



सत्यमेव जयते

Department of Agriculture & Farmers Welfare  
Ministry of Agriculture & Farmers Welfare  
Government of India

# ANNUAL REPORT

2024-25





# ANNUAL REPORT 2024-25

**Department of Agriculture & Farmers Welfare  
Ministry of Agriculture & Farmers Welfare  
Government of India  
Krishi Bhawan, New Delhi-110 001  
[www.agriwelfare.gov.in](http://www.agriwelfare.gov.in)**



## Contents

<b>S. No.</b>	<b>Chapter</b>	<b>Page No.</b>
1.	Overview	1-20
2.	Functions and Organisational Structure	21-23
3.	Directorate of Economics & Statistics (DES)	24-31
4.	National e-Governance Plan in Agriculture (NeGP-A)	32-43
5.	Mission for Integrated Development of Horticulture (MIDH)	44-58
6.	National Beekeeping and Honey Mission (NBHM) /National Bee Board (NBB)	59-63
7.	National Food Security Mission (NFSM)	64-67
8.	National Food Security Mission (Oilseeds) and National Mission on Edible Oils-Oil Palm (NMOE-OP)	68-76
9.	National Mission for Sustainable Agriculture (NMSA)	77-117
10.	Pradhan Mantri Kisan Samman Nidhi (PM-KISAN)	118-126
11.	National Crop Insurance Programme (NCIP)	127-132
12.	Agricultural Credit	133-137
13.	Agricultural Marketing	138-167
14.	Agricultural Trade Policy, Promotion and Logistics Development	168-173
15.	Rashtriya Krishi Vikas Yojana (RKVY)	174-178
16.	Drought Management	179-180
17.	International Cooperation	181-191
18.	Integrated Scheme on Agriculture Census & Statistics	192-193
19.	Sub-Mission on Agricultural Extension (SMAE)	194-200
20.	Sub-Mission on Seed and Planting Material (SMSP)	201-205
21.	Sub Mission on Agricultural Mechanization (SMAM)	206-219
22.	Sub-Mission on Plant Protection and Plant Quarantine (SMPPQ)	220-241
23.	Gender Perspective in Agriculture	242-259
24.	Accounting Organisation of Department	260-269
25.	Annexures	277-282



# Chapter 1

## OVERVIEW

### Overview

Agriculture plays a vital role in India's economy. 54.6 % of the total workforce is engaged in agriculture and allied sector activities (Census 2011) and accounts for 18.4 % of India's GVA at current prices during 2022-23. Given the importance of the agriculture sector, Government of India has taken several steps for its development in a sustainable manner.

#### 1.1 Land Use Statistics

As per Land Use Statistics for 2022-23, the Reported area of our country is 306650 thousand hectares, of which around 59% is agricultural land, 140705 thousand hectares is the reported net sown area and 219357 thousand hectares is the gross cropped area

with a cropping intensity of 155.9%. Net area sown comprises of 42.8% of the total geographical area. At all India level, total cropped area has increased by 66.31 percent in 2022-23 as compared to 1950-51 (131893 thousand hectares in 1950-51 to 219357 thousand hectares in 2022-23). The net irrigated area during 2022-23 was 79312 thousand hectares, out of which 22.85% was accounted by canal source of irrigation, 2.82 % by tanks, 49.34 % by Tube wells, 13.46% by other wells and remaining 11.53% is irrigated by other source of irrigation. The gross irrigated area in 2022-23 was estimated at 122294 thousand hectares, which was 55.75 % of the gross cropped area. The details of important parameters of Land Use Statistics for the year 2022-23 are given in the table below.

**Table-1**

<b>Details of important parameters of Land Use Statistics for the year 2022 -23</b>		
		(thousand hectares)
<b>A) Classification of land</b>		
	Reporting area for land utilization statistics (1 to 9)	306650
1	Forests	72021
2	Area put to non -agricultural uses	27845
3	Barren & unculturable land	16554
4	Permanent pastures & other grazing lands	10248
5	Culturable Wasteland	11659
6	Land under Misc. tree Crops	2992
7	Fallow Land Other than Current Fallows	11128
8	Current Fallow	13498
9	Net Area Sown	140705
	Agricultural Land (5+6+7+8+9)	179982
	Cultivated Land (8+9)	154203
	Cropping Intensity (% of Total cropped Area over Net Area Sown)	155.9
<b>B) Irrigated Area</b>		
1	Government Canals	17959
2	Private Canals	165
3	Total Canals (1+2)	18124

# Department of Agriculture & Farmers Welfare

4	Tanks	2235
5	Tubewells	39134
6	Other wells	10672
7	Other Sources	9147
	Net Irrigated Area (3+4+5+6+7)	79312
	Gross Irrigated Area	122294
	% of Gross Irrigated Area over Gross Cropped Area	55.8
	% of Net Irrigated Area over Net Area Sown	56.4

<b>C) Area under crops</b>	
Total Foodgrains	136309
Total Cereals & Millets	108781
Rice	49527
Wheat	34994
Total Pulses	27528
Total Condiments and Spices	4598
Total Fruits & Vegetables	12024
Total Food Crops	160244
Total Oilseeds	33181
Sugarcane	6794
Cotton	13009
Total non food crops	59113
Total Cropped Area	219357

Source: Land Use Statistics for 2022-23, Agriculture Census Unit, Economics, Statistics & Evaluation Division, DA&FW.

### **1.3 Gross Value Added of Agriculture & Allied Sector**

As per the Provisional Estimates of National Income, 2023-24, released by National Statistical Office (NSO), Ministry of Statistics & Programme Implementation, the agriculture and allied sectors

contributed approximately 17.7 % of India's Gross Value Added, (GVA) at current prices during 2023-24. The absolute Gross Value Added of agriculture and allied sectors and its share in total GVA of the country at current prices during the last 6 years is as follows:

**Table-2**  
**Gross Value Added of Agriculture & Allied Sector** (Rs. In Crore)

Items	Years					
	2018-19	2019-20	2020-21	2021-22	2022-23@	2023-24\$
GVA of Agriculture and Allied Sectors	3029925	3368471	3706469	4099473	4484268	4725223
GVA share of Agriculture & Allied Sector (%)	17.6	18.3	20.4	18.9	18.2	17.7

Source: National Statistical Office, Ministry of Statistics and Programme Implementation, Govt. of India  
@First Revised Estimates,\$ Provisional Estimate as on 31st May 2024

## 1.4 Growth in Gross Value Added of Agriculture and Allied Sectors

The following table represents the growth in the economy's total GVA as well as the growth of the agriculture and allied sectors and its sub sectors at

2011-12 basic prices over the previous year. The economy as a whole is expected to grow by 7.2 percent in 2023-24, while agriculture and allied sectors is expected to rise by 1.4 percent.

Table-3

(In percent)

Year	Total Economy	Agriculture & Allied Sector	Crops	Livestock	Forestry & Logging	Fishing
2018-19	5.8	2.1	-2.4	8.7	7.6	8.5
2019-20	3.9	6.2	5.7	7.5	6.1	4.5
2020-21	-4.1	4.0	2.6	6.2	5.8	3.8
2021-22	9.4	4.6	3.2	6.4	0.6	13.0
2022-23@	6.7	4.7	4.7	5.0	1.0	8.3
2023-24\$	7.2	1.4		To be Released		

Source: National Statistical Office, Ministry of Statistics and Programme Implementation @First Revised Estimates, \$ Provisional Estimate as on 31st May 2024.

## 1.5 Rainfall 2023

### Monsoon Rainfall (June – September)

The cumulative rainfall in the country during the southwest monsoon season i.e. 01st June to 30th September, 2024 was 108% of its long period average (LPA). Rainfall in the four broad geographical divisions of the country during the above period has been higher than LPA by 7% in North-West India, 19% in Central India, 14% in South Peninsula but lower than LPA by 14% in East & North East India.

Out of the total 36 meteorological subdivisions, 2 subdivisions received large excess rainfall, 10 subdivisions received excess, 21 subdivisions received normal rainfall and 3 subdivisions received deficient season rainfall.

Out of 724 districts for which rainfall data is available, 47 districts (6%) received large excess rainfall, 178 districts (25%) received excess rainfall, 340 districts (47%) received normal rainfall, 149

districts (21%) received deficient rainfall and 10 districts (1%) received large deficient rainfall.



## **Post-Monsoon (October - December)**

During the post-monsoon season (1st October to 30th October, 2024) country received rainfall which was equal to the LPA. Out of 36 meteorological subdivisions, 11 received large excess/excess rainfall, 08 received normal rainfall and 17 met subdivisions received deficient/large deficient rainfall.

### **1.6 Production Scenario 2023-24**

As per Final Estimates for 2023-24, total foodgrain production in the country is estimated at record 3322.98 Lakh tonnes which is higher by 26.11 Lakh tonnes than the production of foodgrains of 3296.87 Lakh tonnes achieved during 2022-23. Further, the production during 2023-24 is higher by 245.46 Lakh tonnes compared to average production of foodgrains during last five years. Total production of Rice during 2023-24 is estimated at record 1378.25 Lakh tonnes. It is higher by 20.70 Lakh tonnes than previous year's Rice production of 1357.55 Lakh tonnes and by 128.37 Lakh tonnes than the last five years' average production of 1249.88 Lakh tonnes. Production of wheat during 2023-24 is estimated at record 1132.92 Lakh tonnes. It is higher by 27.38 Lakh tonnes than previous year's wheat production of 1105.54 Lakh tonnes. Production of nutri / coarse cereals estimated at 569.36 Lakh tonnes, which is similar to the production of 573.19 Lakh tonnes

achieved during 2022-23. Further, it is higher by 68.26 Lakh tonnes than the average production. Production of Shree Anna is estimated at 175.72 Lakh tonnes. Total pulses production during 2023-24 is estimated at 242.46 Lakh tonnes which is lower by 5.39 Lakh tonnes than the last five years' average pulses production of 247.85 Lakh tonnes.

Total oilseeds production in the country during 2023-24 is estimated at record 396.69 Lakh tonnes which is lower by 16.86 Lakh tonnes than the oilseed production during 2022-23. Further, the production of oilseeds during 2023-24 is higher by 36.68 Lakh tonnes than the average oilseeds production of 360.01 Lakh tonnes.

Total production of sugarcane in the country during 2023-24 is estimated at 4531.58 Lakh tonnes. The production of sugarcane during 2023-24 is lower by 373.75 Lakh tonnes than the previous year sugarcane production of 4905.33 Lakh tonnes. Production of cotton is estimated at 325.22 Lakh bales (of 170 kg each) is lower by 11.38 Lakh bales than the previous year's cotton production. Production of jute & mesta is estimated at 96.92 Lakh bales (of 180 kg each).

The data on area, production and yield of major crops from the year 2021-22 to 2023-24 is given in the table below:

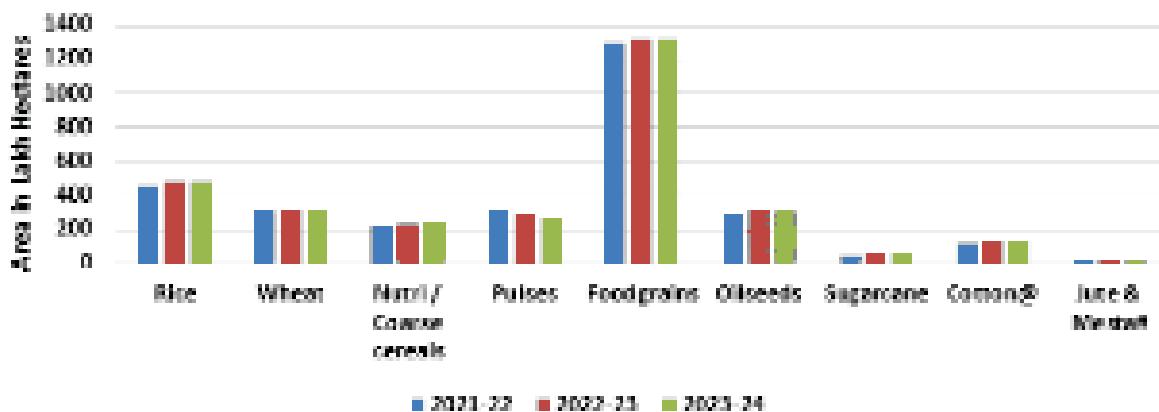
**Table-4**  
**Area, production and yield of major Crops**

Crops	Area (Lakh hectare)			Production (Lakh Tonnes)			Yield (kg/hectare)		
	2021-22	2022-23	2023-24	2021-22	2022-23	2023-24	2021-22	2022-23	2023-24
Rice	462.79	478.32	478.28	1294.71	1357.55	1378.25	2798	2838	2882
Wheat	304.59	314.01	318.33	1077.42	1105.54	1132.92	3537	3521	3559
Nutri / Coarse cereals	227.00	240.70	249.38	511.01	573.19	569.36	2251	2381	2283
Pulses	307.31	289.00	275.05	273.02	260.58	242.46	888	902	881
Foodgrains	1301.69	1322.04	1321.04	3156.16	3296.87	3322.98	2425	2494	2515
Oilseeds	289.45	302.39	301.92	379.63	413.55	396.69	1312	1368	1314
Sugarcane	51.75	58.85	57.40	4394.25	4905.33	4531.58	84906	83349	78953
Cotton@	123.72	129.27	126.88	311.18	336.60	325.22	428	443	436
Jute & Mesta#	6.67	6.58	6.37	101.49	93.92	96.92	2738	2569	2737

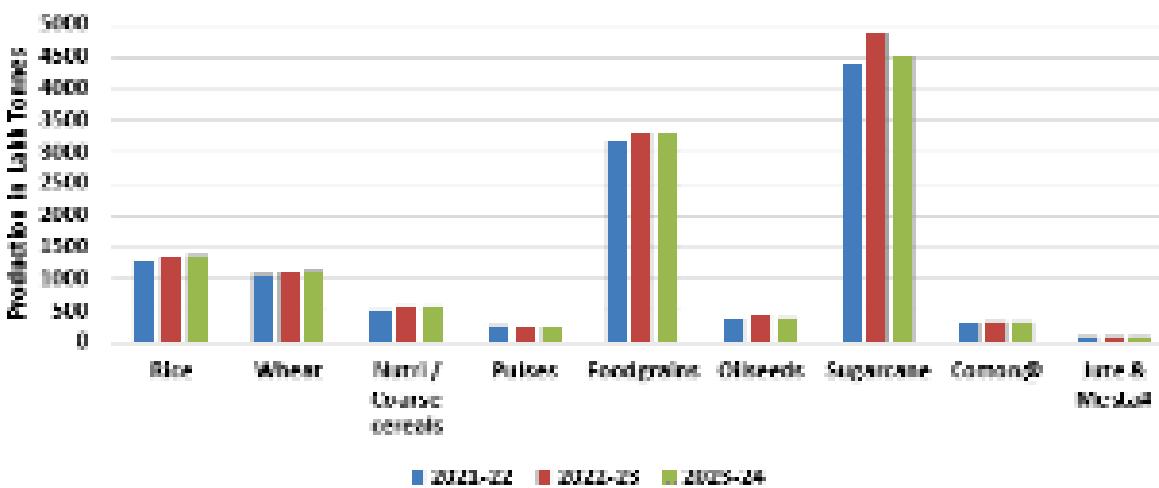
@ Production in Lakh bales of 170 kg each

# Production in Lakh bales of 180 Kg. each.

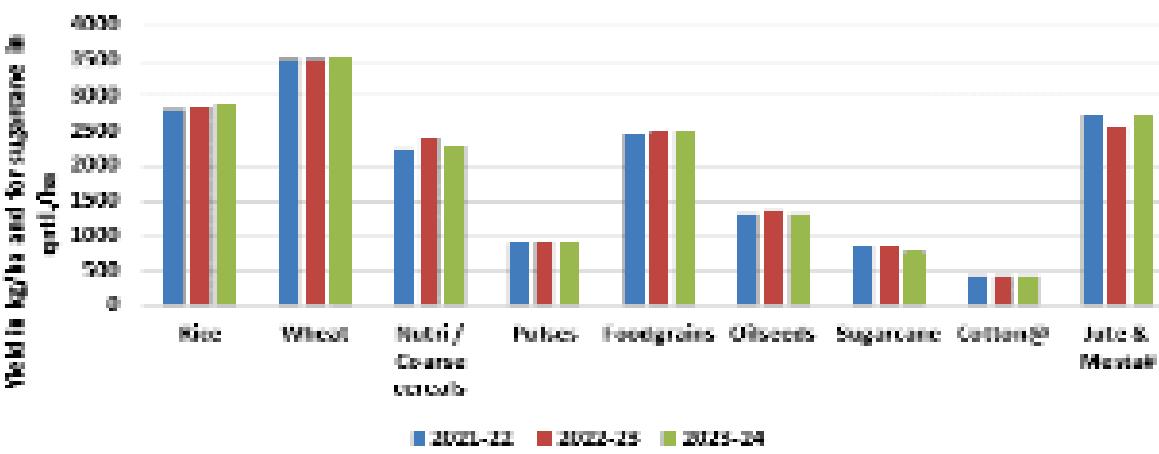
**Fig.-1**  
AREA: 2021-22 to 2023-24



**Fig.-2**  
PRODUCTION: 2021-22 to 2023-24



**Fig.-3**  
YIELD: 2021-22 to 2023-24



## 1.7 Production Scenario as per First Advance Estimates 2024-25 (Kharif Only)

The total Kharif Foodgrain production for 2024-25, as per the First Advance Estimates, is projected at 1647.05 Lakh Metric Tonnes (LMT) which is higher by 89.37 LMT as compared to previous year kharif foodgrain production and 124.59 LMT higher than average kharif foodgrain production. Foodgrain production witnessed record increase due to good production of Rice, Jowar and Maize.

The total production of Kharif Rice during 2024-25 is estimated to be 1199.34 LMT which is higher by 66.75 LMT than the previous year kharif rice production and 114.83 LMT higher than average kharif rice production. The Kharif Nutri/coarse cereals is estimated to be 378.18 LMT. Further, the total Kharif pulses production during 2024-25 is estimated to be 69.54 LMT. The total Kharif oilseeds production in the country during 2024-25 is estimated to be 257.45 LMT which is higher by 15.83 LMT than the previous year total kharif oilseeds production. The production of Sugarcane in the country during 2024-25 is estimated to be 4399.30 lakh tonnes. The production of Cotton is estimated to be 299.26 lakh bales (of 170 kg each).

## 1.8 Minimum Support Price

- The Government's price policy for major agricultural commodities seeks to ensure remunerative prices to the growers for their produce with a view to encouraging higher investment and production and to safeguard the interest of consumers by making available supplies at reasonable prices. Towards this end, Government announces Minimum Support Prices (MSPs) for twenty-two (22) mandated crops based on the recommendations of the Commission for Agricultural Costs & Prices (CACP) after considering the views of concerned State Governments and Central Ministries/Departments. The 22 mandated crops include 14 Kharif crops viz. paddy, jowar, bajra, maize, ragi, arhar, moong, urad, groundnut, soybean (yellow), sunflower seed, sesamum, nigerseed, cotton and 6 Rabi crops viz. wheat, barley, gram, masur (lentil), rapeseed & mustard, safflower and two commercial crops viz. jute and copra. In addition

to that, MSP for toria and de-husked coconut are also fixed on the basis of MSPs of rapeseed & mustard and copra respectively.

- While recommending MSPs, CACP considers important factors like cost of production, overall demand-supply situation of various crops in domestic and world markets, domestic and international prices, inter-crop price parity, terms of trade between agricultural and non-agricultural sector, likely effect of price policy on rest of the economy and a minimum of 50 percent as the margin over cost of production.
- The Union Budget for 2018-19 had announced the pre-determined principle to keep MSP at levels of one and half times of the cost of production. Accordingly, Government has increased the MSPs for all mandated Kharif, Rabi and other commercial crops with a return of atleast 50 per cent over all India weighted average cost of production from the agricultural year 2018-19. In line with the same principle, Government has announced the increase in MSP for all mandated Kharif crops of Kharif Marketing Season (KMS) 2024-25 on 19th June 2024, for all mandated Rabi crops of year 2024-25 (Rabi Marketing Season(RMS) 2025-26)on 16th October, 2024, MSP for Copra for 2025 season on 20th December, 2024, MSP for Raw Jute for 2025-26 season on 22th January, 2025 and MSP for Toria for RMS year 2025-26 on 17th December, 2024.

## Details of MSP of Kharif, Rabi and Commercial Crops viz. Copra & Jute and Toria

- Kharif Crops:** MSP for Kharif Crops ranges from Rs. 9267 per quintal (sesamum) to Rs. 2225 per quintal (maize) for Kharif Marketing season(KMS) 2024-25. The highest absolute increase in MSP of Kharif crops for KMS 2024-25 over the previous year has been recommended for nigerseed (Rs. 983 per quintal) followed by sesamum (Rs. 632 per quintal). In case of tur (arhar), sunflower seed, cotton (both long staple & medium staple), and urad , there has been an increase of Rs 550 per quintal, Rs 520 per quintal, Rs 501 per quintal

and Rs 450 per quintal respectively in comparison to last year. The expected returns to farmers over their cost of production are estimated to be highest in case of bajra (77%) followed by tur (59%), maize (54%) and urad (52%). For rest of the crops, return to farmers over their cost of production is estimated to be at least 50%.

- Rabi crops:** Similarly, MSP for Rabi Crops ranges from Rs. 6700 per quintal (lentil) to Rs. 1980 per quintal (barley) for Rabi Marketing season (RMS) 2025-26. The highest absolute increase in MSP of Rabi Crops for the RMS 2025-26 over the previous year has been recommended for rapeseed & mustard at ₹ 300 per quintal followed by lentil (masur) at ₹ 275 per quintal. In case of gram, wheat, safflower and barley, there has been an increase of Rs 210 per quintal, Rs 150 per quintal, Rs 140 per quintal and Rs 130 per quintal respectively in comparison to last year. The expected return to farmers over their cost of production is estimated to be highest in case of Wheat (105%) followed by rapeseed/mustard (98%) and lentil (89%). For barley and gram, the

return cost of production is estimated to be 60 %. For Safflower, the expected return over cost of production is 50%.

- Copra:** For 2025 season, MSP of milling copra is fixed at Rs. 11582/- per quintal and for ball copra at Rs. 12100/- per quintal. The MSP provides a return of 50 percent for milling copra over the all India weighted average cost of production estimated at Rs. 7721// per quintal for 2024-25 season.
- Raw Jute:** For 2025-26 season, the MSP for raw jute (TD-3 grade) is fixed at Rs. 5,650/- per quintal. The MSP provides returns of 66.8 percent over the all India weighted average cost of production estimated at Rs. 3387/- per quintal for 2025-26 season.
- Toria:** The MSP of Toria for RMS 2025-26 was fixed at Rs. 5950/-per quintal marking an increase of 5.3 percent over the previous season's MSP.

Statement showing Costs, MSPs and percent return over cost for the all mandated crops for the year 2022-23, 2023-24 and 2024-25 is enclosed.

#### Cost\*, Minimum Support Prices (MSP) and Return Statement

Sl. No.	Commodity	KMS 2022 -23			KMS 2023-24			KMS 2024 -25		
		Cost*	MSP	% Return over Cost	Cost*	MSP	% Return over Cost	Cost*	MSP	% Return over Cost
1	PADDY(Common)	1360	2040	50	1455	2183	50	1533	2300	50
	(Grade A) ^		2060			2203			2320	
2	JOWAR (Hybrid)	1977	2970	50	2120	3180	50	2247	3371	50
	(Maldandi) ^		2990			3225			3421	
3	BAJRA	1268	2350	85	1371	2500	82	1485	2625	77
4	RAGI	2385	3578	50	2564	3846	50	2860	4290	50
5	MAIZE	1308	1962	50	1394	2090	50	1447	2225	54
6	ARHAR(Tur)	4131	6600	60	4444	7000	58	4761	7550	59
7	MOONG	5167	7755	50	5705	8558	50	5788	8682	50
8	URAD	4155	6600	59	4592	6950	51	4883	7400	52
9	COTTON (Medium Staple)	4053	6080	50	4411	6620	50	4747	7121	50
	(Long Staple) ^		6380			7020			7521	
10	GROUNDNUT IN SHELL	3873	5850	51	4251	6377	50	4522	6783	50
11	SUNFLOWER SEED	4113	6400	56	4505	6760	50	4853	7280	50

# Department of Agriculture & Farmers Welfare

Sl. No.	Commodity	KMS 2022 -23			KMS 2023-24			KMS 2024 -25		
		Cost*	MSP	% Return over Cost	Cost*	MSP	% Return over Cost	Cost*	MSP	% Return over Cost
12	SOYABEAN	2805	4300	53	3029	4600	52	3261	4892	50
13	SESAMUM	5220	7830	50	5755	8635	50	6178	9267	50
14	NIGERSEED	4858	7287	50	5156	7734	50	5811	8717	50
<b><u>RABI CROPS</u></b>		<b>RMS 2023 -24</b>			<b>RMS 2024 -25</b>			<b>RMS 2025 -26</b>		
1	WHEAT	1065	2125	100	1128	2275	102	1182	2425	105
2	BARLEY	1082	1735	60	1158	1850	60	1239	1980	60
3	GRAM	3206	5335	66	3400	5440	60	3527	5650	60
4	MASUR (LENTIL)	3239	6000	85	3405	6425	89	3537	6700	89
5	RAPESEED/MUSTARD	2670	5450	104	2855	5650	98	3011	5950	98
6	SAFFLOWER	3765	5650	50	3807	5800	52	3960	5940	50
7	TORIA ^		5450			5650			5950	
<b><u>OTHER CROPS</u></b>		<b>2022 Season</b>			<b>2023 Season</b>			<b>2024 Season</b>		
1	COPRA (Calendar Year) (Milling)	6974	10590	52	7153	10860	52	7350	11160	52
	(Ball) ^		11000			11750	64		12000	
2	DE-HUSKED COCONUT (Calendar Year) ^		2860			2930			3013	
		<b>2022-23 Season</b>			<b>2023-24 Season</b>			<b>2024-25 Season</b>		
3	JUTE	2959	4750	61	3095	5050	63	3237	5335	65

\* Refers to cost which includes all paid out costs such as those incurred on account of hired human labour, bullock labour/machine labour, rent paid for leased in land, expenses incurred on use of material inputs like seeds, fertilizers, manures, irrigation charges, depreciation on implements and farm buildings, interest on working capital, diesel/electricity for operation of pump sets etc., miscellaneous expenses and imputed value of family labour.

^ Cost data are not available for Paddy (Grade A), Jower (Maldandi), Cotton (Long staple), Toria, Copra (Ball) and De-husked Coconut. MSPs of Toria and De-husked coconut are determined on the basis of MSPs of Rapeseed/Mustard and Copra respectively.

KMS: Kharif Marketing Season, RMS: Rabi Marketing Season

## 1.9 Doubling of Farmers' Income (DFI):

The Government has adopted the vision of Doubling Farmers Income by 2022. This vision shared by the Hon'ble Prime Minister in April 2016 was adopted as a commitment in the Budget 2016-17 and immediately thereafter, an inter-ministerial committee was constituted on 13th April, 2016 to recommend comprehensive strategies for achieving the goal.

The Government of India has identified the following seven sources for enhancing growth of farmers:-

- i. Increase in crop productivity
- ii. Increase in livestock productivity
- iii. Resource use efficiency - reduction in cost of production
- iv. Increase in cropping intensity
- v. Diversification to high value agriculture

- vi. Remunerative prices on farmers' produce
- vii. Shift of surplus manpower from farm to non-farm occupations

To achieve the above seven objectives, Government of India supplements the efforts of States and welfare of farmers through appropriate policy measures and budgetary support and various schemes/ programmes. The Government has substantially enhanced the budget allocation of Department of Agriculture & Farmers Welfare (DA&FW) from Rs. 21933.50 crore during 2013-14 to Rs. 122528.77 crore in 2024-25.

