoring of KVKs, KVKs are divided into- **11 ATARI Zones**
- ❖ Acronym of ATARI - **Agricultural Technology Application Research Institutes** (ATARIs formerly called as Zonal Project Directorates)
- ❖ **Applied research done by- KVKs; Basic research by- ICAR Research Institutes; KVKs work starts from Technology testing onwards.**
- ❖ Highest number of KVKs are in- **Zone III, Kanpur, Uttar Pradesh with 89 KVKs**
- ❖ Lowest number of KVKs are in- **Zone VII, Barapani with 43 KVKs.**

❖ KVKs 100% fully funded by- **ICAR**

❖ **Golden Jubilee Celebrations of Krishi Vigyan Kendras:**

- The ICAR established the first KVK on- **21st March 1974 at Puducherry.**
- India has a robust network of **731 kvks with 1KVK in 545 districts and 2KVK in 93 districts each.**
- Each kvk serve more than- **5000 farmers (ICAR)**
- The adoption of KVK recommended technologies have led to a notable **42% increase in the productivity, housing and healthcare of farmers.**
- Each kvk trains around 100 individuals annually in agriprenurship with approximately **25% trainees embarking on self employment ventures.**
- Cluster Front line demonstration program by kvks has played a crucial role in bolstering pulse production from 17.70 MT to 27.80 MT.

❖ According to study by IFPRI, KVK interventions have resulted in an additional net farm income of- **Rs.5, 752/ha** demonstrating their effectiveness in enhancing farmer's livelihood.

❖ Anthocyanin Rich Red Okra variety - **Pusa lal Bhindi-1**

Recently released varieties of ICAR:

Crop	Variety	Characteristic
Wheat	DDW 55 (Karan Manjari)	Biofortified durum wheat variety from IIWBR, Karnal
	DBW 327 (Karan Shivani)	Climate resilient and biofortified (Zn- 40.6 ppm) variety released for cultivation in the North Western Plain Zone by CVRC. This variety has a yield potential of 87.7 q/ha with an average yield of 79.4q/ha
	HD 3385	Climate-smart variety, amenable to early sowing and escaping the impact of temperature spikes in March.
	DBW 316 (Karan prema)	New high yielding bread wheat variety released for cultivation under late sown conditions in NEPZ which covers Eastern U.P., Bihar, Jharkhand, Orissa, West bengal, Assam and plains of NE states.
	Karan Varuna (DBW 372)	Recommended for cultivation under irrigated early sown conditions of NWPZ Covering states of Punjab, Haryana, Delhi, Rajasthan, J&K, Rajasthan, H.P. and Uttaranchal.
	Karan Vaidehi (DBW 370)	Recommended for cultivation under irrigated early sown conditions of NWPZ Covering states of Punjab, Haryana, Delhi, Rajasthan, J&K, Rajasthan, H.P. and Uttaranchal. Best chapatti quality score, high protein content & high biscuit spread factor.

	Karan vrinda (DBW 371)	Recommended for cultivation under irrigated early sown conditions of NWPZ Covering states of Punjab, Haryana, Delhi, Rajasthan, J&K, Rajasthan, H.P. and Uttaranchal.
Taro	Sree Hira	New elite variety of taro (<i>colocasia esculenta</i>) suitable for rainfed upland & irrigated medium and lowland conditions of Odisha.
Swagata	Elephant foot yam	A new high yielding variety of elephant foot yam
Rose apple	Arka Neelachal Akshay	Early maturing, high yielding variety of rose apple was developed at ICAR-Central Horticultural Experimental station, Bhubaneswar.
Bengal gram	Pusa JG -16	Climate smart drought hardy chick pea variety.
Thar Vaibhav	Acid lime	A new bunch bearing variety of acid lime
Water spinach	Kashi manu	Upland leafy vegetable
Okra	Kashi Chaman	Tolerant to Yellow Vain Mosaic Virus (YVMV) & Okra Enation Leaf Curl Virus (OELCV), rich in many nutrients and particularly high in vitamin C and K. Chaman is rich source of antioxidants which reduce risk of serious diseases
Onion	Pusa Shobha	Onion variety developed by IARI specifically designed for dehydration

- ❖ Promising sugarcane varieties resistance to pest and diseases developed by Navsari Agricultural University- **CoN13073 & CoN13072**
- ❖ Total registered animal breeds in the country is- **219**

Indian Council of Agriculture Research (ICAR) Umbrella covers	
Research Institutes	72
National Bureaus	06
All-India Coordinated Research Projects + Network Research Projects.	82
Agricultural Universities	74
A. State Agricultural Universities- 63	
B. Deemed Universities- 04	
C. Central Agricultural Universities- 03	
D. Central Universities with agricultural faculty- 04	
National Research centers	12
ATARIs (Agricultural Technology Application Research Institutes)/KVK Zones	11
Project Directorates	12
Krishi Vigyan Kendra's	731

(Source: ICAR).