The various schemes/programmes of the Government of India are meant for the Welfare of farmers by increasing production, remunerative returns and income support to farmers, which include:

1. Pradhan Mantri Kisan Samman Nidhi (PM-KISAN)
2. Pradhan Mantri Kisan MaanDhan Yojana (PM-KMY)
3. Pradhan Mantri Fasal Bima Yojana (PMFBY)/ Restructured Weather Based Crop Insurance Scheme (RWBCIS)
4. Modified Interest Subvention Scheme (MISS)
5. Agriculture Infrastructure Fund (AIF)
6. Formation and Promotion of 10,000 Farmers Producers Organizations (FPOs)
7. Pradhan Mantri Annadata Aay Sanrakshan Abhiyan (PM-AASHA)
8. Agri Fund for Start-Ups & Rural Enterprises' (AgriSURE)
9. Per Drop More Crop (PDMC)
10. Sub-Mission on Agriculture Extension (SMAE)
11. Sub-Mission on Agriculture Mechanization (SMAM)
12. Sub-Mission on Seed and Planting Material (SMSM)
13. Paramparagat Krishi Vikas Yojana (PKVY)
14. National Food Security and Nutrition Mission (NFSNM)
15. Digital Agriculture Mission
16. Integrated Scheme for Agriculture Marketing (ISAM) - National Agriculture Market (ISAM-eNAM)
17. Integrated Scheme for Agriculture Marketing (ISAM) - Others (ISAM-Others)
18. Mission for Integrated Development of Horticulture (MIDH)
19. Soil Health Card (SHC)
20. Rainfed Area Development (RAD)
21. National Mission on Edible Oils (NMEO)-Oil Palm
22. National Mission on Edible Oils (NMEO)-Oilseeds
23. National Beekeeping and Honey Mission (NBHM)
24. Mission Organic Value Chain Development for North Eastern Region

25. Agroforestry
26. Crop Diversification Programme (CDP)
27. National Bamboo Mission

The NITI Aayog (erstwhile Planning Commission) has conducted a study entitled "Efficacy of minimum support prices on farmers", in 2016. The study has found, among other things, that MSP declared by the Government has encouraged 78% of the farmers covered under the study for adopting improved methods of farming such as high yielding varieties of seeds, organic manure, chemical fertilizer, pesticides and improved methods of harvesting etc.

Indian Council on Agricultural Research (ICAR) has released a compilation of success stories of 75,000 farmers who have increased their income more than two times by convergence of schemes being operated by Ministry of Agriculture & FW and the allied Ministries/Departments.

**1.9.1. Agriculture Infrastructure Fund (AIF)** - In order to address the existing infrastructure gaps and mobilize investment in agriculture infrastructure, Agri Infra Fund was launched under Aatmanirbhar Bharat Package. AIF was introduced with a vision to transform the agriculture infrastructure landscape of the country. The Agriculture Infrastructure Fund is a medium - long term debt financing facility for investment in viable projects for post-harvest management infrastructure and community farming assets through interest subvention and credit guarantee support. The Fund of Rs. 1 lakh crore under the scheme will be disbursed from FY 2020-21 to FY2025-26 and the support under the scheme will be provided for the duration of FY2020-21 to FY2032-33.

Under the scheme, Rs. 1 Lakh Crore will be provided by banks and financial institutions as loans with interest subvention of 3% per annum and credit guarantee coverage under CGTMSE & NAB sanrakshan for loans up to Rs. 2 Crores. Further, each entity is eligible to get the benefit of the scheme for up to 25 projects located in different LGD codes.

Eligible beneficiaries include Farmers, Agri-entrepreneurs, Start-ups, Primary Agricultural Credit Societies (PACS), Marketing Cooperative

# Department of Agriculture & Farmers Welfare

Societies, Farmer Producers Organizations(FPOs), Self Help Group (SHG), Joint Liability Groups (JLG), Multipurpose Cooperative Societies, Central/State agency or Local Body sponsored Public Private Partnership Projects, State Agencies, Agricultural Produce Market Committees (Mandis), National & State Federations of Cooperatives, Federations of FPOs (Farmer Produce Organizations) and Federations of Self Help Groups (SHGs).

## Eligible Projects

The scheme will facilitate setting up and modernization of key elements of the value chain including

### (A) Post Harvest Management Projects like:

Supply chain services including e-marketing platforms, Warehouses, Silos, Pack houses, Assaying units, sorting & grading units, Cold chains, Logistics facilities, Primary processing centers, Ripening Chambers

### (B) Viable farming assets including -

- Organic inputs production
- Bio stimulant production units
- Infrastructure for smart and precision agriculture:

- Purchase of drones, putting up specialized sensors on field, blockchain and AI in agriculture etc.
- Remote sensing and Internet of Things (IOT) such as automatic weather station,
- Farm advisory services through GIS applications.
- Farm/Harvest Automation
- Integrated production and processing unit for sericulture, apiculture and spirulina
- Plant Quarantine unit.
- PM Kusum – Component A, B and C.
- Hydroponic Farming.
- Mushroom farming
- Vertical farming.
- Poly house/ Greenhouse.
- Projects identified for providing supply chain infrastructure for clusters of crops including export clusters.
- Projects promoted by Central/State/Local Governments or their agencies under PPP for building viable farming assets or post-harvest management projects.

## Nation-wide Progress under the scheme

(Amount in Rs Crores)

SN	Particulars	Commercial Banks		PACS		Total	
		No.	Amount	No.	Amount	No.	Amount
1	Total Loan Sanctioned	78287	49897	9607	2,987	87894	52885
2	Amount Covered under AIF Subvention	78287	37085	9607	2,987	87894	40072
3	Amount Disbursed	71228	34184	7544	1,074	78772	35259

As 31st December 2024, Rs. 52,885 Crores have been sanctioned for 87,894 projects under AIF, out of this total sanctioned amount ₹40072 Crores are covered under scheme benefits. These sanctioned projects have mobilized an investment of Rs 87008 Crores in agriculture sector.

Major projects sanctioned under AIF include 23499 custom hiring centres, 18121 primary processing

units, 14342 warehouses, 3338 sorting & grading units, 2081 cold store projects, around 26,513 other kinds of post-harvest management projects and community farming assets. Year on Year Progress of the Scheme has also been promising and it is increasing over the period. Table given below highlights the progress of the scheme:-

<b>Year</b>	<b>No. of Sanctioned Project</b>	<b>Investment in Infra Project ( Crores)</b>	<b>Loan Sanctioned under AIF ( Crores)</b>
2020 -21	5682	4691	3838
2021 -22	5785	9613	5749
2022 -23	15973	24181	13031
2023 -24	33,915	28,782	17,399
2024 -25*	26539	19741	12868
<b>Total</b>	<b>87894</b>	<b>87008</b>	<b>52885</b>

\* Up to 31st December 2024

### **Major Activities conducted during 2024-25**

To increase the awareness and reach of the scheme, various activities like seminars, conclaves, meetings are arranged at different forums and results are also very promising. Some of the activities conducted during the Year 2024-25 has been given below:

- Meeting with PSBs and select Private sector Banks and SPMUs on last year's performance, strategy for new financial year and on Krishi mapper implementation on Geo-tagging on 10.04.2024.
- Meeting through VC with SPMU's to discuss the progress of Geo-tagging on krishi mapper application on 30.04.2024.
- Interactive session for convergence under MOVCDNER on May 3, 2024 at Shillong, Meghalaya
- Meeting through VC with Commercial Banks, RRBs & state nodal offices in the presence of Director Shree K. R. Meena regarding opening of Account in E-Kuber platform of RBI on 03.05.2024.
- Meeting with NABARD Head Office and Regional Offices on Interest subvention process.
- Meeting with co-operative department officials on 14.05.2024.
- Presentation of Interest Subvention automation module by NABARD officials on 15.05.2024.
- VC with all major banks on the roadmap for AIF's progress in the FY 2024-25 on 17.05.2024
- VC Meeting with Banks regarding submission of claims & opening of E-Kuber Accounts on 21.05.2024.
- Release of the inaugural issue of the AIF Monthly Bulletin on 22.05.2024.
- Meeting with Andhra Pradesh Co Operative Bank and AP NABARAD RO officials regarding DPR issues on 11.06.2024
- Release of the May 2024 issue of the AIF Monthly Bulletin on 12.06.2024.
- Meeting with Banks regarding pre-launch discussions about ARISE Campaign on 14.06.2024.
- Launch of ARISE Campaign on 18.06.2024.
- Telephonic Follow-up with PSBs regarding the ongoing Campaign on 19.06.2024 & 20.06.2024.
- VC meeting with State PMUs on Review of AIF Progress & Geo Tagging on 25.06.2024.
- Review meeting with selected RRBs and SCBs regarding progress in ARISE Bank Campaign on 04.07.2024 & 05.07.2024.
- Meeting with officials from PFMS & NPCI regarding feasibility of making payments through Direct Beneficiary Transfer (DBT) mode under AIF on 10.07.2024.
- Telephonic review conversation with SCBs regarding the progress during ARISE Bank Campaign on 15.07.2024.

## Department of Agriculture & Farmers Welfare

- Meetings with Co operative banks of Karnataka regarding discussion of Claim submission by PACS on 22.07.2024.
- Training session for online submission of Interest subvention claims with NABARD RO Bengaluru on 29.07.2024.
- Telephonic conversation with banks regarding earliest possible sanction of applications verified during the ARISE Campaign on 06.08.2024.
- Review Meeting with SCBs regarding sanctions post ARISE Campaign on 21.08.2024.
- Cabinet Approval regarding modification in the scheme (Progressive Expansion) received in 28.08.2024.
- AIF Excellence Award ceremony on 03.09.2024.
- Meeting with Regional office of NABARD regarding interest subvention on 06.09.2024.
- Meeting with NABARD's IT team about new AIF IS Portal functionality issues on 12.09.2024.
- Meetings and live trial, testing of automation for CHC applications.
- Participation in World Food India event from 19.09.2024 to 22.09.2024.
- Meetings with banks regarding progressive expansion of AIF on 24.09.2024.
- AIF workshop at Dimapur, Nagaland on 14.10.2024.
- VC with Vendor attended by CPMU & Ministry Officials regarding AIFIS Portal on 22.10.2024.
- Performance Review meeting for Northern Region at Regional Conference on 07.11.2024
- Interaction and progress review meeting with Banks regarding development of scheme and Presentation of CHC automation on 13.10.2024.
- Performance Review meeting for Southern Region at Regional Conference on 18.11.2024
- Training session conducted on 19.11.2024 for Bank officials to train bankers for "AIF SCHEME PORTAL CENTRAL ADMIN ROLE".
- Performance Review meeting for Eastern Region at Regional Conference on 22.11.2024
- AIF participation in India International Trade Fair from 14.11.24 to 27.11.24
- Review meeting with bankers on 10.12.2024
- Meeting with banks regarding claim and release of Interest Subvention on 17.12.2024.

### Some Snapshots of the activities conducted during 2024-25



**11. Recommended**  
**Narendra Modi (B-@narendramodi - Aug 19)**  
 The decision by the Cabinet on the expansion of Central Sector Scheme of Agriculture Infrastructure Fund is yet another measure of the importance attached to agriculture and farmer welfare. This decision will ensure a boost of income for farmers and encourage entrepreneurship.

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**Sambit Patra (b\_gaurabtawary) - Aug 20**  
 The cabinet chaired by PM Sri @narendramodi has approved the progressive expansion of the Central Sector Scheme, Agriculture Infrastructure Fund.

This decision will act as a facilitator for boosting growth and productivity in the farming sector. It also aligns with the Mission.

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**12. Recommended**  
**Ajay Prakash Ranjan (B-@ajayprakashranjan - Aug 19)**  
 The joint-Cabinet, chaired by Hon. PM Sri @narendramodi B, has approved the progressive expansion of the Central Sector Scheme, Agriculture Infrastructure Fund.

This initiative aims to significantly boost agricultural infrastructure across the country and provide greater

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**13. Recommended**  
**Ajay Prakash Ranjan (B-@ajayprakashranjan - Aug 19)**  
 The joint-Cabinet, chaired by Hon. PM Sri @narendramodi B, has approved the progressive expansion of the Central Sector Scheme, Agriculture Infrastructure Fund.

This initiative aims to significantly boost agricultural infrastructure across the country and provide greater

[View more](#)

**14. Recommended**  
**Shivraj Singh Chouhan (B-@ChouhanShivraj - Aug 20)**  
 Hon'ble Sri Shri @ajayprakashranjan

संसदीय पालियां द्वारा अप्रैल से जुलाई तक इन्हें उत्तराखण्ड के लिए बढ़ावा दी गई है। इनका उत्तराखण्ड के लिए बढ़ावा दी गई है।

गोपनीय श्री अमित शर्मा, उत्तराखण्ड के लिए बढ़ावा दी गई है।

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**15. Recommended**  
**Ajay Prakash Ranjan (@AJAYPRAKASHRANJAN) - August 2024**  
 In a significant expansion of its programme for agriculture, the Government has approved the expansion of the Central Sector Scheme of Infrastructure and Processing Facilitation Agriculture Infrastructure Fund (CISF).

• Significant expansion areas:

- Infrastructure and technological enhancement of horticultural processing, organic food and agroforestry sectors.

[View more](#)

**16. Recommended**  
**Priti Patel (@PritiPatel\_Bengaluru) - August 2024**  
 The Cabinet approved this programme for agriculture for Central Sector Scheme of Infrastructure and Processing Facilitation Agriculture Infrastructure Fund (CISF).

• Significant expansion areas:

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# Department of Agriculture & Farmers Welfare





**Rajiv Adityanath** @rajiv\_adityanath · 4h  
The Union Cabinet, led by Hon. PM Shri @narendramodi Ji has approved the expansion of the Agriculture Infrastructure Fund to support more farming projects and boost agricultural productivity.

This initiative will definitely enhance community farming, promote clean energy and...  
[View post](#)

**Explore** Beta

**Cabinet Approves AIF Expansion**

 4 hours ago · Agriculture

**Rajiv Adityanath** @rajiv\_adityanath · 7h  
Chaired by Prime Minister Shri @narendramodi Ji, the Union Cabinet has granted approval for the progressive expansion of the Central Sector Scheme, 'Agriculture Infrastructure Fund'.

This expansion is set to significantly boost growth, enhance productivity, and increase farm...  
[View post](#)

**Government of India** @govt\_of\_India · May 10  
The Union Cabinet has approved the expansion of the Central Sector Scheme, 'Agriculture Infrastructure Fund'.

Under the existing scheme, the Government of India has allocated Rs 10,000 crore for the expansion of the Central Sector Scheme, 'Agriculture Infrastructure Fund'. This scheme aims to support the development of agriculture infrastructure across the country.







### 1.9.2 The National Beekeeping and Honey Mission (NBHM)-

Govt. of India has approved a Central Sector Scheme entitled “National Beekeeping & Honey Mission (NBHM)” under AatmaNirbhar Bharat Announcement for overall promotion and development of scientific beekeeping and to achieve the goal of “Sweet Revolution” in the country with total budget outlay of Rs. 500.00 crores for 3 years (2020-21 to 2022-23) and the scheme has been further extended for three years, i.e., 2023-24 to

2025-26, with the remaining available budget of Rs. 370.00 crores from the allocated budget of Rs. 500.00 crores. The scheme is being implementing through 3 Mini Missions (MMs) - MM-I, MM-II & MM-III under which thrust will be given on awareness, capacity building/ trainings, focus on women empowerment through beekeeping, setting up of requisite infrastructural facilities, viz.; Integrated Beekeeping Development Centres (IBDCs), Honeybees Disease Diagnostic Labs, Setting/ upgradation of Honey Testing labs, Beekeeping

Equipment Manufacturing Units, Custom Hiring Centres, Api therapy Centres, Development of Quality Nucleus Stock Centres & Bee Breeders, Distribution of Bee Colonies a new Component etc., Digitization/ online registration, etc. under MM-I, processing, value addition, market support, etc. under MM-II and R&D under MM-III.

### **1.10 Pradhan Mantri Annadata Aay SanraksHan Abhiyan" (PM-AASHA)**

Investment & Price Support Division deals with the implementation of Pradhan Mantri Annadata Aay Sanrakshan Abhiyan (PM-AASHA) with the components of Price Support Scheme (PSS) Price Deficiency Payment Scheme (PDPS), Market Intervention Scheme (MIS) and Price Stabilisation Funds(PSF). Out of these four components of PM-AASHA, the PSS, PDPS and MIS are implemented by the Department of Agriculture & Farmers' Welfare (DA&FW), Ministry of Agriculture & Farmers' Welfare whereas PSF is being implemented by Department of Consumer Affairs. The details of PSS, PDPS and MIS alongwith their mode of implementation are as under:-

#### **i. Price Support Scheme (PSS):**

PSS is implemented on the request of the State Govt./ UT that agrees to exempt from levy of Mandi tax on the procurement of notified pulses, oilseeds and copra and make arrangements like booking of CWC/SWC Godowns/scientific storage facility, identification of procurement centres, arrangement of gunny bags, GPRS enabled transportation facilities, weighing machines. Moisture/foreign matters/oil content testing machines etc. in consultation with Central Nodal Agencies (CNAs) like National Agricultural Cooperative Marketing

Federation of India Ltd. (NAFED) and National Co-operative Consumers' Federation of India Ltd. (NCCF) and State level agencies. They shall create revolving fund atleast for PSS operations etc. as required under the guidelines of the scheme. It is implemented within the stipulated period as and when the market prices of agricultural commodities fall below the notified MSP during peak harvesting period to provide the remunerative price to the farmers. The procurement of the notified pulses, oilseeds and copra conforming to the prescribed Fair Average Quality (FAQ) is undertaken by the Central Nodal Agencies (CNAs) at the MSP directly from the pre-registered farmers through the State level agencies.

From the procurement year 2024-25, the sanction for the procurement of notified Pulses, Oilseeds and Copra under PSS is given to the State/UT initially upto a maximum of 25% of the production of the State for that particular season. Subsequently, if the State/UT achieves the overall procurement against sanctioned quantity and further intends to procure more beyond the sanctioned quantity, the proposal for the procurement under the PSS is put up for the consideration of the Committee of Secretaries (CoS) restricted upto a maximum of 25% of the national production. However, in order to incentivize the farmers contributing in enhancement of domestic production of pulses and to reduce the dependence on imports, the Government has allowed the procurement of Tur, Urad and Masur under PSS equivalent to 100% of the production of the State for the procurement year 2024-25. The procurement details of pulses, oilseeds & copra under PSS for the year from 2021-22 to 2024-25 as on 31.12.2024 are as follows:

<b>Details of Pulses, Oilseeds &amp; Copra procured at MSP under PSS from 2021-22 to 2024-25 (as on 31.12.2024)</b>						
<b>Year</b>	<b>Oil seed &amp; Copra</b>		<b>Pulses</b>		<b>Total</b>	
	<b>Quantity Procured (in MT)</b>	<b>MSP Value (Rs. in Lakh)</b>	<b>Quantity Procured (in MT)</b>	<b>MSP Value (Rs. in Lakh)</b>	<b>Quantity Procured (in MT)</b>	<b>MSP Value (Rs. in Lakh)</b>
2021-22	151,634.73	84,261.64	3,030,956.91	1,663,569.77	3,182,591.64	1,747,831.41
2022-23	1,170,656.63	659,950.63	2,831,401.10	1,612,872.31	4,002,057.73	2,272,822.93

# Department of Agriculture & Farmers Welfare

Details of Pulses, Oilseeds & Copra procured at MSP under PSS from 2021-22 to 2024-25 (as on 31.12.2024)						
Year	Oil seed & Copra		Pulses		Total	
	Quantity Procured (in MT)	MSP Value (Rs. in Lakh)	Quantity Procured (in MT)	MSP Value (Rs. in Lakh)	Quantity Procured (in MT)	MSP Value (Rs. in Lakh)
2023-24	1,441,356.22	895,379.35	693,769.32	527,266.69	2,135,125.54	1,422,646.04
2024-25	1,917,319.58	1,136,462.23	150,816.31	130,908.99	2,068,135.89	1,267,371.22
<b>Total</b>	<b>4,680,967.16</b>	<b>2,776,053.85</b>	<b>6,706,943.64</b>	<b>3,934,617.76</b>	<b>11,387,910.80</b>	<b>6,710,671.61</b>

## ii. Price Deficit Payment Scheme (PDPS):

PDPS envisages the direct payment of the price difference between the MSP and the selling / modal price in notified market upto 15% of MSP value (including 2% administrative cost) by the Central Government to the pre-registered farmers selling the oilseeds upto 40% of its production to the prescribed Fair Average Quality (FAQ) in the notified market yard through a transparent auction process within the stipulated period. However, the States/UTs have the option to implement either PSS or PDPS for the particular oilseeds for the particular year/season. If any State is willing to cover quantities beyond 40%, they can do so from it's resources.

## iii. Market Intervention Scheme (MIS):

Market Intervention Scheme (MIS) is implemented on the request of the State/UT Government for the procurement of various perishable agricultural/horticultural commodities such as Tomato, Onion and Potato etc. for which Minimum Support Price (MSP) is not applicable and there is a reduction of prices in the market by atleast 10% over the rates of previous normal season in the States/UTs so that the farmers are not constrained to make distress sales of their produce. It is implemented if the States/UT is willing to share the total loss in the ratio of 50:50 between the State and Centre whereas in case of

North-Eastern States, the losses to be shared between the Centre and State on 75:25 basis. The procurement is undertaken by the State designated agency upto 25% of the State's production of the particular crop of the prescribed FAQ at fixed Market Intervention Price (MIP) as determined by MIS Committee plus permitted overheads expenses, which is generally of 25% of MIP so that the farmers are not constrained to make distress sales of their produce. However, States/UTs have also an option to make the differential payment between the MIP and Sale Price to the farmers. The total procurement value will be the cost of procured quantity at Market Intervention Price (MIP) determined by MIS Committee plus permitted overheads expenses, which is generally of 25% of MIP. However, States/UTs have also an option to make the differential payment between the MIP and Sale Price to the farmers. Moreover, in the interest of farmers, in special cases, if there is a price difference of TOP crops (Tomato, Onion and Potato) between the producing and consuming states, the operational costs incurred by Central Nodal Agencies (CNAs) like NAFED and NCCF in storing and transporting the crops from the producing state to the consuming states will be reimbursed by the Government. Details of sanction accorded under MIS since 2021-22 to 2024-25 as on 31.12.2024 are as follows:

Details of Sanction accorded under MIS from 2021 -22 to 2024 -25 (As on 31.12.2024)						
S.N.	Year	Period	Commodity	State	Market Intervention Price (MIP) (Rs. Per MTs.)	Sanctioned quantity (in MTs.)
1	2021-22	05.10.2021 to 05.11.2021	Potato	Nagaland	8,620	14,200

Details of Sanction accorded under MIS from 2021 -22 to 2024 -25 (As on 31.12.2024)						
S.N.	Year	Period	Commodity	State	Market Intervention Price (MIP) (Rs. Per MTs.)	Sanctioned quantity (in MTs.)
2	2022-23	07.06.2022 to 06.07.2022	Onion	Rajasthan	7,780	256,400
3	2022-23	07.06.2022 to 06.07.2022	Garlic	Rajasthan	29,570	107,836
4	2022-23	27.07.2022 to 25.08.2022	C-grade Apple	Himachal Pradesh	12,960	144,936
5	2022-23	27.07.2022 to 25.08.2022	Mango	Himachal Pradesh	11,700	1,250
6	2022-23	10.03.2023 to 08.04.2023	Potato	Uttar Pradesh	6,500	1,000,000
7	2022-23	22.03.2023 to 20.04.2023	Turmeric	Karnataka	66,940	22,006
8	2023-24	19.10.2023 to 17.11.2023	C-grade Apple	Himachal Pradesh	12,960	116,060
9	2024-25	03.10.2024 to 02.11.2024	C-grade Apple	Himachal Pradesh	12,960	116,571
10	2024-25	09.10.2024 to 07.11.2024	Grapes	Mizoram	50,000	3,460

The payments to the farmers shall be released to their individual bank accounts through RTGS or NEFT within three days from actual delivery by the procuring agency. For making timely payment to farmers, state government needs to arrange sufficient revolving funds at the disposal of procuring agencies. Further, the procuring agencies shall ensure that the payments credited directly into the same bank account of the farmer as mentioned at the time of registration. The bank account of an individual farmer shall not be utilised to make payments of other farmers. The state agency will be required to provide daily information of the payment made to farmers as per above stipulation.

Further, the Govt. has taken some effective measures for the benefits of farmers as follows:

- The farmers are registering themselves on the Portals of NAFED, NCCF and State's Portal through Aadhar Based registration for selling their produce.
- SMS and Whatsapp messages are sent to the farmers to make them aware about the procurement to be undertaken by various

agencies of the Govt.

- Agmarknet Portal is in place for daily purchase rates of commodities to make the farmers aware about the current market selling price of the produce.
- Records of the farmers are fetched directly from State land records.
- Direct Benefit Transfer to the farmers in their bank account to the value of the produce by primary agency within 3 days from the receipt of produce from the farmers.

The targets under the Price Support Scheme (PSS), Price Deficit Payment Scheme (PDPS) and Market Intervention Scheme can not be set as the procurement of commodities depend on the decision of State Govts. / UTs concerned to implement these schemes, the market ecosystem such as production of crops, arrivals of crops in the market, market price vis a vis MSP etc.

### 1.11 Agriculture Credit

The performance of the agriculture sector remains critical to growth and employment in the country.

# **Department of Agriculture & Farmers Welfare**

Investment in the sector must be encouraged through an affordable, timely and inclusive approach to credit delivery. In this regard, the government announces an annual target for Agriculture Credit in the budget annually. Agricultural credit flow has shown consistent progress every year.

## **1.12 Modified Interest Subvention Scheme (MISS)**

To ensure that the farmers pay a minimal interest rate to the banks, the department has introduced the Interest Subvention Scheme (ISS), now renamed Modified Interest Subvention Scheme (MISS), to provide short-term Agri-loans to farmers at concessional interest rates. Under the scheme, farmers are given an upfront interest subvention of 1.5%. Therefore, short-term crop loans up to Rs. 3.00 lakh are available to farmers engaged in agriculture and other allied activities at an interest rate of 7%. An additional 3% prompt repayment incentive (PRI) is also given to the farmers for prompt and timely repayment of loans; thus, the effective interest rate comes down to 4% per annum.

## **1.13 Kisan Credit Card (KCC)**

Safeguarding and ensuring hassle-free credit availability at a cheaper rate to farmers has been the top priority of this department. Accordingly, the Kisan Credit Card Scheme (KCC) was introduced for farmers to provide farmers with easy access to affordable credit for their agricultural needs so as to meet short term/long term cultivation requirements, post harvest expenses, consumption requirement etc. The KCC aims at providing adequate and timely credit support from the banking systems to the farmers for their cultivation and other needs like post-harvest expense; provide marketing loan; consumption requirement of farmers' household; working capital for maintenance of farm assets and activities allied to agriculture; investment credit requirement for agriculture and allied activities. In addition, KCC is also available for agriculture and allied activities like Animal Husbandry, Dairying and Fisheries etc.

## **1.14 Kisan Rin Portal (KRP)**

In India's rural heartland, where agriculture is not

just a livelihood but a way of life, access to timely and affordable credit has always been a major hurdle for farmers. Until recently, they faced procedural delays and manual processes that hindered their ability to access crucial financial support. This scenario is changing with the launch of the Kisan Rin Portal (KRP), a transformative digital platform aimed at revolutionizing agricultural credit systems across the country.

## **1.15 Commission for Agricultural Costs and Prices**

The Commission for Agricultural Costs and Prices (CACP) was set up with a view to evolve a balanced and integrated price structure and is mandated to advise on the price policy of 23 crops. These include Minimum Support Prices (MSP) for seven cereal crops (paddy, wheat, jowar, bajra, maize, ragi and barley), five pulses (gram, tur, moong, urad and lentil), seven oilseeds (groundnut, sunflower seed, soybean, rapeseed and mustard, safflower, nigerseed and sesamum), copra (dried coconut), cotton, raw jute and Fair and Remunerative Prices (FRP) for sugarcane. CACP submits its recommendations to the government in the form of Price Policy Reports every year, separately for five groups of commodities namely Kharif crops, Rabi crops, Sugarcane, Raw Jute and Copra. Before preparing these five price policy reports, the Commission seeks views of various Ministries/ Departments, State Governments, Farmers, Farmers Association, Research Institutes and other stakeholders.

### **Determinants of MSP**

Cost of production (CoP) is one of the important factors in the determination of MSP of mandated crops. Besides cost, the Commission considers other important factors such as demand and supply, price trends in the domestic and international markets, intercrop price parity, the likely effect of the price policy on the rest of the economy, rational utilization of land, water and other production resources, and a minimum of 50 percent as the margin over the cost of production in case of MSP of 22 crops and reasonable margin over cost of production in case of FRP of Sugarcane.

## Chapter 2

## FUNCTIONS AND ORGANIZATIONAL STRUCTURE

**2.1 Structure:** The Department of Agriculture & Farmers Welfare (DA&FW) is one of the two constituent Departments of the Ministry of Agriculture & Farmers Welfare. This Department is headed by Minister of Agriculture & Farmers Welfare and is assisted by two Ministers of State. The Secretary (A&FW) is the administrative head of the Department. The Secretary is assisted by five Additional Secretaries including one Financial Adviser, 10 Joint Secretaries, one Agriculture Commissioner, Horticulture Commissioner, Sr. Economic Advisor, Horticulture Statistics Advisor, Advisor Cost and Deputy Director General. In addition, Chairman of Commission for Agriculture Costs and Prices (CACP) advises Department on pricing policies for selected agricultural crops.

**2.2** The DA&FW is organized into 28 Divisions (Annexure-2.1) and has four attached offices and twenty-one subordinate offices (Annexure-2.2) which are spread across the country for coordination with state level agencies and implementation of Central Sector Schemes in their respective fields. Further, one Public Sector Undertaking, seven autonomous bodies, and two authorities (Annexure-2.3) are functioning under the administrative control of Department.

**2.3** Administrative Vigilance Unit (AVU) functions in the Department under a Joint Secretary, designated as Chief Vigilance Officer, to ensure a transparent, clean and corruption free work environment through surveillance, preventive and punitive measures.

**2.4** Administrative Vigilance Unit under the leadership of Joint Secretary & Chief Vigilance Officer (JS&CVO) is regularly monitoring all the pending complaints/Regular Departmental Action cases in this Department and in attached, subordinate and autonomous organization by way of regular review meetings, monthly reports. One disciplinary proceeding against Shri K Narsimmalu, APPO under Directorate of PPQS has been finalized

during the year. 15 old complaints have been carried forward from the previous year while 30 new cases were received during the year. Out of these, 25 complaints including some previous complaints (05) have been finalized till date of November, 2024. Further, 162 public grievances have been addressed/finalized. 07 RTI applications were processed and replied within the prescribed time limit.

**2.5** Identification of sensitive posts in the DA&FW was undertaken and the list of sensitive posts for the year 2024 in the Department and its organizations was finalized with the approval of Secretary, DA&FW and was sent to CVC. Further, to enable periodical rotation of staff posted in sensitive posts, the list was also forwarded to all concerned. The list of Agreed List for the year 2024 was finalized in consultation with CBI in September, 2024. Further, the list of Officers of Doubtful Integrity (ODI) was also finalized with the approval of Secretary (DA&FW) and was sent to CBI on 8th October, 2024. 05 Part Time Vigilance Officers have been appointed during the year.

**2.6** As per direction of the Central Vigilance Commission (CVC), Vigilance Awareness Week (VAW), 2024 was observed from 28th October to 3rd November, 2024 in the Department. The theme of the VAW was “सत्यनिष्ठा की संरक्षिति से राष्ट्र की समृद्धि”- Culture of Integrity for Nation's Prosperity”. All attached/subordinate/PSU and autonomous organizations under the administrative control of this Department were also advised to organize various outreach programs sensitizing the general public about Preventive Vigilance and submit report in the CVC's prescribed format. The Vigilance Awareness Week, 2024 was commenced with the Integrity Pledge administered by Secretary, DA&FW on 28th October, 2024 to all the officers and staff of this Department. During the VAW, this Department arranged two lectures on Conduct Rules and Preventive Vigilance on 29th October, 2024 in online

# **Department of Agriculture & Farmers Welfare**

and offline mode by a faculty from ISTM. Around 200 officials/officers attended the lectures. In addition to that, a written objective type competition was also conducted in this Department on 30th October, 2024 to make the officials/officers of this Department familiarize with the conduct and preventive vigilance rules. In the competition, 37 officers and officials participated.

**2.7** A Public Grievance Cell has been set up and is fully functional in the Department of Agriculture, Cooperation & Farmers Welfare under the Joint Secretary (O&M/PG) who acts as Nodal Appellate Authority of the Department and Deputy Secretary has been nominated as nodal officer for monitoring redressal of public grievances received in the Department at Headquarters. One Director has been nominated as Staff Grievance Officer to deal with grievances of the employees working in the Department of Agriculture & Farmers Welfare for this purpose. Similar arrangements have been made at the level of all Attached and Subordinate Offices and all organizations under the administrative control of this Department in order to ensure expeditious redressal of grievances. During the year 2024-25 (from 01.04.2024 to 17.01.2025) 71477 public grievance petitions/suggestions have been received through CPGRAMS portal and 6718 cases were carried forward from previous year, out of 78195 total cases, 77764 cases have been disposed of and 431 cases were pending in this Department on 17th January, 2025.

**2.8** Citizens'/Clients' Charter of this Department has been prepared as per the instructions/guidelines of Cabinet Secretariat and Department of Administrative Reforms and Public Grievances. The Citizens'/Clients' Charter is available on the website of the Department ([www.agricoop.nic.in](http://www.agricoop.nic.in)).

**2.9** Implementation of the Right to Information Act, 2005: During year 2024-25 (as on 17.01.2025), 3371 physical & online RTI applications and 210 appeals seeking information under the Right to Information Act, 2005 were received in RTI Cell and replies were sent to the applicants in time.

**2.10 Information and Facilitation Counter:** This counter provides information in respect of

Department of Agriculture & Farmers Welfare. During year 2023-24, various visitors from NGOs as well as general public visited the counter to obtain information. Numerous telephonic calls were also received in RTI Cell from general public to obtain information pertaining to DA&FW, Ministry of Agriculture and Farmers Welfare.

**2.11 Progressive Use of Hindi:** The Department has an Official Language Implementation Committee (OLIC), chaired by the Joint Secretary (Administration) to monitor the implementation of the Official Language Policy of the Union and progressive use of Hindi in the official work of the Department. During the year under report, quarterly meetings of the Official Language Implementation Committee were held regularly.

The Official language Division continued to review the position of the progressive use of Hindi in the Department and subordinate offices regularly, through quarterly progress reports and inspections. Besides, officers of the Official language Division also participated in the meetings of the Official Language Implementation Committees of the Attached and Subordinate offices, etc., and extended necessary guidance to them in the implementation of Official Language Act and Rules. In addition to this, 02 offices under the control of this Department, wherein 80 per cent of the officers and employees have acquired working knowledge of Hindi, were notified in the Gazette of India under Rule 10 (4) of the Official Language Rules, 1976.

Every year, the Department nominates JSA and stenographers for training in Hindi shorthand and typing under the Hindi teaching Scheme of the Department of Official Language. 09 participants are rewarded under the incentive scheme for noting/drafting done originally in Hindi.

With a view to create awareness regarding the progressive use of Hindi in the official work of the Department, a Hindi Fortnight was held during the 14th-28th September, 2024. On this occasion, the Hon'ble Agriculture and Farmers Welfare Minister issued an appeal to all officers and staff of the Department of Agriculture and Farmers' Welfare to carry out more official work in Hindi. During the

Hindi Fortnight, various Hindi Competitions such as essay writing, noting and drafting, Hindi spelling & grammar Knowledge, Hindi dictation for MTS and Hindi Prashan Manch were organized and interested officers and employees participated in these competitions. Cash awards and certificates of appreciation were given to the winners of these competitions by the secretary.

The Second Sub-Committee of the Committee of Parliament on Official Language conducted inspection of 24 offices under the control of the Department of Agriculture and Farmers Welfare to review the position regarding the progressive use of Hindi in official work during the year. The officers of this Department were also present in these inspection meetings. In addition to this, 07 subordinate/attached offices have been inspected

by the officers of the Hindi Division of the Department of Agriculture and Farmers Welfare.

**2.12 Reservation for Scheduled Castes/ Scheduled Tribes /Other Backward Castes:** Department of Agriculture & Farmers Welfare continued its endeavour for strict implementation of the orders issued by the Government of India from time to time, regarding reservation in services for SCs, STs, OBCs, minorities, ex-servicemen and physically disabled persons.

**2.13 Prevention of Harassment of Women Employees:** An Internal Complaints Committee regarding prevention of sexual harassment of women at their work place has been constituted by the Department. This Committee is chaired by a senior woman officer of the Department.

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# Chapter 3

## DIRECTORATE OF ECONOMICS & STATISTICS

### 3.1 Overview

Economics, Statistics and Evaluation Division, previously known as Directorate of Economics & Statistics (DES) erstwhile an attached office of DA&FW, is mandated to support work of the Ministry of Agriculture & Farmers Welfare through quality data and analysis towards appropriate policy formulation and execution of schemes in the interest of farmers and consumers. The Division is mandated to build and maintain a strong database in partnership with the States on area, production, yield of Principal crops and cost of production of mandated crops to arrive at Minimum Support Price. Economics, Statistics & Evaluation Division collects price data through its regional offices and regularly analyses the same to identify trigger points for policy intervention towards stable food prices. ESE Division is the knowledge bank of the Ministry that places a large volume of data and information in the public domain for multiple stakeholders, and carries out Agro-Economic Research / Studies in the field of agriculture. In addition, the Division coordinates with international bodies such as the Food and Agriculture Organization (FAO) on global effort to improve agricultural statistics. It is responsible for providing necessary data of the Central Statistics Office (CSO) for GDP compilation and also meets international obligation related to standards of data dissemination.

### 3.2 Major Programmes /Activities

#### 3.2.1 Agricultural Statistics Section

The Agricultural Statistics (AS) - I Section, (ES&E Division) within the Department of Agriculture and Farmers' Welfare releases a series of four crop production estimates for 28 major agricultural crops, which include rice, wheat, coarse cereals, pulses, oilseeds, sugarcane, cotton, Jute & Mesta. These estimates are available at both the state and national levels.

The First Advance Estimates (AEs) focuses on kharif crops only, which is released in October, once the kharif sowing season has concluded. Second Advance Estimates covering both kharif and rabi crops, are usually published in February of the following year, coinciding with the end of the rabi sowing period. Third Advance Estimates released in May, incorporates revised data on rabi crop acreage and more precise yield estimates for kharif crops. Additionally, they include estimates for summer crops. Final Estimates are typically released in September / October. At this point, states are expected to have provided comprehensive data on both kharif, rabi and summer crop area and yields.

When compiling the All-India level estimates, the data on crop area, production, and yield received from State Governments undergo a rigorous validation process. This validation is based on information obtained from various alternative sources, such as remote sensing based forecast from the Mahalanobis National Crop Forecast Centre (MNCFC), Econometric modeling based crop forecast provided by the Institute of Economics Growth (IEG), inputs received from the weekly Crop Weather Watch Group (CWWG) meetings, previous trends in area, production and yield, yield expectation information received through Farmers Survey and yield data received through supervised CCE sample yield of NSSO.

Unified Portal for Agricultural Statistics (UPAg) is an advanced agricultural data management platform designed to generate crop estimates and integrate with other systems generating Agriculture Statistics such as price, trade, procurement, stock etc. It serves as a centralized hub for near real time information on crop production, market trends, pricing, and other vital agricultural data.

"Digital General Crop Estimation Survey (DGCES)" a nationwide initiative aimed at precisely assessing crop yields across a variety of crops has been rolled out during 2023-24. This program utilises a

meticulously crafted survey methodology rooted in the principles of crop cutting experiments and digitalises the same with the introduction of the GCES mobile application and portal. This introduction of DGCES mobile application and web-portal has ushered in a transformative era for recording Crop Cutting Experiment (CCE) which enables results being directly from the field. With innovative features such as GPS-enabled photo capture and automated plot selection, this technological advancement significantly enhances transparency and accuracy within the system. This initiative aims at digital recording of CCEs with no changes to existing methodology.

Improvement of Agricultural Statistics (IAS)" is an independent component of non-scheme - Agricultural Economics & Statistics. The IAS had been converted from Centrally Sponsored Scheme - Agriculture Census and Statistics to Other Central Expenditure - Agriculture Economics and Statistics during FY-2023-24. The IAS is a staff oriented non-scheme and the main expenditure (about 85%) is on salaries, travel and contingencies on the staff involved in the activities of IAS and remaining (15%) to meet the office and other miscellaneous expenses of state implementing agencies. The basic objective of the scheme is to collect and improve agricultural statistics in the form of area, production and yield rate for the principal agricultural crops.

The budget head wise details of fund allocated and Expenditure during the year 2024-25 is given in the table below:

(Rs. In Lakhs)				
S.N o.	Major Heads	B.E. 2024-25	Released (1st and 2nd instt.)	Bills under Process (Bills with PAO)
1	<b>240100111340111 - Domestic Travel Expenses</b>	5.00	-	-
2	<b>240100111340113 - Office Expenses</b>	15.00	11.54	-
3	<b>240100111340116 - Printing &amp; Publications</b>	2.00	1.42	-
4	<b>240100111340128 - Professional Services</b>	15.00	0.00	-
5	<b>240100111340131 - Grants -in-aid-General*</b>	10900.00	5330.50	2365.00
<b>Total</b>		<b>10937.00</b>	<b>5343.46</b>	<b>2365.00</b>

Agricultural Statistics -II Section is coordinating the implementation of "Forecasting Agricultural Output using Space, Agro-Meteorology and Land Based Observations (FASAL)" project through partner organizations i.e. Mahalanobis National Crop Forecast Centre (MNCFC), New Delhi, India Metrological Department (IMD), New Delhi and Institute of Economic Growth (IEG), New Delhi.

Forecasting Agricultural Output using Space, Agro-Meteorology and Land Based Observations (FASAL)" Scheme, an independent component of the "Agriculture Census and Statistics" (erstwhile 'Integrated Scheme on Agriculture Census, Economics & Statistics is in operation since 2006.

The Scheme has been converted into Non-scheme since FY 2023-24. FASAL was initiated with the objective of developing Econometric, Agromet and Remote Sensing based models to generate crop forecast at National, State and District level. The FASAL system integrates various approaches and organizations for creating a hierarchical information system, related to crop condition and crop production at any time of the season from sowing to harvest.

In recent years, advancements in technology have introduced new datasets and analytical tools. To enhance accuracy and timeliness, it became essential to integrate these developments into the

FASAL methodology. Consequently, the crop estimation process under FASAL was revamped to leverage emerging technologies and new datasets effectively.

To make the system more robust and aligned with the latest technology, FASAL has been upgraded to FASAL 2.0, incorporating new partner organizations such as SAC, IARI-ICAR, and knowledge partners like IEG, ISI, and IASRI. Under this framework, SAC will provide monthly crop yield estimates using a semi-physical model, from sowing to harvesting, to DA&FW.

IARI-ICAR to provide yield estimates of crops covered under FASAL 2.0 using Crop Simulation Model to DA&FW on monthly basis from sowing till harvesting. Ground data required for using in Crop Simulation Model may be collected through Mobile App. App may be developed by DA&FW as per requirement whereas actual field data collection has to be undertaken by IARI. Knowledge Partners such

as IASRI and ISI-Kolkata to develop AI/ML Models for generating yield estimates of crops covered under FASAL 2.0.

IEG is also providing Econometric model-based State level / National level forecast of Area, Yield and Production in respect of 18 crops on monthly basis. The Crops are: Rice (Kharif & Rabi), Wheat, Maize (Kharif & Rabi), Bajra, Jowar (Kharif & Rabi), Moong (Kharif & Rabi), Gram Masur (Lentil), Rapeseed & Mustard, Urad (Kharif & Rabi), Groundnut (Kharif & Rabi), Soyabean, Caster Seed, Cotton, Jute and Sugarcane. The Model used for forecasting yield estimates takes into account crop price (expected), substitute crop price (expected), irrigation, pre-sowing month reservoir and groundwater level, sowing season rainfall, rainfall in growing season, temperature in growing season and input price fertilizer, Nutrients (DAP, Ammonium Sulfate), Pesticides, Insecticides price.

Fig.-5



Fig.-6

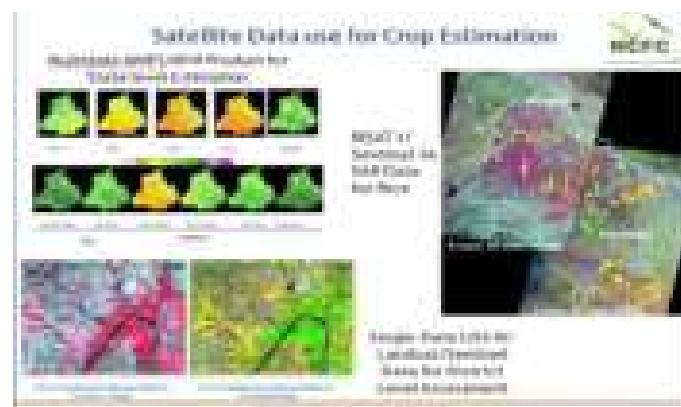
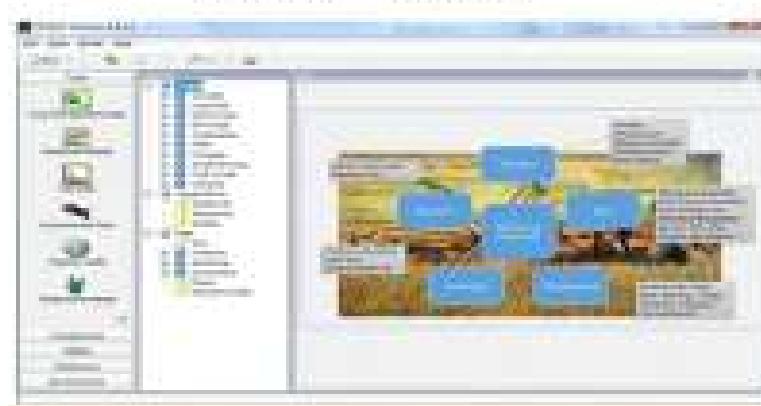


Fig.-7  
Crop Simulation Model



Besides, the section is also involved in organization of weekly Crop Weather Watch Group (CWWG) meeting every Monday. Crop Weather Watch Group (CWWG) in the Economics, Statistics & Evaluation Division is an inter-departmental forum that undertakes weekly review of progress of crop sowing, weather conditions, reservoir levels, level of pest and disease, seeds and fertilizer availability, horticulture arrivals and prices. The purpose is to facilitate timely policy intervention and operational support by the concerned subject matter Divisions of the DA&FW, IMD, CWC, Crops, Fertilizer, Prices, Plant Protection, Horticulture, Seeds etc. Departments/Divisions give their inputs and participate in the meeting. The CWWG data and report are uploaded on the DA&FW website every week. Objective of the project is to provide multiple-in-season forecast based on Agromet, Econometric and Remote Sensing based methodology. MNCFC has been providing Remote Sensing based forecasts in respect of 9 major crops of the country jute, cotton, sugarcane, rice (Kharif & Rabi), wheat, rapeseed, mustard, sorghum (Rabi), pigeon pea/tur, pulses (Rabi).

### **3.2.2 Cost Study Section**

1. The Cost of Cultivation of principal crops in India is being implemented in India since 1970-71. The main objectives of the component are to collect and compile data on cost of cultivation and production in respect of principal crops and to generate crop-wise and State-wise cost of cultivation and production estimates of mandated crops.
2. Comprehensive cost statistics in respect of Principal crops are collected through 19 Agricultural/Central/General Universities located in different States; cost of cultivation data is transmitted to the Commission for Agricultural Costs and Prices (CACP) so as to enable them to recommend the MSPs of the mandated crops with regard to Kharif and Rabi Seasons.
3. The cost estimates generated under the Schemes are also used for research purposes and policy formulations by the Central

Ministries and State Governments, Agricultural/ General Universities, Government/Non-government Research Organizations, Individual researchers (both at domestic and international levels) etc.

4. The Scheme is implemented in 19 states namely Andhra Pradesh, Assam, Bihar, Chhattisgarh, Gujarat, Haryana, Himachal Pradesh, Jharkhand, Karnataka, Kerala, Madhya Pradesh, Maharashtra, Odisha, Punjab, Rajasthan, Tamil Nadu, Telangana, Uttar Pradesh and West Bengal.
5. During the block period 2023-24 to 2025-26, the schemes covers 25 principal crops, i.e., paddy, wheat, jowar, bajra, maize, ragi, barley, moong, urad, arhar, gram, lentil, groundnut, rapeseed and mustard, nigerseed, safflower, soybean, sunflower, sesamum, cotton, jute, sugarcane, onion, potato, and coconut. The combination of crops covered in each state (also known as crop complex) varies from state to state depending upon their importance in terms of its relative contribution in the production of the relevant crop at all-India level.
6. The field data is collected by the 19 State Implementing Agencies on the basis of Cost Accounting Method. Under the Scheme, daily entries of debit/credit for expenditure/income are made in order to assess the total cost/benefit incurred/accrued to each farmer. The field data is collected through a detailed questionnaire administered by field staff through direct interaction with the sample farmers of 06 selected farm holdings as per the sampling design in each village. Six operational holdings in a village consist of 2 each from 3 different size classes, viz., 0 to 1 hectare, 1-2 hectare, 2 and above.
7. In the financial year 2023-24, 185 cost estimates were generated and provided to CACP. Out of 185 estimates, 46 for Rabi, 112 for Kharif, 07 for Sugarcane, 07 for Onion, 06 for Potato, 03 for Jute & 04 for coconut were generated in respect of 25 mandated crops.

### 3.2.3 Minimum Support Prices (MSP) Section

MSP section examines Price Policy reports of Kharif Crops, Rabi crops, Copra and Raw Jute submitted by the Commission for Agricultural Costs and Prices (CACP) considering the views of concerned State Governments and Central Ministries/Departments and other relevant factors which are considered important for fixation of MSP and submits the note for consideration of Cabinet Committee on Economic Affairs (CCEA) for declaration of MSP of these crops. In addition, the section fixes the MSP of Toria based on price differentials of Toria and Rapeseed/Mustard. The Section is also involved in compilation, tabulation, presentation, analysis and interpretation of different types of data.

### 3.2.4 Agro-Economic Research (AER) Section

The AER Section handles matters related to (i) Agro-Economic Research (ii) Publication; and (iii) International Agriculture & Compilation.

#### (i) AER

"Agro-Economic Research (AER)" an independent component of 'Agriculture Economics & Statistics' is categorized under Other Central Expenditure. This was initiated in 1954-55 through a network of 15 AER Centres/Units. A total of 12 Agro-Economic Research Centres (AERCs) are located at Allahabad, Bhagalpur, Chennai, Delhi, Jabalpur, Jorhat, Ludhiana, Pune, Shimla, Vallabh-Vidyanagar, Visva-Bharati and Waltair and 3 Agro-Economic Research Units are located at IEG-Delhi, ISEC Bangalore and IIM-Ahmedabad. This component is staff oriented and 100% funded through Grants-in-Aid by the Government of India, the Ministry of Agriculture & Farmers Welfare.

The 15 AER Centres/ Units function/operate under the administrative control of their respective University/Institute. These AERCs/Us conducts research and evaluation studies annually on various important and emergent issue/(s) of agricultural economy and allied sectors as per the need of the Agriculture Ministry and its allied ministry.

Objectives of the AER are:

- To study specified agro-economic issues at the

macro and micro levels;

- To conduct continuous studies on changes in the rural economy through periodic surveys of selected villages;
- To conduct research on structural changes and fundamental problems of agricultural and rural economy; and
- To give technical advice to the Governments on issues that may be referred to them.

Annually, on an average around 15 research studies are conducted by these Centres /Units, relating to various agro-Economics issues in agriculture, animal husbandry, water management, fisheries & horticulture, food processing, rural development etc. During last five years (2019-20 to 2023-24) more than 70 studies have been completed on the following important topics: such as Future Market for Agricultural commodities, Price support and trade in Pulses and Oilseeds, Cold chain for fruits and vegetables, Soil Health Card, Jhumming Cultivation, Neem Coated Urea, Electronic- National Agricultural Market (e-NAM), Pradhan Mantri Fasal Bima Yojana (PMFBY), Pradhan Mantri Krishi Sinchayee Yojana (PMKSY), National Horticulture Mission (NHM), Oilseeds, PM KISAN etc. During the year 2024-2025 till December 2024, 05 research studies have been completed by these AER Centres/Units.

For the current Financial Year 2024-2025 an amount of Rs 3327.13 lakhs has been allocated as Budget Estimate (BE) (including Rs. 240.00 lakhs for Northeast regions). Out of which, Rs. 2271.75 lakhs have been released including Rs. 171.22 lakhs for Northeast regions till 31.12.2024.

**North East Region:** An Agro-Economic Research Centre was established in 1960 and is functioning under the administrative control of Assam Agricultural University, Jorhat, Assam for conducting research studies on various agricultural issues in the North-Eastern States viz., Assam, Meghalaya, Nagaland, Manipur, Tripura, Arunachal Pradesh, and Mizoram. The details are in the following table:

**Table-6**  
**PROGRAMMES OF NORTH-EASTERN STATES IN RESPECT OF**  
**AGRO-ECONOMICS RESEARCH CENTRE – JORHAT**

(Rs. In lakhs)

Name of Section: Agro-Economics Research Section					
Schemes/ Program Activities Approved	Details of Schemes/ Programs/ Activities taken up	Targets	Achievements	Funds Released from 2019-20 to 2024-25	Funds Utilized from 2019-20 to 2024-25
1	2	3	4	5	6
"Agro-Economics Research (AER) Scheme" an independent component of 'Agriculture Economics & Statistics'	AER Centre, Jorhat undertakes research studies on Agro - Economic issues of North Eastern States	There is no fixed target.	5 Studies completed by AER Centre, Jorhat during the Financial Year 2018-19, to 2022-23.	1508.82	1526.42

Note: (\*) Fund released, expenditure and studies completed till 30<sup>th</sup> September, 2023Note: (\*) Fund released, expenditure and studies completed till 31<sup>st</sup> December, 2024

**(ii)** AER brings out the flagship publication of the Department, namely Agricultural Statistics at a Glance. This publication is widely used as a reference book for data on various aspects of agriculture and allied sector, including growth and investment in agriculture, crop production and productivity across the states, Minimum Support Prices (MSP), cost of production, Terms of Trade (ToT), imports and exports, land use statistics, inputs, credit and crop insurance, food security, subsidy etc. During 2024, the Section has uploaded the latest 2023 issue of Agricultural Statistics at a Glance. This publication is available on the website <https://desagri.gov.in/> and hard copy is available at Controller.

**(iii)** AER Section also brings out Economics, Statistics and Evaluation Division's age old journal 'Agricultural Situation in India'. The journal aims to provide a forum for scholarly work and disseminate knowledge; provide a learned reference in the field; and a platform for communication between academic and research experts, policy makers of agricultural economics and allied sectors.

The journal covers information on multiple topics ranging from farm sector news, general survey of

agriculture, commodity review w.r.t. to food grain procurement, prices indices of commercial crops and agricultural commodities along with research articles and an agro-economics research.

#### **(iv) Coordination Section**

The Coordination section handles all kind of Miscellaneous works including coordination between Department of Agriculture & Farmers Welfare (DA&FW) and different sections of Economics, Statistics and Evaluation Division on all concerned subject matters. The multifarious nature of the work in Coordination section includes providing inputs for the Economic Survey i.e. Chapter "Agriculture & Food Management" on behalf of DA&FW, routine matters wherein several sections of ES&E Division and those of DA&FW are involved; preparation of material for annual report; providing information on budget related matters providing input on the Parliament Questions and working as Public Grievance cell for the Economics, Statistics and Evaluation Division.