Chairman's/Heads/Presidents of different Institutes

Institute	Year of establishment	Chairman /Head/president	Headquarter
❖ ICAR	16 th July, 1929	President- Shivraj Chouhan	New Delhi
		DG- Dr. Himanshu Pathak	
❖ **NITI Ayog	1 Jan, 2015	Chairperson- Narendra Modi	New Delhi
		Vice Chairperson-Suman Bery	
		CEO- B.V.R. Subrahmanyam	
❖ Doubling of Farmer Income	2016	Ashok Dalwai	New Delhi
❖ NABARD	12 th July, 1982	Shaji K V	Mumbai
❖ Asia Pacific Rural & Agricultural Credit Association (APRACA)	Oct, 1974	Chairman- Shaji KV	Bangkok, Thailand
		Secretary General- Dr. Prasan Kumar Das	
❖ Agriculture Skill Council of India (ASCI)	2015	Sanjeev Asthana	Gurugram, Haryana
❖ FCI	1965	Ashok Kumar Meena	New Delhi
❖ APEDA	1986	Abhishek Dev	New Delhi
❖ PMFBY	2016	CEO- Ritesh Chauhan	New Delhi
❖ CACP	1965	Vijay Paul Sharma	New Delhi
❖ United Nations	1945,	Antonio Guterres	New York
❖ ICRISAT	1972	Dr. Jacqueline Hughes	Hyderabad
❖ PPV&FR	*2001	Dr. Trilochan Mohapatra	New Delhi
❖ MANAGE	**1986	Dr.P.Chandra Shekara	Hyderabad
❖ FAO	Oct 24, 1945	Qu Dongyu	Rome, Italy
❖ *NAFED	**Oct 2, 1958	Chairman- Jetha Ahir	New Delhi
		MD- Rajbir Singh Panwar	
❖ FSSAI	2011	Apurva Chandra	New Delhi
❖ FICCI	1927	Subhrakant Panda	New Delhi
❖ Cotton Corporation India (CCI)	2003	Lalit Kumar Gupta	New Delhi

❖ NDDB	1965	Meenesh Shah	Anand, Gujarat
❖ RBI	1 April, 1935	Shaktikanta Das	Mumbai
❖ IARI	*1905	Dr. AK Singh	New Delhi
❖ World bank	1945	Ajay Banga	Washington
❖ IFFCO	1967	Chairman-Dileep Sanghani	New Delhi
		MD –U.S. Awasthi	
❖ GST council	2015	Nirmala Sithraman	New Delhi
❖ IMF	1945	Kristalina Georgieva	Washington
❖ NSC	1963	Dr.Maninder Kaur	New Delhi
❖ IRRI	1960	Dr. Yvonne Pinto	Los Banos, Philippines
❖ IRRI South Asia Regional Center-IRRI SARC & CERVA	Dec, 2018	Dr. Sudhanshu Singh	Varanasi
❖ Competition Commission of India (CCI)	14 Oct, 2003	Ravneet Kaur	New Delhi

India's Rank in Different Indices- 2023-24

Index	Rank
Human Development Index	134 (First rank- Norway)
Global Innovation Index (Switzerland- First rank)	40
Global Hunger Index	111
International Intellectual Property Index	42
Gender Gap Index	129
Global Entrepreneur Index	68
Environmental Performance Index	176
Climate change Performance Index	7 th
Ease of Doing Business (EoDB)	63 (New Zealand- First Rank)

- India has emerged as the **3rd largest ecosystem for startups** globally with over 1,12,718 DPIIT-recognized startups and **110 unicorns** across 763 districts of the country as of 03rd October 2023. Nearly 2800 agri startups operating in India. (Source DPIIT).

For more information on schemes/programs launched during 2014-2022, international organizations refer 2022 General Agriculture and 2023 General Agriculture files:

https://www.researchgate.net/publication/371811136_General_Agriculture_Data_2022?_tp=eyJjb250ZXh0Ijp7ImZpcnN0UGFnZSI6InByb2ZpbGUlLCJwYWdlIjoicHJvZmlsZSJ9fQ

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- <https://agricoop.nic.in/>
- <https://apeda.gov.in/milletportal/>
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- <https://education.icar.gov.in/>
- <https://pib.gov.in>
- Ministry of Commerce and Industry

- Ministry of Statistics and Programme Implementation

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