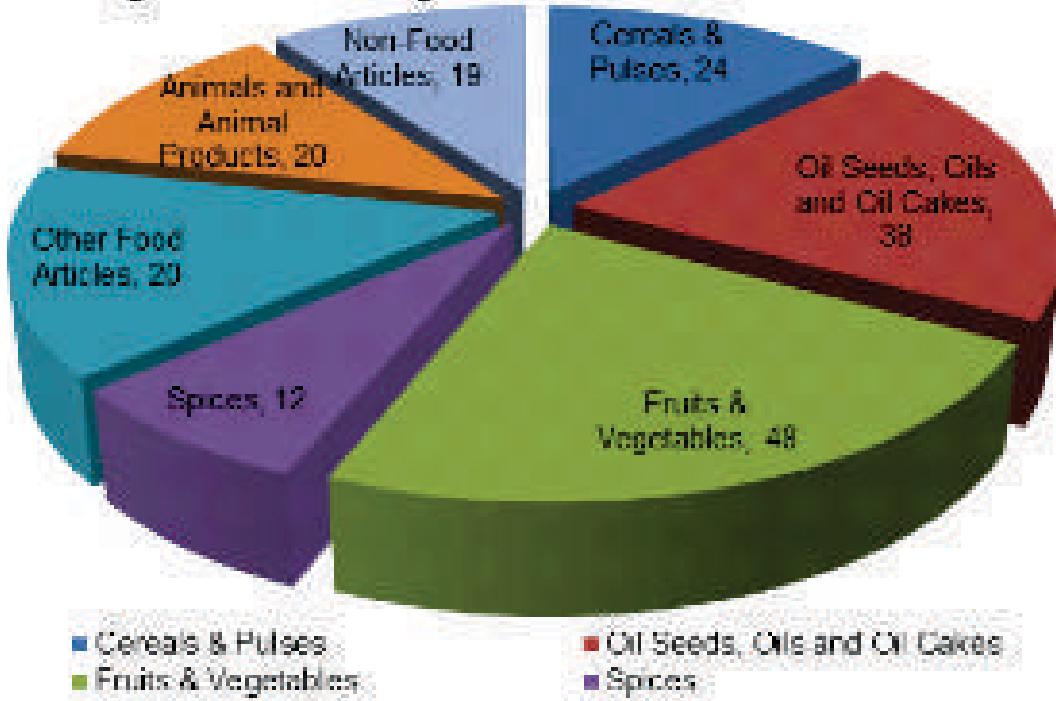
#### **3.2.5 Price & Market Section**

Prices & Market Section provides market intelligence to the Government and is involved in

collection, compilation and dissemination of data/information on prices both wholesale and farm harvest prices of important agricultural commodities. Wholesale prices of 181 selected agricultural commodities from around 738 market centers spread across the country are collected and compiled on a weekly basis. Weekly wholesale

prices (888 price quotations) of 109 agricultural commodities from around 241 markets centers spread across the country are provided by this section to the Department for the Promotion of Industry and Internal Trade (DPIIT), Ministry of Commerce & Industry for the computation of monthly Wholesale Prices Index (WPI).

**Fig 4 Number of agriculture commodities In WPI**



There are Twelve (12) field level Market Intelligence Units (MIUs) with Kolkata MIU having additional charge of Shillong MIU, located across India reporting to this section which play major role in data collection. A Working Group was constituted by DPIIT for the revision of base year of WPI series (base 2011-12), under the chairmanship of Shri. Ramesh Chand (Member, NITI Aayog). Based on the recommendation of Working group for the revision of Base Year of WPI series (base 2011-12), some new commodities have been added and the number of quotations have also increased. The Department has discontinued collating retail prices of agricultural commodities w.e.f 01.04.2023 to avoid duplication as retail prices are collected by other concerned Ministries.

This Section also compiles data on farm harvest prices of 36 principal crops from 31 States / Union Territories. Two annual publications "Agricultural Prices in India" and "Farm Harvest Prices of Principal Crops in India" are brought out by this section every year.

Index of Terms of Trade (TOT) of farmers and agricultural Sectors is also prepared on annual basis as per the methodology recommended by the Working Group headed by Prof. S. Mahendra Dev, the then Director, Indira Gandhi Institute of Development Research (IGIDR), Mumbai. This Index is to be used as an input for price policy formulation of agricultural crops by Commission for Agricultural Costs and Prices (CACP).

The Agricultural Market Information System (AMIS), hosted by Food & Agriculture Organization of United Nations, is an inter-agency platform launched in 2011 by the G20 Ministers of Agriculture, to enhance food market transparency and policy response for food security. AMIS consists of Global Food Market Information Group and Rapid Response Forum to get timely market update and policy discussion. Department of Agriculture and Farmers Welfare, participated in 12th Session of the Agricultural Marketing Information System (AMIS),

Rapid Response Forum held on 29 March 2023 in Chandigarh as part of the country's G20 Presidency. The Department has also participated in the Global Food Market Information Group meeting held in June 2023. AMIS-FAO prepares Food Balance Sheet, where data on inputs of production, food, feed; seed use and trade of 4 agricultural commodities, i.e. wheat, rice, maize and Soyabean are maintained globally. As per government directive, Prices & Market Section provides the required data to AMIS-FAO at regular intervals and coordinates the policy discussions.

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## **Chapter 4**

# **NATIONAL E-GOVERNANCE PLAN IN AGRICULTURE (NEGP-A)**

### **4.1 Overview**

Ministry of Agriculture & Farmers' Welfare aims to improve awareness, knowledge and efficiency of farmers. A comprehensive ICT strategy has, therefore, been developed not only to reach out to farmers in an easy and better way to improve efficiency but also for planning and monitoring of schemes so that policy decisions can be taken at a faster pace and farmers can be benefited quickly. To empower different sections of rural society, ICT strategies have been devised.

### **4.2 Digital Agriculture (erstwhile National e-Governance Plan – Agriculture):**

Considering the need to use digital technologies in agriculture for better scheme governance, the National e-Governance Plan in Agriculture (NeGPA) was launched in 2011-12. Its aim is to achieve rapid development in India through use of Information & Communication Technology (ICT) for timely access to agriculture related information for the farmers. In agriculture, availability of real time information at the right time is a continuous challenge. Lack of information at the proper time causes loss to farmers. Accordingly, its aims to bridge this gap in communication by using technology.

National e-Governance Plan in Agriculture (NeGPA) was initially launched in seven selected States namely, Assam, Himachal Pradesh, Jharkhand, Karnataka, Kerala, Madhya Pradesh and Maharashtra, in the last quarter of 2010-11. This Scheme has subsequently been extended in the 2nd Phase to cover all the States and 7 UTs from 2014-15. Support was rendered for buying hardware, software and deployment of manpower for handling them under the scheme.

However, realizing the significance of new digital & emerging technologies, the Committee on Doubling Farmers' Income (DFI) recommended further expanding and augmenting of the digital agriculture initiatives of Government of India. The report

focused on modern management of agriculture viz. Remote Sensing; Geographical Information System; Data Analytics and Cloud Computing; Artificial Intelligence & Machine Learning; Internet of Things; Robotics, Drones & Sensors and Block-Chain. In order to infuse modern information technologies in the farm sector as recommended by the DFI Committee, the NeGPA guidelines were amended and funds were released for sanctioning projects for customization / shifting of web & mobile applications already developed by the States to the platform to be developed using digital/emerging technologies and involving use of modern Information Technologies such as Artificial Intelligence & Machine Learning, Block Chain Technology, Internet of Things, Robotics etc.

### **4.3 Digital Agriculture Mission:**

The agriculture sector plays a vital role in development of the Indian economy. To augment the sector's contribution to the nation's growth, India's central and state governments are implementing several schemes to benefit the nation's farmers. Taking into cognizance the role of technology in providing better services to the citizens of the country, the Ministry of Agriculture and Farmers Welfare (MoA&FW), Govt of India, is witnessing a paradigm policy shift from the traditional approach to farming and monitoring scheme implementation to embracing AgriTech.

In recent years, India's digital revolution has transformed governance and service delivery by creating digital identities and secured payments and transactions. This has spurred a thriving digital ecosystem in finance, healthcare, education, and retail, positioning India as a leader in citizen-centric digital solutions. Some examples include Aadhar, which is a Unique Identification Number that is linked to the individual's biometric readings; Digi Locker for storing an individual's data securely; eSign, which lets individuals electronically sign contracts and eliminates the need for physical

documents; eKYC facility for instant verification of an individual; Aadhar-enabled Payment Bridge and Unified Payments service (UPI) for trustful digital payments; Electronic Health Records (EHR); Digital Infrastructure for Knowledge Sharing (DIKSHA), etc.

To create a similar digital ecosystem in the agriculture sector, the government announced building digital public infrastructure for agriculture in the Union Budget 2023-24. Further, in the Union Budget 2024-25, the augmentation of the Digital Public Infrastructure (DPI) initiative for the agricultural sector was announced. This Digital Public Infrastructure aims to provide comprehensive and useful data on farmers comprising authenticated demographic details, land holdings and crops sown. It will include cultivators & tenant farmers, as per the policy of the State Government. It would also connect to relevant Digital Public Infrastructure of the State Governments and Ministries of the Government of India to use data of farmers on livestock, fisheries, soil health, other vocations, family details and schemes and benefits availed, leading to innovative farmer-centric digital services in the agriculture sector.

In line with the Viksit Bharat@2047 vision, the cabinet has approved the Digital Agriculture Mission (hereinafter called "Mission"). This initiative aims to create a robust digital agriculture ecosystem in the country, fostering innovative, farmer-centric digital solutions and providing timely and reliable crop-related and farmer-related information. The adoption of digital technologies in agriculture will help improve scheme governance by providing easier access to services, bringing greater transparency, enabling data-driven decision-making, and facilitating evidence-based monitoring.

**About Digital Agriculture Mission:** The Digital Agriculture Mission seeks to enable a robust digital agriculture ecosystem in the country to drive innovative farmer-centric digital and space-tech solutions. Accordingly, the Mission is conceived as an umbrella scheme to support digital agriculture initiatives, such as creating Digital Public Infrastructure, Digital General Crop Estimation Survey (DGCES) and other IT initiatives undertaken by Central Government/State Government/Academic & Research Institutions. The Cabinet has approved the Digital Agriculture Mission with a total outlay of ₹ 2,817 Crores with a Central Share of ₹ 1,940 Crores for 5 years (FY 2021-22 to FY2025-26).

***Digital Agriculture Mission aims to establish a comprehensive farmer-centric digital and space-tech ecosystem to enhance transparency and efficiency in the execution of government programs while providing crucial support for evidence-based policymaking for farmers' welfare.***

The Digital Agriculture Mission aligns with the Government's vision of transforming India into a digitally empowered society and knowledge economy. The success of Digital Public Infrastructures in other sectors, such as health, education, finance, etc., underscores the potential for similar transformative impacts in the agriculture sector.

**Objectives of Digital Agriculture Mission:** Key objectives of the Digital Agriculture Mission are highlighted as under:

- To create a robust and holistic farmer-centric digital ecosystem in the country.

- To improve transparency and efficiency in the implementation of government initiatives.
- To support the government in making informed policy decisions.
- To promote public and private innovation and partnerships, encouraging Agri techs in India's digital economy.

**Benefits of the Mission:** By leveraging trustful data on farmers, farmlands and crops and the use of modern digital technologies, such as data analytics, artificial intelligence, and remote sensing, the Mission aims to make service delivery mechanisms

more efficient and transparent in the interest of farmers in the following areas:

A farmer would be able to digitally identify and authenticate himself/herself to access benefits and services, obviating cumbersome paperwork and with little or no need to physically visit various offices or service providers. Some examples include availing Government schemes and crop loans, connecting to agri-input suppliers and buyers of agricultural produce, accessing personalized advisories in real time, etc.

The trustful data would help government agencies make schemes and services more efficient and transparent, such as paperless MSP-based procurement, crop insurance, and credit card-linked crop loans. Further, the digitally captured crop-sown data and remote-sensing data will help in accurate crop area estimation, crop diversification, and evaluating irrigation needs according to crop and season.

The digital public goods developed under the Mission will also enable the stakeholders in the agriculture ecosystem to establish efficient value chains for agricultural inputs and post-harvest processes.

## Key Components of Digital Agriculture Mission

- Digital Public Infrastructure (DPI) for Agriculture, i.e. AgriStack, Krishi Decision Support System, Comprehensive Soil Fertility, and Profile Maps.
- Digital General Crop Estimation Survey (DGCES)
- Support to Mahalanobis National Crop Forecasting Centre (MNCFC)
- Activities undertaken in erstwhile NeGP- A scheme (subsumed in the Mission) which includes Development & maintenance of IT Infrastructure/Application of DA&FW and Support to States, Academic / Research Institutions for IT initiatives.

## 4.4 Agri-Stack

Unlike platform-centric approaches of the past, Agri Stack follows a protocol-based approach, ensuring modularity, elasticity and adaptability to the evolving needs of the agricultural sector. By leveraging trustful data on farmers, farmlands and crops and the use of modern digital technologies, such as data analytics and artificial intelligence, AgriStack aims to make service delivery mechanisms more efficient and transparent in the interest of farmers. With AgriStack in place, Shanti, a women farmer, would be able to digitally identify and authenticate herself to access benefits and services, obviating cumbersome paperwork and with little or no need to physically visit various offices or service providers. Some examples include availing Government schemes and crop loans, connecting to agri-input suppliers and buyers of agricultural produce, accessing personalized advisories in real time, etc. The standardized data would also help Government agencies make schemes and services more efficient and transparent, such as paperless MSP-based procurement and crop insurance, and develop systems for balanced fertilizer use, etc. Further, the digitally captured crop-sown data will help in accurate crop area estimation and crop diversification. AgriStack will also enable the stakeholders in the agriculture ecosystem to establish efficient value chains for agricultural inputs and post-harvest processes.

**Agri Stack as a Digital Public Infrastructure:** Agri Stack is a collaborative project between the Central and State Governments, serving as a comprehensive Digital Public Infrastructure. It utilizes open-source, open-APIs, and interoperable building blocks to provide **digitally authenticated identities** to farmers, such as Farmer IDs, digital assets such as Farm IDs and Crop Sown certificates to enable secure, consent-based **digital transactions** in a federated architecture where States curate and maintain data with the support of Government of India.

**Digital Agriculture Mission aims to establish a comprehensive farmer-centric digital and space-tech ecosystem to enhance transparency and efficiency in the execution of government programs while providing crucial support for evidence-based policymaking for farmers' welfare.**



Figure 1: Key Building Blocks for Inclusive Digital Agriculture Ecosystem

AgriStack integrates technology, markets, and governance to create an inclusive, integrated digital agricultural ecosystem. The Agri Stack comprises various building blocks, which are essential components supporting the functionality, data sharing, innovation and security within the AgriStack architecture.

**Unified Farmer Service Interface (UFSI):** UFSI is a gateway facilitating diverse agricultural services with centrally defined data schema, with a set of standard APIs. It enables seamless communication and flow of information between various components of AgriStack and IT systems within the

agriculture ecosystem. The interoperability and data flow across different platforms enable unified, integrated and standardized data access to stakeholders, be it private or public. In terms of the flow of data and information, UFSI is similar to UPI. UPI facilitate the flow of information between banks with different Core Banking Solutions (CBS). Similarly, UFSI facilitates the flow of information between Govt. schemes and various State Governments. While each stakeholder may have their own set of standards, the exchange of information through UPI or UFSI is through standardized APIs, as shown in the Figure below:

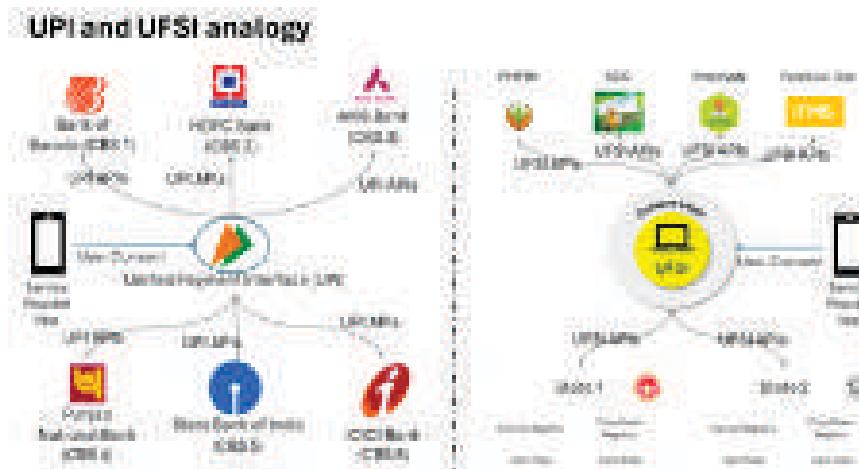


Figure 2: Similarity in the flow of information between UFSI and UPI

**Consent Manager:** The Consent Manager facilitates secure and authorized data sharing with the explicit consent of the Data Principal, i.e., the farmer, in compliance with the Digital Personal Data Protection Act, 2023. It upholds the privacy and data protection principles, giving farmers granular control over their data, as farmers are given the ability to grant or revoke consent for partial or complete data sharing.

## The Core Registries in AgriStack:

- a) **Farmers Registry:** Implemented and maintained by the States, it is a registry that integrates various databases after standardization and verification of State Farmer Databases to create State Farmer Registries. These Registries, established by the respective State Governments, ensure accurate and dynamically updated farmland ownership, establishing a unique record of land-owning farmers. The registries facilitate the issuance of unique Farmer IDs linked to Aadhaar, ensuring efficient delivery of agricultural services and schemes to farmers.
- b) **Geo-Referenced Village Maps:** Georeferenced Village Maps are essential for the Agri Stack, a critical component for agricultural planning, crop surveys, and advisory services. The process of georeferencing involves scanning paper maps, vectorizing them to compute boundary geometries, and assigning precise geographical coordinates (latitude and longitude) to all vertices. While detailed georeferencing at the Survey Number or sub-survey Number level is ideal, village-level georeferencing suffices for immediate needs like digital crop surveys. This approach allows the mapping of farmer's land and crop details using geotagged photos from a mobile app, ensuring genuine field visits and traceability of data discrepancies, if any.
- c) **Crop Sown Registry:** Enabled through the Digital Crop Survey (DCS), it integrates RoR data and geo-referenced map data. State governments conduct DCS using village-level assistants, residents, and farmers as surveyors and verifiers, ensuring authenticated and verified data collection for the database of crops grown by farmers at the State level every cropping season. DCS enables the obtaining of plot-level crop-grown data for every season with physical inspection and geotagged photographs. The ground truth data serves as a rich repository useful for satellite-based crop signature identification and algorithm training. Other use cases, such as crop area estimation, crop diversification and planning, crop insurance and MSP procurement, can be conducted by leveraging DCS data.
- d) **Support Registries:** Besides the three core registries, 25 Support Registries and Master Datasets have been identified to standardize agricultural data nationwide and will be created by the Centre with the participation of the States. Examples include Crop Registry, Seed Registry, Pesticide Registry, etc. Each registry aims to streamline and bring consistency to agricultural data, fostering interoperability across states and private sector actors with regard to such master data sets. So far, 15 Support Registries have been created and published for public use.
- e) **Current Status:** At present, 23 States and UTs have signed MoUs with the Government of India, while many more are getting ready to implement the digital public infrastructure for agriculture.
- f) **Farmer Registry:** The Farmer Registry's proof of concept has been conducted in one district in each of the six States. A total of 1,17,74,668 Farmer IDs have been generated as on 15.01.2025.
- g) **Geo-Referenced Village Map:** Efforts are underway to digitize and georeference hand-drawn cadastral maps, mapping land parcels to village boundaries. A target to complete 75% Geo-referenced village map has been set for 2024-25.
- h) **Digital Crop Survey:** The pilots for the Digital Crop Survey (DCS) were conducted in Kharif and Rabi in 2023 in 12 States. Since then, More

States have been onboarded. From Kharif 2024, DCS is being implemented in 436 districts in the 16 States covering over 80% of the country's farmlands.

#### **4.5 Krishi Decision Support System**

Krishi-DSS, launched on 16th August 2024 with 5 modules, integrates and standardizes geospatial and non-geospatial data, including satellite, weather, soil, crop signatures, reservoir, groundwater data, and government scheme information. Krishi-DSS offers crop maps, soil maps, automated yield estimation models, drought/flood monitoring systems, etc., which support the government's evidence-based decision-making and facilitate innovative solutions by research institutions and the agritech industry. This Krishi-DSS platform is aligned with the government's National Geo-Spatial policy. The information available on Krishi-DSS would support crop map generation for identifying crop sown patterns and crop diversification, drought/flood monitoring, and technology/model-based yield assessment for settling crop insurance claims by farmers.

#### **4.6 Comprehensive Soil Fertility, and Profile Maps:**

A Nationwide Soil Resource Mapping project has been initiated by the Soil and Land Use Survey of India (SLUSI), which is inventorying soils at a village level on a finer and more detailed 1:10,000 scale using high-resolution satellite and ground data. Under this project, a detailed soil profile study will be carried out to create standardized soil maps for rational land use and crop planning, thus promoting sustainable agriculture.

Key objectives of the project include the following:

- To prepare a detailed soil resource inventory of the country's agricultural lands on a 1:10,000 scale at the village level for soil health management, sustainable agriculture and crop planning.
- To carry out a detailed soil survey and soil profile study of the soils of India for their characterization, classification (based on

universally accepted taxonomy), mapping, and interpretation for rational land use planning using remote sensing, GIS techniques, ground survey, and soil analysis.

- To build a digital soil resource database useful for Decision Support System in Agriculture (Krishi-DSS) as a part of the development of a Digital Agriculture Ecosystem in the country for the benefit of farmers, policymakers, academia and researchers.

#### **4.7 Digital General Crop Estimation Survey (DGCES):**

DGCES is designed to streamline and automate the entire GCES process, encompassing state-level planning, recording the results of CCEs conducted on the field, and report generation. By digitizing and enhancing the efficiency of CCEs, DGCES seeks to provide States/ UTs with crop yield data that is not only accurate but also accessible in a timely manner. DG CES was pilot implemented during Kharif 2023 in selected districts of 10 States: Uttar Pradesh, Punjab, Haryana, Odisha, Rajasthan, Gujarat, Kerala, Tamil Nadu, Himachal Pradesh, and Bihar. In Rabi 2024, it was implemented in all districts of 16 major States. From Kharif 2024, DG CES will be rolled out in all the major States/UTs of India.

#### **4.8 Support to Mahalanobis National Crop Forecasting Centre (MNCFC):**

The key activities of MNCFC to be covered under the Digital Agriculture Mission are enlisted as follows:

- Crop acreage and production estimation of major crops under the scheme "Forecasting Agricultural output using Space, Agrometeorology and Land based observations" (FASAL). It also undertakes Horticulture Crop assessments.
- Support to Crop Weather Watch Group, drought monitoring and support to the States for their capacity building on geospatial technologies for agriculture.
- MNCFC is also the technical partner for the effective implementation of PMFBY for area discrepancy analysis, smart sampling, and yield dispute resolution.

# Department of Agriculture & Farmers Welfare

## 4.9 Activities undertaken in erstwhile NeGP-

A scheme (subsumed in the Mission) which includes Development & maintenance of IT Infrastructure/ Application of DA&FW and Support to States, Academic / Research Institutions for IT initiatives.

## 4.10 Special Central Assistance:

To encourage States for creation of Farmers Registry, a core component of Agristack under the Mission, Department of Expenditure, Ministry of Finance, GoI

has also announced a Scheme for Special Central Assistance (SCA) to states for Capital Investment 2024-25. Under SCA, an amount of Rs. 5000 crores has been allocated for giving “incentives to the states for creating States” Farmers Registry linked with the State's land record system. SCA is available only upto 31.03.2025 on “first-come first-serve basis”. The milestones to be achieved in saturating a live State Farmers' Registry and the norms for calculating incentives are as below:-

Milestones and Norms for Assistance for Creation of Farmers' Registry			
Stages	Description	Incentive per Farmer (in Rs.)	Total Incentive (in Rs.)
Milestone - 1	25 percent of the farmers in the state have Farmer ID	500	Number of Farmer ID s X 500
Milestone - 2	50 percent of the farmers in the state have Farmer ID	750	Number of Farmer IDs above 25 percent x 750
Milestone - 3	75 percent of the farmers in the state have Farmer ID	1250	Number of Farmer IDs above 50 percent x 1250
Milestone - 4	100 percent of the farmers in the state have Farmer ID	1750	Number of Farmer IDs above 75 percent x 1750

The detailed guidelines of SCA has been issued and same has uploaded on the department website at <https://agriwelfare.gov.in/en/DigiAgriDiv>

As on 15.01.2025, Gujarat and Madhya Pradesh have achieved their 1st milestone.

## 4.11 Other IT Initiatives:

**4.11.1 Krishi Mapper:** Krishi Mapper is a geospatial-based mobile application developed by

Digital Agriculture Diviin, DA&FW for capturing essential data related to farmers, land, crops, assets, and field photos. It enables users to draw polygons to geo-fence farm lands, thus facilitating the efficient management of various agricultural land-based schemes. This tool plays a key role in collecting, storing, and managing baseline data for land-based schemes, contributing to better decision-making and planning in the agricultural sector.

## Krishi MAPper

Visualizing land-based schemes on a unified GIS Dashboard



Krishi MAPper is a mobile application which aims to enable:

- collecting essential baseline information about farmers, including land and crop/soil, along with geotagged photographs
- geo-tagging (polygons) of program implementation areas.
- creation of a unified platform of farmer-wise and scheme-wise data by integrating data through APIs.

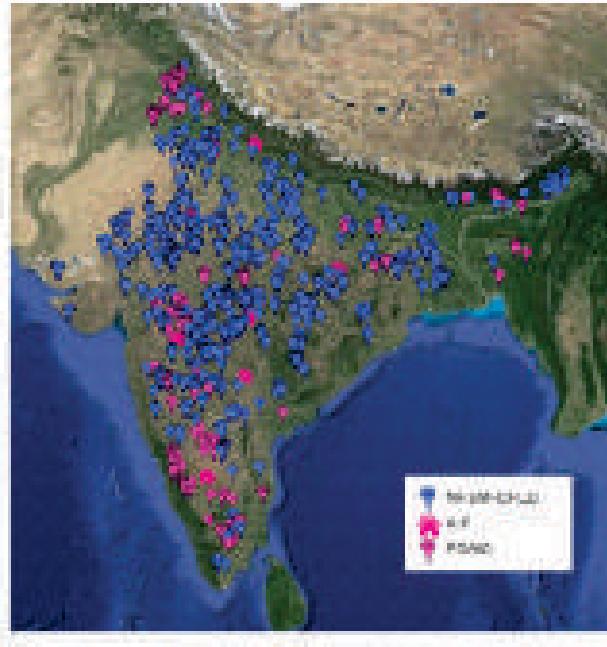
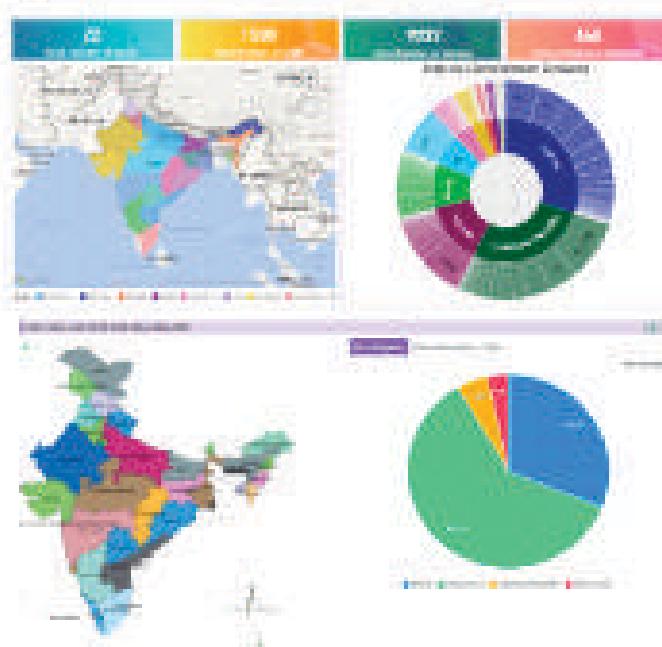
How will it help?

<b>Unified Database</b> 	<b>Transparency</b> 	<b>Evidence-based Monitoring and Analytics</b> 	<b>User Friendly</b> 
To provide a single land-based scheme database for different government programs	Ensuring the transparency of data (from collection to the Scheme)	Ability to derive systematic information through geospatial information and analysis	User-friendly data presentation and connectivity with farmers

## Krishi Mapper DASHBOARD

Data Visualization and Analytics

The system provides user friendly graphics and chart analysis.



## 4.11.2 Krishi Monitoring Support Centre:

Deployed & Ongoing		
#	Initiatives	Description
<b>1</b>	<b>PM KISAN e-Mitra</b>	<ul style="list-style-type: none"> <li>• The Kisan e-Mitra is an AI chatbot developed by the Ministry of Agriculture &amp; Farmers Welfare. It serves as a digital assistant for farmers, helping them with queries related to the PM Kisan Samman Nidhi scheme. The chatbot is designed to break down technological and language barriers and currently sees an average of 20,000 farmer queries a day with a total unique farmer user-base of 10 crore (translating to 100 million farmers).</li> <li>• The E-Mitra chatbot leverages GenerativeAI, speech-to-text through auto-capture and transcription powered by Bhashini, to address farmer queries conversationally across varying levels of digital literacy.</li> <li>• Envisioned to be a one-stop-shop for all federal scheme related information, e-Mitra will soon be launched to support the PMFBY and Kisan Credit Card schemes and will eventually scale to include all centrally-sponsored schemes</li> </ul>
<b>2</b>	<b>National Pest Surveillance System (NPSS)</b>	<ul style="list-style-type: none"> <li>• National Pest Surveillance System (NPSS), an AI-based phone-application, aims to equip farmers and extension workers with a tool that is able to diagnose pest-related symptoms and prescribe actionable advisory using image capture. This is being used by farmer extension workers (with over 10,000 active users) to support farmers, pest advisory</li> <li>• The NPSS uses computer vision technology, and AI-based classification modules to identify pest infestations and then escalate to regional centers to then disseminate associated advisory and notifications to farmers in the area to mitigate against pest attacks and avoid crop loss.</li> <li>• Currently supporting 61 crops and over 400 pests, the NPSS application will be further developing surveillance modules to provide more customized advisory based on real-time data feeds.</li> </ul>
<b>4</b>	<b>Krishi Saathi</b>	<ul style="list-style-type: none"> <li>• Krishi Saathi is an AI-Powered chatbot to assist Farm-Tele Advisors working at Kisan Call Centers (KCC) to efficiently respond to farmers' queries by using large language models trained using vetted information from local agricultural universities such as packages of practice for crops, technologies of use, and through accessing information from other sources such as the Indian Meteorological Department (IMD), etc.</li> <li>• The bot has been integrated into the Kisan Knowledge Management System (KKMS), which manages data and queries received from inbound farmer calls. Krishi Saathi uses GenerativeAI to draw from various sources and create comprehensive yet concise summaries that are easily disseminated to farmers for faster query resolution.</li> <li>• Currently deployed across 3 Kisan Call Centres in the states of Rajasthan, Haryana, and Madhya Pradesh (that routinely respond to 10,000 queries/day), it will eventually be scaled to all 17 Kisan Call Centres to cater to all farmers across India.</li> </ul>

Krishi Monitoring Support Center

About the Krishi Monitoring Support Center

The Krishi Monitoring Support Center has been developed to facilitate and monitor the timely delivery of agricultural services at one place. These Centres are functioning for the betterment of the farmers and agriculture.

Ability to access multiple sources of information simultaneously

Facilitate to generate, calculate and integrate various types of data for better decision making

Ability to store, sort, filter and use the reports and documents for better decision making

Provide solutions for monitoring and tracking

Facilitate and manage distribution of information from various sources

Ability to access multiple sources of information simultaneously

Facilitate to generate, calculate and integrate various types of data for better decision making

Ability to store, sort, filter and use the reports and documents for better decision making

Provide solutions for monitoring and tracking

Facilitate and manage distribution of information from various sources

## 4.12 AI initiatives in Agriculture

### Background

India has experienced significant growth in innovation through the use of digital technologies across various sectors. This transformation is driven by government initiatives, a burgeoning startup ecosystem, widespread mobile and internet penetration, and a young, tech-savvy population.

In recent years, the agriculture sector, the backbone of the Indian economy, has witnessed widespread adoption and absorption of AI-led solutions across its value chain. This transformation is helping to address long-standing challenges in the agriculture sector, and is working towards the goal of Viksit Bharat in 2047 and geared towards bolstering India's Digital Agriculture Mission.

In addition to the above, an enterprising ecosystem of agri startups is growing rapidly with grassroots-level innovation across the value chain. This is driven by a young and intelligent generation that is quickly changing how agriculture is carried out nationwide. By integrating AI technologies into various aspects of policymaking, resource management, research, and service delivery, the MoA&FW aims to achieve more efficient and effective outcomes.

The table below highlights some concurrent initiatives designed, developed, and deployed by India's

Ministry of Agriculture and Farmers Welfare (MoA&FW). These initiatives are accessible to the country's farmers through telephone, mobile, and internet applications:

#### 4.12.1 MKisan-Use of basic mobile telephony:

Since the penetration of smart phones with internet in rural areas is around 18% only, mobile telephony is considered to be the alternate and the best option to deliver services to the farmers. Mobile telephony has transformed the tenor of our lives. The Department has developed a portal - mkisan(mkisan.gov.in), where around 5.2 crore farmers are registered and experts/scientists of different departments like IMD, ICAR, State Government, State Agriculture Universities send information to farmers in 12 local languages on a regular basis.

Information related to the weather such as likelihood of rainfall, temperature, etc. enables farmers to make informed decision in choice of seed varieties and decide on timing of sowing and harvesting. With market information, farmers are better informed to sell produce, prevailing market prices and quantity demanded in the market. Thus, they can make informed decisions to sell produce at the right price and at the right time. This helps in reducing distress sales by farmers due to market supply fluctuations. More than 2462 crore SMSs have been sent through mKisan since its inception in 2013.



## Department of Agriculture & Farmers Welfare

### 4.12.2 Development of Mobile Apps:

Spreading agriculture related information to farmers in the poorest communities has been made easier by proliferation of mobile phones. Today, mobile apps and services are being designed and released in different parts of the world. Mobile apps help to fulfil the larger objective of farmers' empowerment and facilitates in dissemination of extension services to address food security issues. Various mobile apps have been developed for farmers. Details are as listed below:

Kisan Suvidha: It is an omnibus mobile app to help farmers by providing relevant information to them

quickly. It has a simple interface and provides information on critical parameters—weather, input dealers, market price, plant protection, expert advisories, Soil Health Card, cold Stores & godowns, crop insurance. An additional tab directly connects the farmer with the Kisan Call Centre where agriculture experts answer their queries. Unique features like extreme weather alerts and market prices of commodities in the nearest area and the maximum price in the State as well as in India have been added to empower farmers in the best possible manner. With the click of a button, farmers can obtain all this information in hand provided they have a smart phone and decent internet connectivity.



### 4.12.3 DBT implementation in schemes of the Department

- 15 schemes of the Department have been identified for DBT implementation
- Management Information System of these schemes is linked with the Central Agriculture portal ([dbtdacfw.gov.in](http://dbtdacfw.gov.in)).

## Schemes on boarded on DBT

Agri Clinics and Agri Business Centres ACABC
Agriculture Technology Management Agency (ATMA) - Extension Functionaries
Agriculture Technology Management Agency (ATMA) - Farmers
Krishi Unnati Yojana (KUY) - MOVCDNER
Mission for Integrated Development of Horticulture
National Food Security Mission - NFSM
NMSA - Rainfed Area Development
Per Drop More Crop
PM KISAN
RKVY (RAFTAAR)
Sub Mission on Agriculture Mechanization - Central Sector
Sub Mission on Agriculture Mechanization - Centrally Sponsored
Sub - Mission on Seeds and Planting Material
National Mission on Edible Oil - Oilpalm ( <b>NMEOOP</b> )
Pradhan Mantri Fasal Bima Yojana

### 4.13 Cloud Services for the Department:

The Ministry of Agriculture and Farmers' Welfare (MoAFW) has selected a Cloud Managing Service Provider (MSP) to manage the cloud infrastructure provided by Google Cloud. The primary purpose of adopting the cloud platform is to migrate all existing portals, applications, and databases currently hosted on the NeGPA server at the NIC Physical Data Center to the cloud. Additionally, any newly developed portals and applications will be hosted on cloud-based Virtual Machines (VMs).

The cloud platform offers a comprehensive range of services, including storage, computing, and networking. One of its key advantages is the ability to

scale up or down, both vertically and horizontally, based on system performance and workload demands. This flexibility ensures efficient handling of varying loads, optimizing resource use and overall system performance.

Moreover, the cloud platform enables the immediate provisioning of high-performance VMs and compute resources, which are essential for AI-ML model training and deployment. This makes the cloud platform an ideal solution for deploying AI/ML models and applications, as it eliminates the operational expenditure (OPEX) associated with maintaining infrastructure, providing a cost-effective and efficient alternative.

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## **Chapter 5**

## **MISSION FOR INTEGRATED DEVELOPMENT OF HORTICULTURE (MIDH)**

### **Overview**

**5.1** Mission for Integrated Development of Horticulture (MIDH) is a Centrally Sponsored Scheme for the holistic growth of the horticulture sector covering fruits, vegetables, root & tuber crops, mushrooms, spices, flowers, aromatic plants, coconut, cashew and cocoa.

### **5.2 Major Schemes - Objectives**

MIDH consists of 5 schemes on Horticulture viz. (i) National Horticulture Mission (NHM), (ii) Horticulture Mission for North East and Himalayan States (HMNEH), (iii) National Horticulture Board (NHB), (iv) Coconut Development Board (CDB), (v) Central Institute of Horticulture (CIH), Nagaland.

Under MIDH, Government of India (GOI) contributes 60% of total outlay for developmental programmes in all the States except States in North East and Himalayas, 40% share is contributed by State Governments. In the case of North Eastern and Himalayan States, GOI contributes 90%. In case of National Horticulture Board (NHB), Coconut Development Board (CDB), Central Institute for Horticulture (CIH), Nagaland and the National Level Agencies (NLA), GOI contributes 100%.

The budget allocation of Rs. 2065.99 crore has been earmarked for MIDH during 2024-25. As on 31st December, 2024, funds to the tune of Rs. 1191.35 crores have been released for implementation of activities of MIDH i.e. Rs. 560.11 crore under NHM, Rs. 306.88 crore under HMNEH, Rs. 65.49 crore under CDB, Rs. 153.50 crore to NHB, Rs. 53.33 crore under NBM and Rs. 52.04 crore to CIH, DCCD & DASD and Estt. Expenditure of CDB & NHB.

### **5.3 Brief of schemes under MIDH is as follows:**

#### **5.3.1 National Horticulture Mission (NHM):**

This Centrally Sponsored Scheme was launched in the year 2005-06 and aims at the holistic development of the horticulture sector by ensuring forward

and backward linkage through a cluster approach with the active participation of all stakeholders. A total of 384 districts in 18 States and 6 Union Territories were covered under NHM. Sixteen (16) National Level Agencies (NLAs) have also been included for providing support for developmental efforts which require inputs at the national level.

Supply of quality planting material through establishment of nurseries and tissue culture units, production and productivity improvement programmes through area expansion and rejuvenation, technology promotion, technology dissemination, human resource development, creation of infrastructure for post harvest management and marketing in consonance with the comparative advantages of each State/region and their diverse agro-climatic conditions are major interventions under NHM.

#### **5.3.2 Horticulture Mission for North East and Himalayan States (HMNEH)**

The Department is implementing a Centrally Sponsored Scheme - Horticulture Mission for North East and Himalayan States (HMNEH) earlier known as Technology Mission for Integrated Development of Horticulture in North Eastern States since 2001-02. During the X Plan (2003-04), the scheme was further extended to three Himalayan States namely: Himachal Pradesh, Jammu and Kashmir and Uttarakhand. The Mission covers the entire spectrum of horticulture, right from planting to consumption with backward and forward linkages. With effect from 2014-15, HMNEH scheme has been subsumed under MIDH.

#### **5.3.3 National Horticulture Board**

The National Horticulture Board (NHB) was set up by the Government of India in 1984 as an Autonomous organization under the administrative control of Ministry of Agriculture and Farmers Welfare and registered as a society under Societies Registration Act with its headquarters at Gurugram. Presently,

NHB has 29 field offices located all over the country. The broad aims and objectives of the Board are to develop production clusters/hubs for integrated Hi-tech commercial horticulture, development of Post-harvest and cold chain infrastructure, ensuring availability of quality planting material and to promote adoption of new technologies/tools/techniques for Hi-tech commercial horticulture etc.

The Board is implementing following schemes:

1. Development of Commercial Horticulture through Production and Post Harvest Management of Horticulture Crops.
2. Capital Investment Subsidy for Construction/ Expansion/ Modernization of Cold Storages and Storages for Horticulture Products.
3. Technology Development and Transfer for Promotion of Horticulture.
4. Market Information Service for Horticulture Crops.
5. Horticulture Promotion Services/ Expert Services and Strengthening Capability of NHB.

#### **5.3.4 Coconut Development Board**

Coconut Development Board (CDB) is a statutory body established by Govt. of India by an Act of Parliament (Coconut Development Board Act 1979) and came into existence in January 1981. The thrust areas of the Coconut Development Board programmes under MIDH are production and distribution of quality planting material, expansion of area under coconut cultivation especially in potential and non-traditional areas, improving the productivity of coconut in major coconut producing States, developing technology in post-harvest processing and marketing activities, product diversification and by-product utilization of coconut for

value addition, dissemination of information and capacity building in the coconut sector.

The major programmes being implemented by the Board are:

- A.1. Production and Distribution of Quality Planting Materials
  - (a) Demonstration cum-Seed Production (DSP) Farm
  - (b) Establishment of Regional Coconut Nurseries
  - (c) Establishment of Nucleus Coconut Seed Garden
  - (d) Establishment of Small Coconut Nursery
- A.2. **Expansion of Area under Coconut**
  - A.3. Integrated Farming for Productivity Improvement
    - (a) Laying out of Demonstration Plots
    - (b) Aid to Organic Manure Units
  - A.4. Technology Demonstration/Quality Testing Lab
  - A.5. Marketing, Market Intelligence Services, Statistics and Strengthening of Export Promotion Council (EPC)
  - A.6. Information & Information Technology
  - A.7. Technical Service & Project Management
  - B. Technology Mission on Coconut
  - C. Replanting & Rejuvenation of Old Coconut Gardens
  - D. Coconut Palm Insurance Scheme
  - E. Kera Suraksha Insurance Scheme

#### **5.4 Physical and Financial Progress**

##### **5.4.1 National Horticulture Mission (NHM):**

A. Physical Progress: The summary details of progress achieved during 2024-25 are given at Table 1 below:

**Table 1: Progress under NHM**

S. No.	Components	Unit	Progress during 2024-25 (as on 31st December , 2024)
1	<b>Area Expansion</b>	Ha.	16521
2	<b>Rejuvenation</b>	Ha.	3386

# Department of Agriculture & Farmers Welfare

**Table 1: Progress under NHM**

S. No.	Components	Unit	Progress during 2024-25 (as on 31st December , 2024)
3	<b>Protected Cultivation</b>	Ha.	3701
4	<b>Integrated Pest/ Nutrient Management</b>	Ha.	19587
5	<b>Nurseries</b>	No.	3
6	<b>Water Resources</b>	No.	655
7	<b>Beekeeping</b>	No.	14851
8	<b>Horticulture Mechanization</b>	No.	1670
9	<b>Post Harvest Management</b>		
	(i) Pack House	No.	479
	(ii) Cold Storage	No.	0
	(iii) Primary/mobile processing units	No.	107
10	<b>Rural Market</b>	No.	0

*Source: As per the data uploaded by the State Govt. on MIDH, web portal.*

**B. Financial Progress:** During 2023-24, funds to the tune of Rs. 728.70 crore have been released to States/UTs/NLAs for implementing NHM scheme against RE of Rs 747.97 crore. During 2024-25, an amount of Rs. 1038.64 crore has been allocated for NHM, against which an amount of Rs. 560.21 crore has been released as on 31st December, 2024.

## 5.4.2 Area, Production & Productivity of Horticulture Crops

The comparative details of area, production and productivity of various horticulture crops during 2023-24 (3rd Adv. Est) with reference to 2004-05 are given in the following Table 2.

**Table 2: NHM Scenario: Area, Production & Productivity**

(Area: '000 Ha, Production: '000 MT, Productivity: MT/Ha)

Crop	Area			Production			Productivity		
	2004 -05	2022-23	2023 -24*	2004 -05	2022-23	2023 -24*	2004 -05	2022-23	2023 -24*
<b>Fruits</b>	5155	7025	7158	50988	110207	112730	9.89	15.69	15.75
<b>Vegetables</b>	6744	11309	11171	101286	212548	205799	15.02	18.80	18.42
<b>Flowers</b>	118	85	292	659	3097	3138	5.58	10.88	10.75
<b>Aromatic &amp; Medicinal</b>	131	754	786	159	608	638	1.21	0.81	0.81
<b>Plantation</b>	3147	4551	4637	9835	17049	18259	3.13	3.75	3.94
<b>Spices</b>	3150	4515	4940	4001	11830	12478	1.27	2.62	2.53
<b>Honey</b>	-	-	-	-	-	-	-	-	-
<b>Total</b>	<b>18445</b>	<b>28438</b>	<b>28984</b>	<b>166939</b>	<b>355482</b>	<b>353188</b>	<b>9.05</b>	<b>12.50</b>	<b>12.19</b>

\*3<sup>rd</sup> Advance Estimates of Horticulture Crops 2023-24 - DA&FW

The wide and varied nature of the horticulture sector covering fruits, vegetables, root and tuber crops, flowers, aromatics and medicinal crops, spices and plantation crops facilitates better returns per unit of area, besides opportunities for diversification in agriculture.

Horticulture crops cover an area of 28.98 Million Hectare at present; it has registered an increase of

23.8% as compared to 23.41 Million Hectare in 2014-15. However, with a production of about 353.19 Million Tonnes, horticulture production has witnessed an increase of about 25.7% during the period 2014-15 to 2023-24 (3rd Advance Estimates).

Area, Production & Productivity of Horticulture crops during the past 10 years are given in Table 3.

**Table 3: Area, Production & Productivity of Horticulture crops**

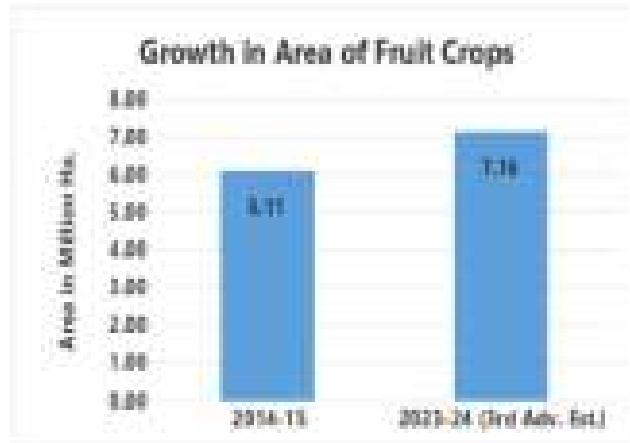
Area: Million Ha, Production: Million Ton, Productivity: Ton/Ha

Year	Area	Production	Productivity
2014 -15	23.41	280.99	12.00
2015 -16	24.47	286.19	11.69
2016 -17	24.85	300.64	12.10
2017 -18	25.24	310.67	12.31
2018 -19	25.74	311.05	12.09
2019 -20	26.48	320.47	12.10
2020 -21	27.48	334.60	12.18
2021 -22	28.04	347.18	12.38
2022 -23	28.44	355.48	12.50
2023 -24 (3 rd Advance Estimates)	28.98	353.19	12.19

The area under fruit crops during 2023-24 (3rd Advance Estimate) is 7.16 Million Hectare, with a total production of 112.73 Million Tonne. During the Period 2014-15 to 2023-24 (3rd Advance Estimate),

production of fruits increased by about 30.2%, while the area increased by about 17.2%. Comparative details of area, production and productivity of fruit crops are given in **Figure 1**.

**Figure 1: Growth in Area and Production of Fruits**

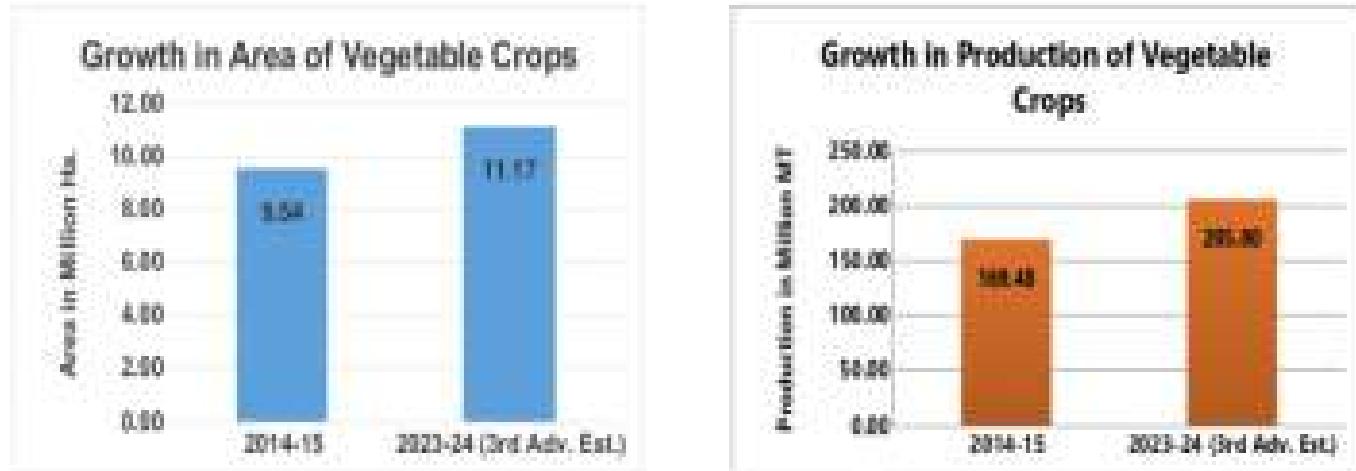


# Department of Agriculture & Farmers Welfare

Vegetables are an important crop in the horticulture sector, occupying an area of 11.17 Million Hectare as per 2023-24 (3rd Advance Estimate) with a total production of 205.80 Million Tonne with average productivity of 18.42 Tonnes/Hectare. In fact, vegetables constitute about 58.27% of horticulture

production. During the period 2014-15 to 2023-24 (3rd Advance Estimate), area and production of vegetables increased by 17.1% and 21.4% respectively. The comparative details are depicted in the **Figure 2**.

**Figure 2: Growth in Area and Production of Vegetables**



India has also made remarkable advancements in production of flowers, particularly cut flowers, which have a high potential for exports. Floriculture during 2023-24 (3rd Advance Estimate) covered an area of 0.29 Million Hectare with a production of 3.14 Million Tonne of flowers.

India is the largest producer, consumer and exporter of spices and spice products. The total production of spices during 2023-24 (3rd Advance Estimate) was

12.48 Million Tonne from an area of 4.94 Million Hectare.

### 5.4.3 Horticulture Mission for North East and Himalayan States (HMNEH)

#### A. Physical Progress

The summary details of progress achieved so far under HMNEH during 2023-24 are given at **Table 4** below:

**Table 4: Progress under HMNEH**

S. No.	Components	Unit	Progress during 2024 -25 (as on 31 st December, 2024)
1	<b>Area Expansion</b>	Ha.	190.00
2	<b>Rejuvenation</b>	Ha.	6.00
3	<b>Protected Cultivation</b>	Ha.	1
4	<b>Integrated Pest/Nutrient Management</b>	Ha.	1
5	<b>Nurseries</b>	No.	0
6	<b>Water Resources</b>	No.	62
7	<b>Beekeeping</b>	No.	0
8	<b>Horticulture Mechanization</b>	No.	21

**Table 4: Progress under HMNEH**

S. No.	Components	Unit	Progress during 2024 -25 (as on 31 <sup>st</sup> December, 2024)
9	<b>Post Harvest Management</b>		
	(i) Pack House	No.	114
	(ii) Cold Storage	No.	0
	(iii) Primary/Mobile Processing Units	No.	2
10	<b>Rural Market</b>	No.	0

Source: As per the data uploaded by State Govt. on MIDH, web portal.

## B. Financial Progress

During 2023-24, funds to the tune of Rs. 306.88 crore have been released to States implementing HMNEH scheme against RE of Rs. 340.00 crore. During 2024-25, an amount of Rs.375.60 crore has been allocated for North Eastern States and Himalayan States against which an amount of Rs. 306.88 crore has been released as on 31st December, 2024.

### 5.4.4 National Horticulture Board (NHB)

#### A. Physical Progress:

**1. “Development of Commercial Horticulture through Production and Post-Harvest Management of Horticulture Crops” for a better alternative to increase the income of farmers** in which the financial support in the form of back-ended subsidy is provided for setting up units relating to horticulture sector such as production related projects, PHM viz. Pack House, Ripening Chamber, Refer Van, Retail Outlets, Pre-cooling units, Primary processing etc. The brief of the scheme is as under:-

**1.1 Open Field Cultivation-** Credit linked back-ended subsidy @ 40% of the total project cost limited to Rs 30.00 lakh per project in general area and @ 50% of project cost limited to Rs. 37.50 lakh in NE Region and Hilly States and Scheduled areas for horticulture projects in open field condition on project mode including component viz, planting material, plantation, irrigation, fertigation, mechanization, GAP etc. for projects covering area over 2.00 ha (5 Acres). In case of NE Region, projects having area over 2.5 Acres are eligible.

**1.2 Protected Cover/ Cultivation** - Credit linked back-ended subsidy @ 50% of project cost limited to

Rs 56.00 lakh per project for horticulture project in protected condition on project mode including components viz Green House, Shade net house, plastic tunnels, planting material, plantation, irrigation, fertigation, mechanization, etc for project having area over 2500 sq meter. In case of NE Region, projects having area over 1000 sq meter are eligible.

**1.3 Post-Harvest Management- Integrated PHM** Projects relating to Pack House, Ripening Chamber, Refer Van, Retail Outlets, Pre-cooling units, Primary processing etc. Credit linked back-ended@35% of the project cost limited to Rs. 50.75 lakh per project in general area and 50% of project cost limited to Rs. 72.50 lakh per project in NE Region, Hilly States and Scheduled areas for post-harvest management projects/components.

#### Achievements

Under the scheme, the Board sanctioned 161 projects during the current financial year involving subsidy of Rs. 63.37 lakh. The projects include Hi-Tech cultivation of perennial fruit crops in open field, vegetables & flowers in protected cultivation, tissue culture units, mushroom cultivation, establishment of pack house and grading centers, ripening chambers, refer van, retail outlets, pre-cooling units, primary processing units etc.

**2 “Capital Investment Subsidy for Construction/ Expansion/ Modernization of Cold Storages and Storages for Horticulture Products”,** under this scheme, credit linked back-ended subsidy @35% of the capital cost of the project in general areas and 50% in case of North East, Hilly States & Scheduled areas for Cold storage capacity above 5000 MT and up to 10000 MT is sanctioned for

# **Department of Agriculture & Farmers Welfare**

construction/ expansion/ modernization of cold storage and CA store. In case of NE Region, the capacity above 1000 MT are also eligible. Only those projects are considered which are set up in conformity of technical standards for energy efficiency and environmental safety energy and multi chambers.

## **Achievements**

Under the scheme, the Board sanctioned 32 projects of Cold Storages/CA Storages involving subsidy of Rs. 59.34 lakh for creation of capacity of 193398.26 MT during the current financial year.

### **3. Technology Development and Transfer for Promotion of Horticulture**

Under this scheme, the Board is also providing grant-in-aid for popularization of identified new technologies/tools/techniques for commercialization and adoption through following programmes:

- (i) Setting up of block / mother plant and root stock nursery (Area above 4 ha).
- (ii) Acquisition of technologies including import of planting material.
- (iii) Import of new machines and Tools for horticulture.
- (iv) Development & Transfer of Technology.
- (v) Long Distance Transport Solution
- (vi) Product Promotion and Market Development Services- Horti-fairs
- (vii) Exposure visit of farmers (Outside State)
- (viii) Visit Abroad for Government Officers
- (ix) Organization/Participation in Seminar/ symposia/workshop for development of horticulture
- (x) Accreditation and Rating of Fruit Plant Nurseries

## **Achievements**

Under this scheme, NHB has assisted 02 projects for Introduction of New Technology, Visit of Progressive Farmers, Horti. Sangam, Organization/Participation in Seminars/ Symposia/ Exhibitions, Technology Awareness, Mother Plant Nurseries, etc. and released financial assistance amounting to Rs. 1.541 lakh during the current financial year.

### **4. Market Information Service for Horticulture Crops**

This scheme deals with work of computerization, development of technology package, data feeding, information dissemination through publicity, printed literature local advertisements etc scheme provides for engagement of outsourced staff such as Senior Programmer, Programmer, Data Entry Operators and horticulture assistant as per need at approved rates under TSG component of MIDH.

### **5. Horticulture Promotion Services/ Expert Services and Strengthening Capability of NHB**

Under this component, specialized studies and surveys shall be carried and study/ survey reports shall be brought out for use by targeted beneficiaries. In addition, technical laboratories shall be set up or cause to be set up and also provide technical services including advisory and consultancy services.

## **Other New Initiatives**

### **1. Cluster Development Programme**

The Ministry of Agriculture and Farmers Welfare (MoA&FW), Government of India, has launched a new programme for Horticulture Cluster Development to enhance the global competitiveness of the Indian horticulture sector. The National Horticulture Board has been designated as the Nodal Agency for implementation of Cluster Development Programme as a component of Central Sector Scheme of NHB.

The Cluster Development Programme (CDP) is designed to leverage the geographical specialisation of horticulture clusters and promote integrated and market-led development of preproduction, production, post-harvest, logistics, branding, and marketing activities. MoA&FW has identified 55 horticulture clusters, of which 12 have been selected for the pilot launch of the Programme. Based on the learnings from the pilot project, the programme will be scaled up to cover all 55 clusters. The experiences gathered from the implementation of the pilot phase will provide policy insights and field level learnings that will help in better implementation of programme in all horticulture clusters across India

## 2. Clean Plant Programme

The Cabinet on 9th August 2024 has approved the Clean Plant Programme (CPP) with an investment of Rs 1,765.67 Crores. This pioneering initiative is set to revolutionize the horticulture sector in India and expected to set new standards for excellence and sustainability. The CPP represents a major leap forward in enhancing the quality and productivity of fruit crops across the nation.

### Key Benefits of the Clean Plant Programme (CPP):

- Farmers:** The CPP will provide access to virus-free, high-quality planting material, leading to increased crop yields and improved income opportunities.
- Nurseries:** Streamlined certification processes and infrastructure support will enable nurseries to efficiently propagate clean planting material, fostering growth and sustainability.



- Consumers:** The initiative will ensure that consumers benefit from superior produce that is free from viruses, enhancing the taste, appearance, and nutritional value of fruits.
- Exports:** By producing higher-quality, disease-free fruits, India will strengthen its position as a leading global exporter, expanding market opportunities and increasing its share in the international fruit trade.

### 5.4.5 Coconut Development Board (CDB)

#### A. Physical Progress:

The summary of physical achievements during 2024-25 till 31st December is as follows;

- The Board has produced 4.24 lakh quality coconut seedlings in 11 Demonstration cum Seed Production Farms established across the country and supported various State Govts in production of 5.31 lakh seedlings.
- An extent of 535.52 ha has been brought newly under coconut cultivation through Area expansion programme.



- 625.40 New Hs & 7767.10 Ha Maintenance area have been demonstrated under integrated nutrient management and assistance has been provided for establishment of 33 nos organic manure units.
- 2626.88 Ha new & 1044.60 Ha maintenance area has been covered under replanting and rejuvenation.

- Under the scheme, Technology Mission on Coconut assistance has been extended to one project for development of technologies for management of insect pest and disease management and one project for setting up of coconut processing unit.
- The Board has organized 597 training programmes on coconut based value added products and 258 onsite demonstration programme at CDB institute of Technology, Aluva.

## Department of Agriculture & Farmers Welfare

- Conducted 5 market promotion meets, established 12 market intelligence centres, assisted in establish 1 kiosk for value added coconut products and 58 exporters/ entrepreneurs has been

assisted for participating in 10 international exhibitions/ trade fairs/ domestic fare and issued 614 RCMC



Training on value addition in coconut



NABL accredited Lab

- Under Kera Suraksha Insurance scheme, 2427 coconut palm climbers have been insured.
- Board conducted 129 awareness training programmes, 18 skill development programme, attended 20 exhibitions, published journals, disseminated technical informations through various medias etc as part of creating awareness on coconut cultivation, processing, marketing etc.

### B: Financial Progress:

During the current financial year, funds to the tune of Rs. 58.50 crore has been released to CDB and an amount of Rs. 65.49 crore has been expended as on 31.12.2024 (including Estt. Exp. of Rs. 31.22 crore).



World Coconut day celebration in Karnataka



Orientation programme for Department Officials



World coconut day celebration in Kerala



Handicraft training programme

#### **5.4.6 Central Institute of Horticulture (CIH), Nagaland**

Central Institute of Horticulture, Medziphema, Nagaland has been engaged in the task of various horticulture development activities in North Eastern regions and the programmes are executed through capacity building by training of trainers and farmers/beneficiaries; on & off farm demonstration of improved production technologies; production and supply of quality planting material; accreditation and certification of nurseries in NE region; promotion of organic cultivation of horticultural crops; agri-business promotion through exhibitions, seminars, workshops, exposure trips, buyers & sellers meet; post harvest management and value addition of horticultural crops; skill development & certificate courses in horticulture; transfer of technology through method & result demonstration, publication of folders, manuals, leaflets and coordination with state horticulture departments of NER and other National organizations, NGOs, farmers' group and self-help groups.

##### **Major Achievements of CIH during 2024-25:**

- Conducted 2 days training programme for 43 horticulture officers and field functionaries in collaboration with MSFAC on "Advanced Production Technology of Kiwi fruit" on 25th - 26th July 2024 in Shillong Meghalaya.
- Conducted farmers training for 68 progressive bee farmers' of Mima and Kigwema Villages on scientific bee keeping to commemorate World Bee Day on 20th May 2024 at Thawuzu, Mima Village, Nagaland. Organized 2 days farmers' training for 100 farmers on Production Technology, PHM and Marketing of Important Horticulture crops from 21st - 29th May 2024 at Molvom and Bungsang villages of Nagaland.
- Conducted three days exposure visit cum training to Guwahati, Assam from 12-14th June 2024 on "Entrepreneurship development through processing and value addition".
- A total of 22722 nos. of rootstocks of Citrus, mango, Cashew nut and guava have been raised and 58039 Quality Planting materials have been propagated & produced for Citrus, Cashewnut, Litchi and Guava. Beside these, 3 nursery units and 2 scion blocks in polyhouse & scion mother block in field is being maintained. Further, 1340 air layered litchi plants, 11092 rangpur lime, 4062 assam lemon, 2900 rough lemon and 2330 acid lime have been produced.
- Established demonstration plots of Mango-steen, Avocado, Pear, Jackfruit, vegetables & spices (Colocasia, Turmeric, Cabbage, Broccoli, Pakchoi, French bean, Palak, Lettuce, Zucchini, pea, Yardlong bean, sweet corn), seasonal flowers, cultivation of capsicum, tomato, muskmelon and cucumber under protected structures.
- CIH has done 4 Horticulture nurseries Accredition in Dirang, Arunachal Pradesh during the period from 24.11.2024 to 29.11.2024, 4 Horticulture nurseries

## Department of Agriculture & Farmers Welfare

Accreditation in Assam State, during the period from 06.12.2024 to 10.12.2024 and 13 Horticulture nurseries Accreditation in Tripura State, during the period from 09.12.2024 to 15.12.2024.

- CIH, Nagaland carries out practical demonstrations and training on post-harvest processing activities at Minimal processing unit of

the Institute for unemployed youths, SHGs and women group.

- Celebrated World Environment Day on 5th June, 2024 where plantation drive was organized on the campus.
- Organized Swachhta Pakhwada from 13th September to 2nd October.

### GLIMPSES OF ACTIVITIES CARRIED OUT IN CIH, NAGALAND



Quality planting material production



Training Programmes/ webinar/ Field Day



Post harvest management & value addition



Events celebrated

### 5.5 Directorate of Areca nut and Spices Development, Calicut

The Directorate of Areca nut and Spices Development (DASD) is a subordinate office under Ministry of Agriculture & Farmers Welfare, Government of India, entrusted with the responsibility of development of Spices, Areca nut, Betel vine and Aromatic

plants at National level. The Directorate monitors the development programmes implemented by the states in spices under MIDH. During the year 2024-25, the Directorate had an outlay of Rs. 14.00 crores for development and promotion of spices, arecanut, aromatic crops and betelvine under MIDH.

### 5.5.1 Major Achievements of DASD during 2024-25:

- Planting material production programmes worth Rs 9.05 crores was implemented during the year. More than 1128 tonnes of seeds/rhizomes and 52 Lakhs of seedlings of various spices were produced and distributed under this programme. 70 ha of aromatic crops were multiplied during this period.
- More than 60 nurseries are recognized under DASD accreditation programme till date. Financial assistance was given for improving the infrastructure facilities of 5 spices nurseries established at different State Agri Universities to meet accreditation norms.
- Nursery infrastructure facilities for spices are established at 3 different SAUs during 2024-25. 6 seed processing and storage infrastructure facilities for spice crops were also established in selected centres. Established nurseries exclusively for large cardamom in Arunachal Pradesh under COA, Pasighat and state department farms for ensuring availability of quality disease free planting material to the farmers of North Eastern region.
- Cluster-based demonstrations on cultivation and value addition of aromatic plants established in an area of 30 ha at various locations. Established 153 demonstration plots of size 1 ha each for seed spices. Established demonstration plots on Arecanut based multi species cropping system at Tripura. Cluster based demonstration programme of organic farming in spices were established mainly in Chilli, Turmeric, black pepper and ginger. Established demonstration plot for promotion and popularization of the improved organic production technology in Bhiwapur chilli at Maharashtra. Demonstration on High density Cinnamon intercropping in coconut gardens in Bhatkal area of Karnataka. Established demonstration plot of Cinnamomum tamala plantation in Garhwal, Himalaya.
- Innovative programmes such as Single bud planting and Protray method of nursery raising in ginger and turmeric has been promoted. Special programme on micro-rhizome derived ginger seed production through tissue culture technique has been undertaken in association with SAUs to promote disease free seed material in these crops. Established 2 distillation units for extraction of aromatic plants/ spices at different centres. Established polyclonal mother garden of cinnamon (*Cinnamon verum*) to achieve maximum production of seedlings with assured quality.
- A multi institutional project on "Evidence Based Research on Arecanut and Human Health" is initiated by DASD which brings together around 16 national and state-level agencies dealing with medical research to conduct detailed research on the effect of arecanut on human health.
- A large-scale demonstration on the management of leaf spot disease in arecanut was initiated on a community basis in 10 arecanut-growing taluks of Karnataka covering a total area of 50 ha, with 5 ha covered in each of the 10 taluks.
- Around 12,750 farmers were given training on different aspects of cultivation, management, post harvest management and processing of spice crops.
- The Eighteenth Annual Review meeting of the MIDH programmes implemented through the DASD was conducted at SKUAST - Kashmir.
- The All-India estimates (2023-24) have been arrived for area and production of 23 spices & Arecanut. As per the third advance estimates, the spices production in 2023-24 is 124.78 lakh tonnes from 50.00 lakh ha.
- Directorate published a quarterly journal 'Indian Journal of Arecanut Spices and Medicinal Plants' for the dissemination of information on various technologies related with Arecanut, Spices and medicinal plants.

# Department of Agriculture & Farmers Welfare

## Photographs of DASD activities held in 2024-25



Quality seed material production plot of Ginger and Turmeric at UAHS, Shimogga



Protray seedlings of ginger raised at IGKV, Chhattisgarh



DASD accreditation team visiting spice nurseries at Karnataka for evaluation



Eighteenth Annual Review meeting of DASD at SKUAST - Kashmir



Cleanliness activities at Government LP/UP School, Blathikulam



Inspection of proposed nursery sites for establishment of large cardamom nursery at Arunachal Pradesh

## 5.6 Directorate of Cashewnut and Cocoa Development, Kochi

The Directorate of Cashewnut and Cocoa Development (DCCD) functioning at Cochin is the subordinate office of the Department of Agriculture & Farmers Welfare of the Union Ministry of Agriculture & Farmers Welfare. This was established in the year 1966 for the promotion of cashew cultivation in the country, bifurcating the erstwhile Indian Central Spices and Cashewnut Committee. The promotion of Cocoa also was entrusted to this Directorate in the year 1997. The Directorate formulate and execute the developmental programmes of cashew and cocoa in the country and monitor the implementation of developmental programmes formulated and executed by the State Governments under Mission for Integrated Development of Horticulture (MIDH). The DCCD also acts as a nodal agency for accreditation of existing cashew/ cocoa nurseries and issue recognition.

### i. Major Achievements of DCCD during 2024-25:

- Fresh area of 2900 ha were brought under cashew in the states of Gujarat, Goa, Jhrakhand Karnataka, Kerala, Madhya Pradesh and Maharashtra. An area of 2800 ha of 2nd year maintenance and 3138 ha of third year maintenance were also achieved in the states of Gujarat, Goa, Madhya Pradesh Karnataka and Kerala during the current financial year.
- An area of 420 ha of cocoa fresh planting programme, 300 ha of 2nd year and 200 ha of 3rd year maintenance were established. Total 5.90 lakh cashew grafts and 2.10 lakh cocoa hybrid seedlings distributed to small and marginal farmers.
- Senile area of 975 ha was removed and replanted with high yielding varieties in the current year in Odisha, Tamil Nadu, Kerala and Andhra Pradesh. Maintenance activity in an area of 1490 ha was undertaken in area replanted in the year 2022-23 and 2023-24.
- The Directorate will establish/modernize 7 cashew/cocoa nurseries in major cashew and cocoa growing states. 40 cashew/cocoa nurseries will be accredited for production and distribution of good quality planting materials. Total 5.90 lakh good quality cashew grafts were distributed to farmers from DCCD accredited nurseries.
- Total 2,40,000 cocoa hybrid seedlings were distributed to tribal farmers as part of new planting programme
- 26 cocoa polyclonal seed gardens/ Cashew scion bank under normal density planting and 14 garden under high density planting will be established with drip irrigation facilities in North Eastern States such as Assam, Manipur and Meghalaya.
- As part of publicity and crop promotion activities, 43 district level seminars and National conference on Cashew was organized at Rajbhavan on 14th and 15th June, 2024 in association with State Agricultural Universities, KVK's, Corporations and ICAR institutes.
- 11 Demonstration units under High density planting and 59 units under normal density planting will be established/ under progress in the cashew and cocoa growing states.
- Under the HRD programme, 525 women beneficiaries will be trained on cashew value addition. Besides, 50 farmers training, 5 exposure visits and 20 cashew apple utilization trainings will be conducted in association with SAU's and ICAR institutes.
- One day workshop on Cocoa cultivation: brown gold for the future was organized as a part of Mission LIFE on 05th June, 2024. Around 80 farmers attended the workshop.
- As part of Global campaign for #Plant for Mother, campaigns were conducted in Irirkur block panchayath in Kerala and Huvinahadagalli in Karnataka and 1.98 lakh nos cashew grafts and cocoa hybrid seedling were distributed & planted in Tamil Nadu, Maharashtra, Madhya Pradesh, Gujarat and Kerala.
- The Directorate of Cashewnut and Cocoa Development in association with Assam Agricultural University had organized three

## **Department of Agriculture & Farmers Welfare**

days National Level Training programme on Cashew and Cocoa to the field level implemeting officials of various development department in the North Eastern States.

### **Glimpses of National Conference on Cashew**



### **Glimpses of MLife Campaign**



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# Chapter 6

## NATIONAL BEEKEEPING AND HONEY MISSION (NBHM)/ NATIONAL BEE BOARD (NBB)

### 6.1 Beekeeping:

Beekeeping is an agro-based activity which is being undertaken by farmers/ landless labourers in rural area as a part of Integrated Farming System (IFS). Beekeeping has been useful in pollination of crops, thereby, increasing income of the farmers/ beekeepers by way of increasing crop yield and providing honey and other high value beehive products, viz.; bees wax, bee pollen, propolis royal jelly, bee venom, etc., that serves as a source of livelihood for rural poor. Diversified agro climatic conditions of India provide great potential and opportunities for beekeeping/ honey production and export of Honey.

### 6.2 Schemes of DA&FW for promotion of Beekeeping:

#### A. National Beekeeping & Honey Mission (NBHM):

Govt. of India has approved a Central Sector Scheme entitled “National Beekeeping & Honey Mission (NBHM)” under AatmaNirbhar Bharat Announcement for overall promotion and development of scientific beekeeping and to achieve the goal of “Sweet Revolution” in the country with total budget outlay of Rs. 500.00 crores for 3 years (2020-21 to 2022-23) and the scheme has been further extended for three years, i.e., 2023-24 to 2025-26, with the remaining available budget of Rs. 370.00 crores from the allocated budget of Rs. 500.00 crores. The scheme is being implementing through 3 Mini Missions (MMs) - MM-I, MM-II & MM-III under which thrust will be given on awareness, capacity building/ trainings, focus on women empowerment through beekeeping, setting up of requisite infrastructural facilities, viz.; Integrated Beekeeping Development Centres (IBDCs), Honeybees Disease Diagnostic Labs, Setting/ upgradation of Honey Testing labs, Beekeeping Equipment Manufacturing Units, Custom Hiring Centres, Api therapy Centres, Devel-

opment of Quality Nucleus Stock Centres & Bee Breeders, Distribution of Bee Colonies a new Component etc., Digitization/ online registration, etc. under MM-I, processing, value addition, market support, etc. under MM-II and R&D under MM-III.

#### National Bee Board (NBB):

National Bee Board (NBB), a registered society under Societies Registration Act XXI of 1860 (19th July, 2000), was reconstituted under the Chairmanship of Secretary (A&C) in June, 2006. The main objective of NBB is overall development & promotion of Scientific Beekeeping in the country to increase the productivity of crops through pollination and increase the Honey production for increasing the income of the Beekeepers/ Farmers. NBB has been designated/ recognized as Nodal Agency for overall development/ promotion of scientific beekeeping in the country. The scheme NBHM is being implemented by NBB.

### 6.3 Main activities under NBHM during 2024-25:

Details of main activities implemented during the year 2024-25 under NBHM, as on date, are given as under:

- 4 World Class State-of-the-Art Honey Testing Labs has been sanctioned under NBHM: i. at NDDB-Kolkata campus, West Bengal, (ii) a National Centre of Excellence in Beekeeping at IIT-Roorkee Uttarakhand, (iii) at Guwahati Biotech -park, Assam; &(iv) at Central Ag-Mark lab, Pune, Maharashtra (1);
- 13 Mini Honey Testing Labs in the states of Gujarat (1), Manipur (1) Arunachal Pradesh (2) Bihar (1) Assam (2) and Meghalaya (2), Haryana (1) Uttar Pradesh (1) Uttarakhand (1) & Kerala (1)
- On demand of beekeeping sector APEDA imposed Minimum Export Price (MEP) of US \$

2,000 (Rs. 1,67,103.20/-) per metric ton (PMT). i.e., Rs. 167.10 per Kg of Honey. This has been extended upto 31st December 2025.

- Madhukranti portal has been launched for online registration traceability of source of honey and other bee products. About 15,211 Beekeepers/Beekeeping & Honey Societies/ Firms/ Companies with 22.83 lakhs honeybee colonies registered with NBB are uploaded on "Madhukranti Portal".

## 6.4 Main achievements of NBB in beekeeping/honey production:

The main achievements of NBB in beekeeping/honey production since its inception in 2006 are summarized as under:

- India is currently producing about 1,46,000 Metric Tonnes (MTs) (3rd-advance Estimate) of Honey (2023-24).
- The country has exported 109,763 kg of Honey to the world for the worth of Rs. 1470.00 Crores during the year of 2023-24. (source: MoC&I)
- Four training modules, viz.; (i) basic training on beekeeping (ii) training on scientific beekeeping (iii) training on post-harvest management, processing, etc. & (iv) training on production of high value beehive products viz.; royal jelly, pollen, propolis, bee venom, bees wax, bee bread, etc. prepared & circulated to all the stakeholders including ICAR, SAUs, State Govts., KVIC, etc. for trainings in beekeeping.
- To boost the agricultural production through pollination enhancement in crops in sustainable manner in the country, Department of Agriculture & Farmers Welfare, GOI has decided to treat Beekeeping/ Honeybees as an Input in Agriculture.
- 17 Integrated Beekeeping Development Centres (IBDCs) as role model of beekeeping have been commissioned, one each in the States of Gujarat, Haryana, Delhi, Bihar, Punjab,

Madhya Pradesh, Uttar Pradesh, Manipur, Uttarakhand, Jammu & Kashmir, Tamil Nadu, Karnataka, Himachal Pradesh, West Bengal, Tripura, Andhra Pradesh and Arunachal Pradesh.

- Advisories on Good Beekeeping Practices (GBPs) published & circulated to all State Govts. & concerned Agencies/ Stakeholders.
- Projects for Integrated Development of Scientific Beekeeping (IDS) on Cluster/ Area/ District development approach for enhancing the crop productivity & income of farmers/ beekeepers and generating employment in rural areas formulated/ implemented.
- Designed technical standards for food grade plastic containers for storing honey, which helped in minimizing the problem of presence of lead in honey.
- Standards of Honey, Bees Wax & Royal Jelly notified by FSSAI.
- Prepared 5 years Vision Document for overall development of beekeeping.
- Requested Ministry of Finance and NABARD for instructing the financial institutions for financing beekeeping activities by providing credit limits/ Kisan credit cards etc. In pursuance to this, NABARD has already directed all commercial banks to finance beekeeping on priority basis.
- National Bee Board is also promoting beekeeping and marketing of honey to explore the possibilities for utilizing milk routes/ NDDB's infrastructure/ cooperative network in the field.
- In pursuance to NBB, Beekeeping Development Committee (BDC) under the Chairmanship of Dr. Bibek Debroy, Chairman EAC to PM, was constituted with seven members, including ED, NBB to take lead in promoting & coordinating activities involved in Beekeeping Industry so that "Sweet /Golden Revolution" in the Country may be achieved.



Production &amp; Export of Honey during last 3 years (2021-22 to 2023-24)



**Honey production has seen a substantial growth in the last decade, with the support of the NBHM mission, which has, support in boosting the honey production, adopting modern technology & scientific methods in avoiding adulteration in honey, which has helped to increase exports of honey and allied products to boost the sector**



Established a Honey & other beehive Processing Unit under NBHM Scheme at Salt Range Foods Private Limited, Guwahati, Assam

## Department of Agriculture & Farmers Welfare



A range of Honey & other value-added products on Beekeeping manufactured by Hi-Tech Natural Products (India) Ltd. under NBHM scheme



Activities of Women SHG Groups across multiple districts – Tamil Nadu Horticulture Development Agency under NBHM scheme



Bee colonies maintained by Sher-e-Kashmir University of Agricultural Sciences and Technology, Sri-Nagar Under NBHM scheme



**Demonstration of bee colonies at Honeybee Research station,  
Nagrota, CSK Himachal Pradesh**

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## **Chapter 7**

# **NATIONAL FOOD SECURITY & NUTRITION MISSION (NFSNM)**

**7.1** National Food Security Mission was launched in 2007-08 to increase the production of rice, wheat and pulses through area expansion and productivity enhancement; restoring soil fertility and productivity; and enhancing farm level economy. The coarse cereals and commercial crops were included from 2014-15 and NFSM-Nutri-Cereals is being implemented from the year 2018-19. The Mission has been renamed in the year 2024 as National Food Security & Nutrition Mission (NFSNM).

**7.2 Interventions:** The interventions covered under NFSNM includes cluster demonstrations on improved package of practices, demonstrations on cropping system, Seed production and distribution of HYVs / hybrids, improved farm machineries / resource conservation machineries / tools, efficient water application tools, plant protection measures, nutrient management / soil ameliorants, processing & post-harvest equipments, cropping system based trainings to the farmers etc.

### **7.3. Area of Operation:**

**NFSNM-Foodgrain crops:** NFSNM is being implemented in identified districts of 28 states & 2 Union Territories UTs (viz. Jammu & Kashmir and Ladakh in the country. NFSNM - Rice in 193 districts of 24 states & UT of Jammu & Kashmir, NFSNM-Wheat in 124 districts of 10 states & 2 UTs viz. Jammu & Kashmir and Ladakh, NFSNM - 00C1oa00000rse Cereals in 269 districts of 26 states & 2 UTs viz. Jammu & Kashmir and Ladakh. NFSNM - Pulses and NFSNM- Nutri Cereals are being implemented in all the districts of 28 states & 2 UTs viz. Jammu & Kashmir and Ladakh.

**NFSNM-Commercial Crops:** NFSNM-Cotton is being implemented in 15 states, Jute in 9 states and sugarcane in 13 states of the country.

### **7.4 Monitoring & Evaluation:**

**Monitoring at National level:** A three-tier monitoring mechanism exists in NFSNM at National, State

and District levels. At National level, NFSNM- General Council (GC) under the chairmanship of the Union Minister of Agriculture and Farmers Welfare was constituted to oversee the implementation of NFSNM and take policy decisions for mid-term corrections. National Food Security & Nutrition Mission-Executive Committee (NFSNMEC) under the chairmanship of Secretary (A&FW) periodically review State Action Plans and the progress of the programme of each state. National Level Monitoring Teams (NLMTs) constituted for monitoring of National Food Security & Nutrition Mission activities. Each team is comprised of experts in the field of rice, wheat, pulses, coarse cereals and nutri-cereals as per requirement and the respective Directors of the Crop Development Directorates of Ministry of Agriculture and Farmers Welfare as Coordinator. As such, there are eight (8) National Level Monitoring Teams (NLMTs).

**Monitoring at State Level:** The monitoring & review is undertaken by the State Food Security Mission-Executive Committee (SFSMEC) under the Chairmanship of Chief Secretary. At district level, the monitoring is undertaken by District Food Security Mission- Executive Committee (DFSMEC) under the chairmanship of District Collector.

**Evaluation:** The Mid-Term Evaluation and the Impact Evaluation study of NFSNM for the 11th and 12th plans were conducted by independent agencies to assess the impact of the programme in increasing the production and productivity of foodgrain crops. NITI Aayog has conducted an evaluation study through Deloitte Touch Tohmatsu India LLP from 2017-18 to 2019-20.

- The evaluation report covered all the aspects of the NFSNM scheme.
- The recommendations and way forward for NFSNM is for greater focus on pulses, nutricereals and bio-fortified varieties which is already being done and promoted under NFSNM.

**7.5 Funding pattern:** The programme is being implemented on 60:40 sharing basis between Government of India (GOI) and state government in general states and 90:10 sharing basis for North Eastern states, Hilly states, states and 100% for Union Territories. As per the operational guidelines of NFSNM, at least 30% of allocation is made for women farmers, 33% allocation of the fund is made for small and marginal farmers. In accordance with the decision of the Government of India regarding implementation of Special Component Plan (SCP) for Scheduled Castes and Tribal Sub-Plan (TSP) for Scheduled Tribes, 16% of the total allocation for SCP and 8% for TSP is earmarked. However, States are allowed to make allocation to SC/ST farmers in proportionate to their population in the States/districts.

**7.6 Achievement during 2023-24:** Recommended agronomic practices have been encouraged through various demonstrations of rice, wheat, pulses & nutri-cum-coarse cereals in 9.52 lakh ha area. Nearly, 3.87 lakh quintals of high yielding varieties / hybrids of rice, wheat, pulses and nutri-cum-coarse Cereals have been distributed, 1.75 lakh quintals of seeds of pulses & nutri cereals has been produced, 10.29 lakh ha area has been treated with micronutrients, biofertilizers, soil ameliorants/(gypsum/lime/others) and 11.04 lakh ha area has been covered under Integrated Pest Management (IPM). Nearly 54.563 thousand numbers of improved farm machineries including pumpset. 73.60 lakh meters water carrying pipes have been distributed. About 7092 cropping system based trainings were conducted for capacity building of farmers.

#### 7.7 Initiatives for Pulses:

- Strengthening of Breeder Seed production of pulses through ICAR.
- 150 Seed Hubs are being implemented for increasing certified seeds of indigenous production of pulses in India through the Indian Institute of Pulses Research (IIPR), Kanpur and their centres.
- Supplying of Seed Minikits of pulses not older than 10 years free of the cost (100% share) to the farmers. A total of 28.70 lakh minikits of

pulses have been allocated for distribution during 2024-25 as on January-2025 (Kharif: 4.48 lakh minikits, Rabi: 20.81 lakh minikits & Summer: 2.1 lakh minikits).

- In addition to State Governments, the ICAR / KVKs / SAUs are also involved in conducting the demonstrations on improved package of practices of pulses.
- From 2024-25 onwards, new focused approach adopted under Cluster Frontline Demonstrations (CFLDs) of pulses is being implemented in 10780 Ha through Krishi Vigyan Kendras (KVKs) of ICAR, which demonstrates latest crop production techniques on farmers field for faster dissemination of new technologies developed by ICAR amongst farming community.
- The Model Pulses Village project developed by ICAR has been approved, wherein 130 model pulses villages will be developed in 65 districts of 13 states.
- In addition, special projects on pulses have been given to National and International Institutes such as IIPR, Kanpur, ICRISAT, ICARDA, IRRI etc., in order to facilitate the conduct of strategic adaptive research for pulses.

#### 7.8 Initiatives for Nutri-Cereals:

- Breeder seed production of nutri-cereals.
- Creation of seed hubs.
- Certified seed production.
- Seed minikits allocation.
- Strengthening / creation of Centers of Excellence.
- Publicity of nutri-cereals.

#### 7.9 Initiatives for Cotton & Maize:

- The Government has approved the projects of ICAR-Central Institute for Cotton Research (CICR), Nagpur to increase productivity of cotton through High Density Planting / Closer Spacing Technology, promote production of Extra Long Staple (ELS) cotton and management of pink bollworm.

## Department of Agriculture & Farmers Welfare

- Further, steps have also been initiated to enhance production of maize for ethanol production under NFSNM through the ICAR-Indian Institute of Maize Research (IIMR), Ludhiana.

### **7.10 Targeting Rice Fallow Area (TRFA) for Pulses:**

The TRFA is sub-scheme of National Food Security and Nutrition Mission (NFSNM) programme which gives emphasis on land that remains underutilized after harvesting of Kharif paddy crops and aims to bring a change in the cropping pattern during Rabi

season by introducing appropriate varieties of pulses that can be cultivated using available moisture. It is being implemented through a combination of innovative technological interventions and provision of essential agri-inputs including extension services in 11 TRFA implementing States. Targeting Rice Fallow Area Programme was initiated in the year 2016-17 in 15 districts of 6 states namely, Assam, Bihar, Chhattisgarh, Jharkhand, Odisha and West Bengal. However, this was extended to 5 new states namely, Gujarat, Maharashtra, Madhya Pradesh, Karnataka and Tamil Nadu during 2019-20.

### **The Production of Foodgrains & Commercial crops during 2019-20 to 2023-24 is as under:**

Foodgrain Crops	2019-20	2020-21	2021-22	2022-23	Production in Lakh Tonnes 2023-24*
Rice	1188.70	1243.68	1294.71	1357.55	1378.25
Wheat	1078.61	1095.86	1077.42	1105.54	1132.92
Coarse Cereals	304.88	333.03	351.01	399.98	393.64
Shree Anna /Nutri Cereals	172.61	180.21	160.00	173.21	175.72
Total Pulses	230.25	254.63	273.02	260.58	242.42
<b>Total Food Grains</b>	<b>2975.04</b>	<b>3107.42</b>	<b>3156.16</b>	<b>3296.87</b>	<b>3322.95</b>
<b>Commercial Crops</b>					
Sugarcane	3705.00	4053.99	4394.25	4905.33	4531.58
Cotton#	360.65	352.48	311.18	336.60	325.22
Jute & Mesta##	98.77	93.54	101.49	93.92	96.92

Source: UPAg Portal, DA&FW (\*As per Final Estimates of 2023-24).

# Cotton Production in Bales, 1Bale=170 Kg

## Jute, Sannhemp & Mesta Production in Bales, 1Bale=180 Kg



Visit of Smt .Shubha Thakur, Additional Secretary )Crops  
(at Krishi Vigyan Kendra at Ayodhya, Uttar Pradesh.



Demonstration of Pulses by Directorate of Pulses  
Development Bhopal, Madhya Pradesh



Glimpses of the visit of Smt .Shubha Thakur, Additional Secretary )Crops( to the Channa crop demonstration field at Ayodhya, Uttar Pradesh.

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## Chapter 8

# NATIONAL FOOD SECURITY MISSION (OILSEEDS) AND NATIONAL MISSION ON EDIBLE OILS-OIL PALM (NMEO-OP)

### 8.1 Oilseed production and edible oils scenario:

Oilseeds Division has been consistently working towards achieving self-sufficiency in edible oils through promotion of oilseed production in the country. Through the synergistic efforts of Government, the area under oilseed cultivation increased from 25.60 million hectares in 2014-15 to 30.19 million hectares in 2023-24 (18.05% increase), production increased from 27.51 million tonnes to 39.67 million tonnes (44.20% increase), and pro-

ductivity increased from 1,075 kg/ha to 1,314 kg/ha (22.23% increase). Additionally, edible oil production has also increased from 86.30 lakh tonnes in 2015-16 to 121.75 lakh tonnes in 2023-24, showing a growth of 40% and reducing the import share from 63.2% to 57.29% by 2022-23, despite rising demand and consumption.

#### 8.1.1 Area, Production and Yield of Oilseeds:

Details of Area, Production and Yield of Oilseeds during 2019-20 to 2024-25 are as under:

Year	Area (million ha.)	Production (Million tonnes)	Yield (Kg/ha.)
2014 -15	25.60	27.51	1075
2015 -16	26.09	25.25	968
2016 -17	26.18	31.28	1195
2017 -18	24.51	31.46	1284
2018 -19	24.79	31.52	1271
2019 -20	27.14	33.22	1224
2020 -21	28.83	35.95	1247
2021 -22	28.95	37.96	1312
2022 -23	30.24	41.36	1368
2023 -24	30.19	39.67	1314
2024 -25*	19.79	25.74	1301
% Change	+18%	+44%	+22%

\* 1st Advance Estimate, DA&FW.

#### 8.1.2 Availability of Edible Oils in the country:

The year wise demand and supply of edible oil during 2015-16 to 2023-24 in the country are given below.

(In lakh tonnes)

Oil Year (Nov. to Oct.)	Demand	Supply**		
		Domestic sources	Imports	% import
2015 -16	234.80	86.30	148.50	63.25
2016 -17	254.16	100.99	153.17	60.27

Oil Year (Nov. to Oct.)	Demand	Supply**		
		Domestic sources	Imports	% import
2017 -18	249.72	103.80	145.92	58.43
2018 -19	259.22	103.52	155.70	60.06
2019 -20	240.71	106.55	134.16	55.74
2020 -21	246.03	111.51	134.52	54.68
2021 -22	258.44	116.50	141.94	54.92
2022 -23	289.23	124.23	165.00	57.05
2023 -24	278.30	121.75	156.55	56 .25
% Change		+40%		

Source: Directorate General of Commercial Intelligence & Statistics (Ministry of Commerce) as reported by Directorate of Vegetable Oils under Department of Food and Public Distribution.

## **8.2 Previous Oilseeds Promotional Schemes and their impacts:**

The Government has implemented several missions and initiatives to boost oilseed production in the

country, aiming to reduce dependence on edible oil imports and achieve self-sufficiency. The tenure of the missions and their achievements are as follows:

S. No	Mission	Year	Achievements			
1	Technology Mission on Oilseeds (TMO)	1986 to 2004	Year	Area (Lakh ha. )	Production (Lakh tonne )	Yield (Kg./ha )
			1986 -87	186.26	112.70	605
			2004 -05	275.23	243.54	885
2	Integrated Scheme on Oilseeds, Pulses, Oil Palm and Maize (ISOPOM)	2004 to 2014	Year	Area (Lakh ha. )	Production (Lakh tonne )	Yield (Kg./ha )
			2004 -05	275.23	243.54	885
			2014 -15	255.96	275.11	1075
3	National Mission on Oilseeds and Oil Palm (NMOOP)	2014 to 2018	Year	Area (Lakh ha. )	Production (Lakh tonne )	Yield (Kg./ha )
			2014 -15	255.96	275.11	1075
			2018 -19	247.94	315.22	1271

S. No	Mission	Year	Achievements			
4	NFSM - Oilseed & Oil Palm	2018 to 2024 - 25	Year	Area (Lakh ha. )	Production (Lakh tonne )	Yield (Kg./ha )
			2018 -19	247.94	315.22	1271
			2023 -24	301.92	396.69	1314
5	NMEO -OP	2021 to till now	Year	Area (Lakh ha. )	FFB production (Lakh tonne)	CPO Production (Lakh Tonne)
			2021 -22	3.70	20.51	3.48
			2023 -24*	5.35	22.44	3.95

\*Upto Dec-2024

### **8.3 National Mission on Edible Oils - Oil Palm (NMEO-OP) and its progress:**

The centrally sponsored scheme of National Mission on Edible Oils - Oil Palm (NMEO-OP), launched in 2021-22, aims to boost India's edible oil production by tapping into the potential of oil palm cultivation. The mission aims to add 6.50 lakh hectares under the Oil Palm cultivation, during the 2021-2026 period.

#### **8.3.1 Progress of NMEO- OP:**

- NMEO- Oil Palm is under implementation in 15 states viz., Andhra Pradesh, Assam, Telangana, Chhattisgarh, Gujarat, Karnataka, Odisha, Tamil Nadu, Tripura, Arunachal Pradesh, Manipur, Mizoram, Nagaland, Goa and Kerala. The financial expenses between central and state Govt. is provided in the ratio of 60:40 for general states and 90:10 for NE states.
- Viability Price (VP) for Fresh Fruit Bunches (FFBs) has been announced for every palm oil year (Nov-Oct). Viability Price for the OPY 2021-22, 2022-23, 2023-24 and 2024-25 is ₹ 10516/-, ₹ 13,346/-, ₹ 13,652/- and ₹ 14,489/- per ton of FFBs of Oil Palm respectively.
- Around 1.7 lakh hectares of area has been added under oil palm plantation under the

scheme. As of March 2024, a cumulative area of around 5.35 lakh hectares is under oil palm cultivation, compared to 3.70 lakh ha in 2020-21.

- Fresh Fruit Bunches (FFBs) Production of 22.34 lakh tons in 2023-24 from 12.86 lakh tonnes in 2015-16 and Crude Palm Oil (CPO) production of 3.93 lakh tons in 2023-24 from 2.17 lakh tonnes in 2015-16.
- Under the mission, 10 Oil Palm Processing Mills have been sanctioned in the North-Eastern States, with 02 mills have started functioning (3F&PFL) in Arunachal Pradesh.
- 83 new Seed Nurseries have been established under the mission, with 35 in the North-Eastern States. This resulted in the production capacity addition of more than 135 lakh of Oil Palm saplings annually.
- To fulfill the need for additional domestic demand for sprouted seed and to arrest the import dependency, 09 new Seed Gardens have been sanctioned in addition to the existing 12 seed gardens.
- 11 Projects have been approved for Oil Palm Research and Development (R&D) at ICAR-Indian Institute of Oil Palm Research (IIOPR).

Besides, one project has been sanctioned to Central Agricultural University (CAU), Imphal for establishing three Centers of Excellence (CoE) for Oil Palm.

- ix. The 'Mega Oil Palm Plantation Drive,' was launched in 2023 and 2024 covering an area of 3500 hectares in 2023 and 17000 hectares in 2024 under oil palm, engaging over 17,800 farmers in 11 states during the drive.
- x. Permission granted to import Oil Palm seed sprouts are 180 lakh, 220 lakh, 150 lakh and 40 lakh during 2021-22, 2022-23, 2023-24 and 2024-25 (till August) respectively.

#### **8.4. National Mission on Edible Oil – Oilseeds (NMO-OS):**

- The Government has approved a new Centrally Sponsored Scheme, namely National Mission on Edible Oils – Oilseeds (NMO-Oilseeds) on 3rd October, 2024 with a financial outlay of Rs. 10,103 crore having a central assistance of Rs. 7481.67 crores for implementation over seven years from 2024-25 to 2030-31 to boost oilseed production in the country.
- The main objective of the Mission is to increase the production of edible oilseeds (oilseeds) from 39.2 million metric tonnes in 2022-23 to 69.7 million metric tonnes by 2031. As a result, domestic edible oil production will increase from 12.69 million metric tonnes to 25.45 million metric tonnes with secondary sources and palm oil.
- The mission will mainly focus on increasing the production of major oilseeds like mustard, groundnut, soybean, sesame, sunflower and other oils from rice bran, cotton seed, corn oil and tree borne oilseeds.
- More than 600 clusters will be formed under the mission, which will be supervised by FPOs, cooperatives, public or private agencies as Value Chain Partners and will be covered more than 10 lakh hectares of area every year.
- Farmers registered in these clusters will also be provided free seeds, training and access to weather advisories, pest control and pesticide use information, soil health information using digital technologies and 100% crop procurement support.
- This mission will utilize easily available and early maturing new research and technological advancements and make them accessible to farmers. Under this mission, seeds of notified varieties released within 5 years as well as Truthfully Labelled Seeds will be popularized through value chain clusters.
- To promote the production of high yielding variety seeds, breeder seeds produced by ICAR institutes will be promoted through full subsidy (100%) on their purchase. Certified seeds produced using such breeder seeds will be distributed to farmers through state governments involving central and state agencies.
- In this mission, advanced agricultural practices will be demonstrated in an area of 2.8 lakh hectares every year. Apart from this, about 1,014 farmer field schools will also be organized every year.
- 65 new seed hubs will be created and apart from this 50 storage units will also be built, which will increase the storage facility of groundnut and soybean seeds.
- To increase the area of oilseeds, the area of oilseeds will be increased through rice fallows and intercropping as well as crop diversification. In the eastern and north-eastern states of the country, the fields are left fallow after paddy cultivation in Kharif, such 40 lakh hectare area will be encouraged for oilseed production.
- Value chain partners will be encouraged to set up post-harvest infrastructure, such as collection, extraction and processing of rice bran, cotton seeds and tree-borne oils.
- Digital monitoring of the mission will be done through a dashboard, which will be linked to existing schemes like Krishi Mapper, AgriStack, Soil Health, e-Samriddhi.
- Apart from this, a promotional campaign will also be run to promote the balanced use of edible oil among the citizens.

# Department of Agriculture & Farmers Welfare

- Procurement from farmers will be ensured at MSP through Pradhan Mantri Annadata Aay Sanrakshan Abhiyan (PM-AASHA).
- NMEO - Oilseeds Mission is an important initiative for farmers, which will not only make them financially strong but will also take them towards modern and sustainable farming. These efforts of the government will not only increase the oilseed production but will also increase the income of farmers manifold, making them self-reliant.
- To increase domestic production of edible oils from 12.3 million metric tons in 2022-23 to 25.45 million metric tons by 2030-31,
- To increase the production of edible oilseeds from 39 million tons in 2022-23 to 69.7 million metric tons by 2030-31.
- To increase the productivity of edible oilseeds from 1352 kg/ha in 2022-23 to 2112 kg/ha by 2030-31.
- To increase the area under edible oilseeds from 28.9 million hectares (2022-23) to 33 million hectares by 2030-31.

## 8.5. Expected targets in oilseeds production during next 7 years:

The following targets are to be achieved during the 7-year upto 2030-31:

## 8.6 Major Oilseed Crops and Area during the Year 2023-24:

(Area in lakh hectares and Production in lakh tons)

S. No.	Crops	Total Area	Total Production	Major Producing States
1.	Mustard	91.83 lakh ha	132.59 lakh tons	Rajasthan (43%), Madhya Pradesh (15%), Uttar Pradesh (14%), Haryana (10%), West Bengal (6%)
2.	Soybean	132.55 lakh ha	130.62 lakh tons	Madhya Pradesh (42%), Maharashtra (40%), Rajasthan (9%)
3.	Groundnut	47.07 lakh ha	101.80 lakh tons	Gujarat (46%), Rajasthan (20%), Madhya Pradesh (10%), Tamil Nadu (9%), Andhra Pradesh (3%)
4.	Sesame	15.31 lakh ha	8.74 lakh tons	West Bengal (33%), Gujarat (17%), Madhya Pradesh (14%), Uttar Pradesh (14%), Rajasthan (9%)
5.	Sunflower	1.51 lakh ha	1.73 lakh tons	Karnataka (42%), Haryana (17%), Odisha (13%), Telangana (9%)

<b>S. No.</b>	<b>Crops</b>	<b>Total Area</b>	<b>Total Production</b>	<b>Major Producing States</b>
<b>6.</b>	Safflower	0.65 lakh ha	0.50 lakh tons	Maharashtra (64%), Karnataka (26%)
<b>7.</b>	Niger	0.83 lakh ha	0.27 lakh tons	Odisha (48%), Chhattisgarh (18%), Madhya Pradesh (11%), Assam (11%)
<b>8.</b>	Castor	10.41 lakh ha	19.59 lakh tons	Gujarat (81%), Rajasthan (17%)
<b>9.</b>	Linseed	1.75 lakh ha	1.13 lakh tons	Madhya Pradesh (29%), Uttar Pradesh (26%), Rajasthan (12%), Jharkhand (12%)
	<b>Total Oilseeds:</b>	<b>301.92 lakh hectares</b>	<b>396.69 lakh tonnes</b>	<b>Rajasthan (24%), Madhya Pradesh (22%), Gujarat (18%), Maharashtra (14%)</b>

### **8.7 Budgetary Estimate (BE) and release:**

During 2023-24, an amount of Rs. 416.81 crore had been released against the budgetary allocation of Rs.600.00 crore under Edible Oil-Oilseeds for implementation in States and Central agencies and an amount of Rs.296.18 crore has been released

against budgetary allocation of Rs.900.00 crore under Edible Oil-Oil Palm for implementation in States and Central agencies upto 31.03.2023. The programme-wise SLSC Allocation during 2023-24 (Central Share) and release is given below:

(Rs. in crore)			
<b>S. No.</b>	<b>NFSM (OS&amp;OP) subsumed as NMEO - OS</b>	<b>SLSC Allocation</b>	<b>Release of fund</b>
	<b>A. States</b>		
1.	i. NFS M -Oilseeds	429.22	221.70
	ii. NFSM -TRFA	67.02	45.45
	iii. TBOs	6.76	2.61
	<b>Total</b>	<b>503.00</b>	<b>269.76</b>
2.	Central Agencies/ R& D institutions	149.00	147.04
	<b>Total Edible Oil -Oilseeds</b>	<b>652.00</b>	<b>416.81</b>
	<b>B. NMEO -Oil Palm</b>	<b>SLSC Allocation</b>	<b>Release of fund</b>
1	States	993.11	292.32
2	Central Agencies	25.15	3.86
	<b>Total</b>	<b>1018.26</b>	<b>296.18</b>

# Department of Agriculture & Farmers Welfare

State wise allocation & release under National Food Security Mission- Oilseeds (NFSM-OS), now subsumed under NMEO-OS, during the years 2020-21 to 2024-25 is enclosed at Annexure-I and State

wise allocation and release under National Mission on Edible Oils - Oil Palm (NMEO-OP) during 2021-22 to 2024-25 is enclosed at **Annexure-II.**

## **Annexure-I**

State wise allocation and release under National Food Security Mission- Oilseeds (NFSM-OS), now subsumed under NMEO-OS, during the years 2020-21 to 2024-25:

(Amount Rs. in Crore)

S. No.	Name of State	2020-21		2021-22		2022-23		2023-24		2024-25	
		Allocation	Release	Allocation	Release	Allocation	Release	Allocation	Release	Allocation	Release*
1	Andhra Pradesh	40.70	28.47	46.32	19.31	24.91	0.00	12.00	3.00	17.90	11.19
2	Bihar	6.71	0.33	5.90	0.00	8.70	0.00	3.00	2.25	4.70	3.53
3	Chhattisgarh	14.32	9.33	11.89	2.07	10.94	1.73	12.45	6.23	16.31	8.15
4	Goa	0.00	0.00	0.07	0.02	0.00	0.00	2.23	0.00	0.02	0.01
5	Gujarat	35.29	31.37	29.24	11.57	32.52	19.36	24.62	12.31	33.75	24.93
6	Haryana	21.93	20.43	7.78	0.00	12.08	0.00	7.00	1.75	7.70	3.85
7	Jharkhand	13.55	7.30	7.85	0.00	8.53	0.00	5.00	1.25	6.66	3.33
8	Karnataka	11.80	8.13	13.98	4.17	12.50	4.19	15.17	7.59	21.25	10.63
9	Kerala	0.00	0.00	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00
10	Madhya Pradesh	50.48	28.25	43.99	16.74	35.75	7.64	45.80	22.90	62.50	46.88
11	Maharashtra	39.38	19.59	43.27	5.70	37.82	22.20	52.02	38.72	72.57	36.29
12	Odisha	16.10	13.10	16.34	5.30	15.04	6.36	18.75	9.38	24.50	12.24
13	Punjab	1.10	0.95	0.50	0.17	0.66	0.00	0.70	0.18	1.28	0.64
14	Rajasthan	114.53	92.48	64.47	7.30	71.98	33.67	71.54	17.89	82.78	41.39
15	Tamil Nadu	15.81	13.60	18.71	10.07	22.58	15.58	23.69	23.69	39.09	29.05
16	Telangana	13.10	1.81	23.42	7.01	9.15	0.00	8.40	0.00	8.60	4.30
17	Uttar Pradesh	31.98	25.39	17.58	3.80	18.42	5.30	11.15	2.79	18.09	11.01
18	Uttarakhand	0.41	0.20	0.45	0.21	0.57	0.09	0.75	0.38	0.85	0.53
19	West Bengal	51.68	27.45	34.94	6.38	42.22	19.07	41.67	36.25	32.21	17.67
20	Arunachal Pradesh	13.00	13.00	14.23	7.11	1.26	0.26	4.81	2.41	6.43	1.60
21	Assam	18.55	12.05	14.11	19.01	12.71	1.58	112.03	64.07	32.50	16.26
22	Manipur	3.49	1.88	5.00	2.32	1.87	0.37	5.40	1.50	7.25	3.62

S. No.	Name of State	2020-21		2021-22		2022-23		2023-24		2024-25	
		Allocation	Release	Allocation	Release	Allocation	Release	Allocation	Release	Allocation	Release*
23	Meghalaya	0.25	0.13	0.25	0.00	0.28	0.05	0.54	0.27	0.54	0.14
24	Mizoram	12.10	6.68	14.50	6.63	2.53	0.00	8.00	2.00	8.70	5.43
25	Nagaland	7.15	7.15	6.75	3.38	1.74	1.09	7.50	7.25	10.00	5.00
26	Sikkim	0.90	0.90	1.00	0.45	1.00	1.00	3.50	2.62	4.22	2.63
27	Tripura	1.58	0.79	1.70	0.85	1.64	0.52	5.00	2.50	6.69	4.18
28	Jammu & Kashmir	0.60	0.17	2.49	0.81	2.17	0.00	1.90	0.48	3.43	0.85
29	Ladakh	0.08	0.04	0.50	0.25	0.25	0.00	0.25	0.06	0.19	0.00
30	Puducherry	0.12	0.06	0.50	0.00	0.25	0.06	0.32	0.08	0.38	0.09
31	Central Agencies		95.38		59.04		138.33		147.04		196.43
	<b>Total</b>	<b>518.52</b>	<b>466.39</b>	<b>536.00</b>	<b>199.67</b>	<b>600.00</b>	<b>278.46</b>	<b>600.00</b>	<b>416.81</b>	<b>597.00</b>	<b>478.64</b>

\*As on 16.12.2024

## Annexure-II

State wise allocation and release under National Mission on Edible Oils - Oil Palm (NMO-OP) during 2021-22 to 2024-25:

(Amount Rs. in Crore)

S. No.	Name of State	2021-22		2022-23		2023-24		2024-25 *	
		Allocation	Release	Allocation	Release	Allocation	Release	Allocation	Release
1	Andhra Pradesh	26.62	13.31	96.28	0.00	91.01	17.65	158.20	98.87
2	Arunachal Pradesh	12.98	6.49	18.95	9.47	75.24	37.62	165.79	41.42
3	Assam	70.27	17.51	84.06	0.00	319.32	79.83	228.92	114.46
4	Chhattisgarh	1.42	0.00	6.35	2.43	3.33	0.00	7.80	3.90
5	Gujarat	0.60	0.00	2.20	0.00	0.60	0.00	4.14	3.10
6	Karnataka	3.38	1.05	9.90	5.52	7.54	3.46	19.57	9.78
7	Kerala	0.50	0.00	3.29	1.65	2.52	0.63	6.80	4.24
8	Manipur	3.00	1.82	8.82	2.20	28.58	7.15	26.24	13.12
9	Goa	0.00	0.00	0.00	0.00	0.00	0.00	12.00	0.08
10	Mizoram	12.00	6.00	8.81	4.16	22.50	5.63	30.97	19.36
11	Nagaland	5.00	2.50	19.75	9.87	80.01	40.01	50.75	12.69
12	Odisha	2.40	0.00	6.70	0.00	8.92	4.46	19.08	9.54
13	Tamil Nadu	2.10	0.41	3.39	1.70	3.09	0.77	3.95	2.47
14	Telangana	14.27	7.01	285.28	107.44	320.39	80.10	211.21	105.60
15	Tripura	0.00	0.00	9.35	4.63	30.00	15.00	28.18	17.61
16	Other Agencies				3.49		3.86		7.45
	<b>Total</b>	<b>154.54</b>	<b>56.10</b>	<b>563.13</b>	<b>152.58</b>	<b>993.05</b>	<b>296.18</b>	<b>961.60</b>	<b>424.81</b>

\* Upto 16<sup>th</sup> December, 2024

## 8.8 Fund flow (%) under SCSP and TSP:

The release of fund under NFSM (OS) programme is made to the states with category wise break-up for SC/ST and also there is a special mention in the release letter that the funds earmarked for SC/ST category cannot be diverted for General category.

## 8.9. Women beneficiaries:

While conveying the Budgetary allocation for Annual Action Plan to the States, 30% of allocation has been earmarked for women beneficiaries/farmers at the level of state Government implementing the oilseeds and oil palm programme.

## 8.10. Extension activities:

### Mega Oil Palm Plantation drive:

Under the National Mission on Edible Oils – Oil Palm, the State Governments along with Oil Palm processing companies initiated '2nd Mega Oil Palm Plantation Drive-2024' that commenced on 15th July, 2024. The major oil palm growing states where the plantation drive was organized are Andhra Pradesh, Arunachal Pradesh, Assam, Goa, Karnataka, Mizoram, Nagaland, Odisha, Tamil Nadu, Telangana, and Tripura. The Oil Palm Processing companies

such as Patanjali Food Pvt. Ltd., Godrej Agrovet, and 3F participated actively participated in this drive. Apart from that other regional companies such as KE Cultivation and NavBharat also participated in the drive. The Mega Oil Palm Plantation drive concluded on 15th Sept 2023. Through this drive, the states and the companies were able to reach out to more than 17,800 farmers in 12 states, covering approximately 17,116 ha. of the area and planting more than 24.48 lakh planting material.

As part of the mega plantation drive, the companies also organized unique and intensive large-scale technical training seminars on oil palm cultivation for farmers along with the department staff. The aim of the seminars conducted was to make the farmers and the staff more aware of the management packages which will help to ensure the plants' health, thereby enhancing productivity and creating sustainable income sources. Several dignitaries including senior political leaders, department officials, and gram panchayat members also graced the series of events that were conducted as part of the Pan-India Mega Oil Palm Plantation Drive.



Mega Oil Palm Plantation Drive – 2024 in Nagarkurnool District of Telangana



Mega Oil Palm Plantation Drive – 2024 in Anand District of Gujarat

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# Chapter 9

## NATIONAL MISSION FOR SUSTAINABLE AGRICULTURE (NMSA)

### 9.1 Overview

#### National Mission for Sustainable Agriculture (NMSA)

National Mission for Sustainable Agriculture (NMSA) is one of the eight Missions outlined under the National Action Plan on Climate Change (NAPCC) and aims at promoting sustainable agriculture by devising appropriate adaptation strategies/dimensions. During the 12th Five Year Plan, these strategies / dimensions were embedded and mainstreamed into Missions/Programmes/Schemes of the Department of Agriculture and Farmers Welfare (DA&FW) through a process of restructuring and convergence. NMSA as a programmatic intervention made operational from the year 2014-15 aims at making agriculture more productive, sustainable, remunerative and climate resilient by promoting location specific integrated / composite farming systems; soil and moisture conservation measures; comprehensive soil health management; efficient water management practices and mainstreaming rainfed technologies. NMSA aims at promoting Sustainable Agriculture through climate change adaptation measures. The major thrust is on enhancing agricultural productivity especially in rainfed areas focusing on integrated farming, soil health management and synergizing resource conservation. From the year 2018-19, NMSA was being implemented as a sub-mission/ sub-umbrella scheme under the Umbrella Scheme of 'Green Revolution-Krishnati Yojana'. From 2022- 23, various programmes/Schemes of NMSA have been subsumed under Rashtriya Krishi Vikas Yojana (RKVY) as RKVY- Annual Action Plan based programme. Several central sector programs/schemes rolled out in the last decade in Department of Agriculture & Farmers Welfare are aligned with the basic tenets of NMSA. The Mission is focusing on the following thrust areas;

#### 1 Climate ready crops, varieties & resilient practice

- Sustainable livestock and fish cultures
- Water Use Efficiency
- Pest surveillance and forewarning.
- Agri waste management
- Insurance & Risk management
- Integrated Farming Systems, Agroforestry, Bamboo
- Strengthening value chain
- Energy management & Farm Mechanization
- Organic farming & Natural Farming
- Soil Health & Nutrient management

The National Mission for Sustainable Agriculture (NMSA) through various adaptation measures aims at transforming Indian agriculture into an ecologically sustainable climate resilient production system by ensuring food security, employment and livelihood opportunities in rural areas. Adequate food grain production despite variable climate contributes to economic stability at national level and climate change proofing against the shocks at regional level. The Mission builds on the on-going schemes of the Ministry of Agriculture and Farmers Welfare and also leverages related interventions from other national Missions. Accordingly, the NMSA document was revised and realigned with the national priorities.

#### National Advisory Committee under NMSA

The National Mission on Sustainable Agriculture (NMSA) has three tier structure for planning, implementation and monitoring of various components at National, State and District Level. The National Advisory Committee (NAC) is the National Level Architecture under the Chairmanship of Secretary (A&FW). The Committee provides strategic direction for guidance and planning for effective implementation of the mission. The National Advisory Committee (NAC) under the Chairmanship of

# **Department of Agriculture & Farmers Welfare**

Secretary (A&FW) constituted with the members of line Departments and organizations provides overall direction and guidance to the Mission, monitors and reviews its progress and performance at National level. The sixth meeting of NAC was held on 29 October 2024.

## **Climate Change Cell**

Indian Agriculture is highly vulnerable to climate change with approximately half of cultivated areas under rainfed conditions. Climate change is causing significant shifts in weather patterns throughout the world, and it is expected to impact agricultural production systems thereby posing major challenges to the livelihoods and food security. As per the latest Inter Governmental Panel on Climate Change (IPCC) Assessment Report (AR-6), increase in rainfall, higher inter annual variability, intense and frequent heat waves, likely temperature increase by 1.5 to 4.0°C and rise in sea level by 300 mm could be the major challenges for sustainable agriculture in the coming years (IPCC, 2021). Agricultural production in India is becoming increasingly vulnerable to climate variability characterized by temperature rise and altered frequency, timing and magnitude of precipitation. One or other part of the country is experiencing frequent extreme weather events causing sizeable loss of yield and income to the farmers at micro level and to the nation's economy at macroeconomic level. This necessitates accelerated efforts for developing resilient and smart technologies and their adaptations, wherever feasible, to combat climate change.

Natural Resource Management-Climate Change Division is the Nodal unit in the Ministry for PM Council for Climate Change to establish an effective inter and intra Departmental/Ministerial co-ordination for National Mission on Sustainable Agriculture (NMSA). The Cell collates activities being undertaken by other Divisions/Departments such as INM, MIDH, Crops, Animal Husbandry, ICAR etc. for preparing and communicating a consolidated report to Ministry of Environment Forest and Climate Change (MoEF&CC) and other Committees.

## **Climate Action in Agriculture:**

COP 23(UNFCCC), held in Bonn in 2017 adopted "Koronivia joint work on agriculture" to address for the first time the issues of climate action in agriculture considering the vulnerabilities of agriculture to climate change and approaches to addressing food security. The Sharm-el Sheikh joint work on agriculture (COP 27) envisages promoting a holistic approach to address issues related to agriculture and food security, taking into consideration regional, national and local circumstances, such as adaptation, adaptation co-benefits and mitigation, recognizing that adaptation is a priority for vulnerable groups, including women, indigenous people and small-scale farmers. Therefore, it is imperative to align the policies and programs of the Government in accordance with climate actions that the joint work laid down. G20 New Delhi Leaders' Declaration (2023) committed to enhance global food security and nutrition by encouraging efforts to strengthen Climate Resilient Agriculture(CRA) through research co-operation, efficient use of fertilizers and inputs, reducing food loss and waste, improving marketing and storage, early warning systems, value chain, nutritious and healthy diets through millets/other traditional crops etc.

India has adopted holistic approach to climate action in agriculture and the upscaling of resilient practices that address issues related to agriculture and food security. Climate action in the country is adaption centric and mitigation is the co-benefit of adaptation measures. To meet the challenges of sustaining domestic food production in the face of changing climate and to generate information on adaptation and mitigation in agriculture at global platforms like United Nations Framework Conference on Climate Change (UNFCCC), Indian Council of Agricultural Research (ICAR), Ministry of Agriculture and Farmers Welfare, Government of India launched a flagship project National Innovations in Climate Resilient Agriculture (NICRA) in February 2011. The mandate of the project is to enhance the resilience of Indian Agriculture to climate variability and climate change through application of improved technologies and new policies.

## **Development of Voluntary Carbon Market in Agriculture Sector**

Carbon markets offer opportunities to mobilize investments in priority sectors, such as, agriculture, forest and land use. Carbon markets have gained significant traction in recent years and, thus, it can help to accelerate the transformation needed by creating an economic incentive for reducing emissions. Keeping in view the existing global scenario of carbon markets, developing carbon market in agriculture is important to move towards more remunerative agriculture/ farming system through adoption of regenerative/ sustainable agriculture practices. Many interventions under National Mission on Sustainable Agriculture (NMSA) such as agroforestry, micro irrigation, crop diversification, National Bamboo Mission, Natural / organic farming, Integrated Farming Systems, etc. have potential to sequester carbon/reduce emission of GHG thus creating opportunities for small holder farmers to avail benefits from carbon markets. Farmers can embrace regenerative farming, promote agro-ecology and get benefits from carbon credits. In view of the above, a separate Cell has been established in NRM Division to oversee carbon market in Agriculture Sector. A National Steering Committee under the Chairmanship of Secretary, DA&FW has been constituted to oversee the progress on carbon markets in Agriculture. The Ministry has initiated "Framework for Voluntary Carbon Market(VCM) in Agriculture Sector" to promote carbon markets. An MoU has also been signed between NABARD and DA&FW for promotion of VCM in agriculture.

A domestic carbon market registry called "Carbon Credit Trading Scheme" (CCTS) has been launched by the Government and agriculture has been identified as one of the key sectors for carbon offset mechanism. MoAFW is extending all support required related to agriculture to CCTS.

As a part of VCM promotion in Agriculture, the Ministry has also initiated pilot VCM projects with 11 institutes of ICAR/SAUs. The institutes are also working on development of methodologies/related tools required for Measurement, Reporting, and Verification (MRV) for various sustainable agriculture practices. The Ministry encourages participa-

tion of farming communities including FPOs, SHGs, WUAs, farmers cooperatives etc. in VCM so that all benefits from carbon markets reach the farmers.

## **Activities related to Mission LiFE**

The implementation of the agriculture component of Mission LiFE is being coordinated by NRM Division. In this regard, an Action Plan on Mission LiFE along with its LiFE Actions and Key Performance Indicators (KPIs) pertaining to Agriculture has been prepared in coordination with Ministry of Environment, Forest and Climate Change, which is Nodal Ministry of the Mission LiFE. The activities carried out on Mission LiFE actions are updated on the MeriLiFE portal time to time. "Ek Ped Maa Ke Naam" Tree Plantation Campaign was launched with tree planting program at IARI campus on 29th August 2024. All the subordinate offices of DA&FW, ICAR institutions, CAUs, KVKS and SAUs in the country also organized a similar tree plantation program in their respective places. Under the campaign, people are encouraged to plant a tree as mark of love, respect and honour for their mother and also to take a pledge for protecting trees and mother earth. The campaign aims for halting land degradation and eco-restoration of degraded land parcels in accordance with the theme of World Environment Day (WED) declared for 2024, which is "land restoration, desertification, and drought resilience".

## **9.2 Rainfed Farming Systems**

Food grain production in the country accrues from approximately 141.007 million hectare of net area sown. Of this, 77.916 million hectares is net irrigated area and the remaining area of about 63.091million hectares is under rainfed conditions (during 2021-22 as per Land Use Statistics at a Glance 2022-23).

Rainfed agriculture is complex, diverse and risk prone characterized by low levels of productivity and low input usage. Rainfed areas if managed properly have the potential to contribute a larger share in the overall production of food grains in the country. In view of this, the Government of India has accorded very high priority to the holistic and sustainable development of rainfed areas through efficient use of water management at farm level and appropriate farming systems etc.

# Department of Agriculture & Farmers Welfare

RFS division is implementing the Per Drop More Crop Component (PDMC) and Rainfed Area Development (RAD) component of the National Mission for Sustainable Agriculture (NMSA). Besides, a dedicated Micro Irrigation Fund (MIF) had been instituted with NABARD with a corpus of Rs. 5000 crores for expanding coverage of Micro Irrigation which has been doubled to Rs. 10000 crores during 2024–25.

## **9.2.1 Per Drop More Crop Component (PDMC):**

Department of Agriculture & Farmers Welfare (DA&FW) is implementing Centrally Sponsored Scheme of Per Drop More Crop (PDMC) in the country from 2015-16. From the year 2015-16 to 2021-22, the Scheme was implemented as component of Pradhan Mantri Krishi Sinchayee Yojana (PMKSY). From the year 2022-23, PDMC Scheme is being implemented under the Pradhan Mantri Rashtriya Krishi Vikas Yojana (PM-RKVKY). PDMC focuses on enhancing water use efficiency at farm level through Micro Irrigation, namely, Drip and Sprinkler Irrigation Systems.

### **Activities of Micro Irrigation:**

- Drip Irrigation:** Irrigating root zone through emitters fitted on a lateral tube.
- Sprinkler Irrigation:** Water is discharged under pressure in the air through a set of nozzles attached to a network of pipes.

### **Achievements made under PDMC:**

Year	Central Assistance released (Rs. in crore)	Area covered under Micro Irrigation (in lakhha)
2015 -16	1556.73	5.73
2016 -17	1991.24	8.40
2017 -18	2819.39	10.49
2018 -19	2918.38	11.59
2019 -20	2700.02	11.73
2020 -21	2562.19	9.37
2021 -22	1796.12	10.15
2022 -23	1901.37	11.02
2023 -24	2103.50	11.41
2024 - 25 (As on 20.01.2025)	1619.82	5.69
<b>Total</b>	<b>21 968.75</b>	<b>9 5.58</b>

### **Benefits of Micro Irrigation:**

The Micro Irrigation helps in water saving as well as reduced fertilizer usage through fertigation, labour expenses, and other input costs, while sustaining soil health and overall income enhancement of farmers.

### **Salient Features of PDMC Scheme:**

- The Government provides financial assistance @ 55% for small and marginal farmers and @ 45% for other farmers for installation of Drip and Sprinkler systems under the PMKSY-PDMC. Besides, some States provide additional incentives/ subsidy to farmers in the form of top-up for encouraging installation of Micro Irrigation.
- The Assistance for installation of Micro Irrigation systems is limited to 5 hectares per beneficiary with subsidy cycle of 7 years.
- 25% higher amounts have been taken into consideration while working out the unit cost for the North Eastern and Himalayan states, UTs of J&K and Ladakh and 15% higher for low penetration States of Micro Irrigation namely Bihar, Chhattisgarh, Goa, Punjab, Jharkhand, Odisha, Uttar Pradesh, West Bengal and Union Territories for larger adoption of systems by the farmers under the scheme.

From the year 2015-16 to 2023-24, total area of 90 lakh ha has been covered under Micro Irrigation in the country through PDMC. This is 92% higher as compared to coverage in nine years prior to PDMC period which is a significant achievement. Total area of 95.58 lakh ha has been covered under PDMC as on 20.01.2025.

**9.2.2 Micro Irrigation Fund (MIF):** Micro Irrigation Fund (MIF) with corpus of Rs. 5000 crores has been created with National Bank for Agriculture and Rural Development (NABARD). The objective of the MIF is to facilitate the States in mobilising resources for expanding coverage of micro irrigation. The States may access MIF for taking up special and innovative projects for expanding coverage of Micro Irrigation and also for incentivizing microirrigation beyond the provisions available under PDMC scheme to encourage farmers. Projects of Rs 4709.0278 crore have been approved to the States so far, and Rs3639.529 cr have been disbursed to the States on reimbursement basis. Union Cabinet has approved to double the initial corpus of MIF by augmenting it by another Rs. 5,000 crores during 2024-25.

### **9.2.3 Findings of Evaluation Study of PDMC:**

Recent evaluation studies of the scheme have reiterated that Micro Irrigation is relevant in achieving national priorities such as improving on-farm water use efficiency, enhancing crop productivity, generating employment opportunities, improving quality of agri/horti. products and increase the farmer's income.

New National PDMC Portal (<https://pdmc.da.gov.in/>) has been developed by the Department in collaboration with Gujarat Green Revolution Company (GGRC), to facilitate implementation of Per Drop More Crop(PDMC) scheme. The portal will also facilitate national level monitoring of the scheme implementation, both in terms of physical and financial progress, and data analysis for qualitative, timely and improved reporting. The portal further allows States to onboard onNational portal for on-line implementation of the scheme in the states.

**9.2.4 Rainfed Area Development (RAD):** To mainstream development of rainfed areas in a

sustainable manner, Rainfed Area Development (RAD) Scheme was made operational from 2014-15 in the country as a component of National Mission for Sustainable Agriculture (NMSA). Rainfed Area Development (RAD) aims at promoting sustainable agriculture production through adoption of agricultural climatic zone wise Integrated Farming System (IFS) models developed by Indian Council of Agriculture research (ICAR). RAD aims at promoting integrated farming system (IFS) with emphasis on multi-cropping, rotational cropping, inter-cropping, mixed-cropping practices with allied activities like horticulture, livestock, fishery, apiculture, etc. to enable farmers not only to maximize the farm returns for sustaining livelihood, but also to mitigate the impacts of drought, flood or other extreme weather events. RAD component is being implemented under the umbrella scheme 'Pradhan Mantri Rashtriya Krishi Vikas Yojana from the year 2022-23 onward.

The various activities supported under RAD component include Integrated Farming System- cropping systems, Fishery, Apiculture, Silage making, Vermi compost Units/organic input production unit, green manuring etc.

### **Salient Features of RAD:**

A cluster based approach of 20 ha. or more (contiguous or non-contiguous in difficult terrain with close proximity in a village/ adjoining villages) has been adopted to derive noticeable impact of convergence and encourage replication of the model in large areas. Development and strengthening of FPOs through involvement in the implementation of the program has been emphasized upon.

Priority has been given to Gram Panchayat/Blocks having more than 60% of the area under uplands/ rain-fed, Natural Farming Clusters, Watersheds area taken up under WDC project in last 20 yrs, Gram Panchayat/Blocks which are the focus areas of NRLM, Aspirational Districts etc.

Millets perform exceptionally well in rainfed areas due to its hardiness and capacity to withstand climatic aberration. Cultivation of millets has been preferred in RAD thus contributing to Government's strategy to promote millets. At least 25% area of the

# Department of Agriculture & Farmers Welfare

cluster is to be taken up for Millets cultivation.

The scheme also promotes climate resilient agriculture practices. Indian Council of Agricultural Research (ICAR) implements flagship network project, namely, National Innovations in Climate Resilient Agriculture (NICRA) to promote climate resilient agricultural practices. In order to replicate/upscale the experiences gained in NICRA, the RAD Cluster would be linked to the nearest NICRA Villages.

## Achievements made under RAD:

Since its inception (2014-15) and up to 2023-24, 7.80 lakh ha rainfed area has been brought under Integrated Framing System under RAD with an expenditure of Rs. 1784.36 cr. During 2024-25, an amount of Rs. 111.73 crore has been released upto 10th December, 2024 to the States for implementation of the programme.

## Agro Forestry

As a follow up to the recommendation of the National Agroforestry Policy, 2014, Sub-Mission on Agroforestry (SMAF) - 'Har Medh par Ped' under National Mission for Sustainable Agriculture (NMSA) was conceived to encourage plantation on farmlands. The scheme (SMAF) was implemented from 2016-17 to 2021-22 with an aim of promoting plantation in farmland which is also an important additional source of income for the farmers. Since inception of the scheme in 2016-17, a total of 682 lakh trees in 1.61 lakh Hectare have been planted in the country. Under the Scheme, around 899 nurseries have been set up/developed.

SMAF was discontinued during 2022-23. The program continues as Agro-forestry components of Pradhan Mantri Rashtriya Krishi Vikas Yojana (RKVY) from 2023-24. The restructured Agroforestry Component under RKVY supports setting up of Agroforestry nurseries with an aim to provide Quality Planting Material (QPM) to farmers.

Under the Agroforestry Component of RKVY, during the year 2023-24 an amount of Rs.58.10 Crores was released to 19 States/UTs. As per report received from States/UTs, so far a total of 183 new Nurseries have been established during the year 2023-24.

During Current Financial Year (2024-25), allocation of Rs.72.50 crores has been made as central share for Agroforestry component, out of which an amount of Rs. 35.70 crores has been released to 23 States till 31.12.2024.

The objectives of the scheme include;

- i. To encourage and expand tree plantation in a complementary and integrated manner with crops to improve productivity, additional income generation and improved livelihoods of rural households, especially the small farmers.
- ii. To ensure the availability of Quality Planting Materials (QPM) like seeds, seedlings, clones, hybrids, improved varieties, etc. Quality Planting Material (QPM) of healthy, resilient and adaptable nursery stock raised through seed or vegetative propagation should be made available for the famers.
- iii. To popularize various agroforestry practices/ models suitable to different agroecological regions and land use conditions through demonstration plots.
- iv. To create a database, information and knowledge support in the area of agroforestry.
- v. To provide Research & Development (R&D), extension and capacity-building support to the agro-forestry sector.
- vi. To identify and catalyze linkages with traditional and emerging markets for the timber and non-timber products generated from agro-forestry plantation on farmland including Bio-fuels, matchwood, plywood, silk, fiber, lac, beauty and wellness sector, handicrafts, construction, etc.
- vii. To promote value addition and processing of agro-forestry produce by creating collection and post-harvest facilities for additional income generation by farmers.
- viii. To provide use of modern technology for monitoring and evaluation (M&E) on the impact of agro-forestry in agro-ecology.

The scheme components includes (i) Establishment

of New Nurseries (Small & Big Nurseries) (ii) Raising of saplings in the existing Nursery (iii) Establishment of Tissue culture Units (iv) Skill Development and awareness campaign (v) Research & Development (vi) Monitoring & Evaluation and Other specialized technical works (vii) Formulation of project for voluntary Carbon Market in Agriculture Sector (viii) Local Initiative. Under the program 100% assistance will be provided to Government agencies and 50% back ended credit linked assistance will be provided for private beneficiaries.

### New Initiatives under the Scheme

The Ministry of Agriculture & Farmers' Welfare, Govt. of India has notified the ICAR-Central Agroforestry Research Institute (CAFRI) as the National Nodal Agency for all technical support for the implementation of the scheme. The Operational Guidelines of Agroforestry lays emphasis on the importance of Quality Planting Material (QPM). To enable this, the Ministry has developed an Accreditation Protocol for Agroforestry Nurseries with CAFRI.

During the first year of implementation of Agroforestry component (2023-24), a total of 183 numbers of New Nurseries have been established. So far, a total of 197 Nurseries have been accredited/awarded accreditation certificate.

### 9.3 National Rainfed Area Authority (NRAA):

The 'National Rainfed Area Authority' (NRAA) serves as an expert body to provide knowledge inputs regarding systematic up-gradation and management of country's dry land and rainfed agriculture. In this capacity, NRAA is actively engaged with various ministries and departments at the union level, and with the state governments as well. The focus of such engagements is always promotion of rainfed agriculture by enabling knowledge-based interventions and efficient coordination with various agencies, and convergence of different services. In the present challenges of adverse impact of climate change, growing intensities of extreme climatic events, water scarcity, productivity decline of land etc., NRAA has a bigger role to play towards institutional and knowledge support in the field of overall natural resource governance issues of the

country particularly in the rainfed ecosystem. NRAA was allocated Rs 4.44 crore for the year 2023-24 and the allocated budget for 2024-25 is Rs. 4.00 Crore. Some of the major activities undertaken during the year 2024-25 by NRAA are:

- i. **NRAA is engaged in the development of drought-proofing action plans (DPAP)** targeting the most vulnerable districts in the country. In the initial phase, 24 district plans were prepared and received approval from the respective state governments. In conjunction with its drought-proofing initiatives, NRAA has collaborated with NDMA as knowledge partner for drought proofing in selected districts across twelve states. Financial assistance of 100 crore has been approved for 11 states by Sub-committee of National Empowered Committee (SC-NEC) of MHA. The budget of Rs. 1200 crore has been allocated by XV Finance Commission for drought mitigation in 12 States (Andhra Pradesh, Bihar, Gujarat, Jharkhand, Karnataka, Madhya Pradesh, Maharashtra, Odisha, Rajasthan, Tamil Nadu, Telangana, and Uttar Pradesh) Convergence approach. NRAA along with NDMA conducted several rounds of consultation with states and professional agencies to finalize the strategic approach. The templates for submission of proposal and the operational guidelines for implementation has been shared with states. The Technical Advisory Committee is headed by NDMA and represented by members of NRAA.
- ii. NRAA has taken up a project "**In-situ Conservation and Management of Wild Rice (*Oryza rufipogon*) in the Sonitpur district of Assam, India**" in partnership with ICAR-National Bureau of Plant Genetic Resources (NBPGR). The project envisages in-situ conservation, habitat and molecular study, and nutritional profiling of wild rice *Oryza rufipogon*. All stakeholders, Assam State Biodiversity Board, Forest Department, BMC Borjuli, Borjuli Tea Estate, KVK, Sonitpur and NRAA, New Delhi are partners in the man-

- agement of wild rice site and implementation of this project.
- iii. **NRAA is implementing a FAO-funded project focused on "Internet of Things (IoT)-Enhanced Real-Time Weather Forecasting and Agro-Advisory Models" in partnership with Weather Risk Management Services Pvt Ltd (WRMS) across four states: Andhra Pradesh, Himachal Pradesh, Karnataka, and Maharashtra. The primary objective of this project is to equip farmers with a holistic solution for managing risks throughout the entire crop cycle including addressing uncertainties in the market. This project has yielded an IoT-based real-time Farm Monitoring System, which includes pest forecasting frameworks, irrigation advisory models, and nutrient advisory systems.**
- iv. NRAA is serving as the knowledge partner to the Department of Land Resources (DoLR) in the World Bank supported Rejuvenating Watershed for Agricultural Resilience
- through Innovative Development (REWORLD) programme to develop National Technical Guidelines (NTG) for improved watershed management. To support this effort, NRAA has formed a consortium with four agencies namely MANAGE, NRSC, ICRISAT, and WASSAN. As part of this initiative, NRAA had conducted a technical assessment of the protocols/methodologies adopted in science-based watershed development under REWORLD Programme and the findings submitted to the DoLR. Currently, NRAA and its partners are in the process of preparing the NTG. NRAA has finalized the Table of Contents (ToC) for NTG in consultation with World Bank, DoLR, REWORLD States & their knowledge partners, and experts from national & international organizations. The upcoming NTG is expected to facilitate the revision of the existing Watershed Development Guidelines (PMKSY WDC 2.0) and will serve as a cornerstone for future watershed programmes in the country.



National Level Brainstorming Session under REWORLD Project: 24.09.2024

- v. NRAA, in collaboration with FAO, Department of Agriculture & Farmers' Empowerment, Odisha and WASSAN implemented the project titled "Landscape-based Integrated Rainfed Agriculture Systems for Improved Income and Nutritional Security through Convergence" in Nuapada district of Odisha. The project introduced an innovative and redefined Integrated Farmers' Livelihood System (IFLS) approach, emphasizing intercropping, livestock and fisheries. The learnings gained from this project has been widely disseminated to agriculture departments of other states, agriculture universities and other organizations.
- vi. The NRAA has taken a significant step towards fostering a National policy on accelerated growth of rainfed agriculture. The draft rainfed agriculture policy was made accessible on both the NRAA and DA&FW portals for wide array of suggestions from various stakeholders. The policy will be pivotal in addressing the pressing challenges posed by climate change and achieving sustainable and ecological production system. The proposal for obtaining approval of cabinet on the policy is under consideration.
- vii. NRAA Organized National Consultation Developing "An Integrated Forest-Farm-Livestock Framework for Forest Fringe Landscapes in Rainfed Areas" on 8th October, 2024 at Conference Hall, NRAA in collaboration with Revitalising Rainfed Agriculture Network and Common Ground. Subsequently, five blocks in different Agro-climatic zones have been selected for area based detailed studies in fringe areas.



Interactive Meeting on Forest Farm Livestock in Forest Fringes date 08.10.2024

- viii. A meeting was organised on "Climate Resilient Sugarbeet Based Cropping System Model for Higher Income in Rainfed Areas" with all stakeholders, including FAO, on 08.12.2023. The detailed presentation of the project progress report was made. Follow up action was taken with sugar processing mills for visiting their industry to understand process of sugar making from sugarcane & sugarbeet as well as details of requirement of

additional plant equipment and machinery for processing of sugarbeet in the same mill. Drafted concept note on sugar beet, phase-II project and shared with FAO officials.

Field visits have been done at VSI, Pune and sugar factories in Baramati and Kolhapur to discuss the details of sugarbeet production, processing, value addition, etc. Agri./ Horti Division participated in the meetings with FAO representative on May 15, 2024 regarding development of concept note. As suggested in the meeting the title of the second phase project for which Concept Note drafted on "Value Chain Development for Climate Resilient Sugarbeet from Production to Post Harvest Management/ Production to Consumption in rainfed areas with thrust on small & marginal farmers and involvement of woman". The presentation on the concept note on was made with FAO representatives on 26th July, 2024.

The Final draft policy paper was submitted by considering the suggestions/corrections and also the latest data/information was incorporated in the draft policy paper and submitted to for consideration and approval by CEO, NRAA. The comments were obtained from different stakeholders in the revised draft policy paper on "Climate Resilient Sugarbeet-based Cropping System Model for Higher Income in Rainfed Areas" which intends to develop a technology to supplement sugarcane/sugar and ethanol production through sugarbeet cultivation without adverse impact on sugar production and income of sugarcane farmers of the Nation. The Policy Paper on "Climate Resilient Sugarbeet-based Cropping System Model for Higher Income in Rainfed Areas" including text, data, figures and annexures, have been finalized and approved by the CEO, NRAA). A total of 500 copies of Policy paper on "Climate Resilient Sugarbeet-based Cropping System Model for Higher Income in Rainfed Areas" have been printed and are under process of distribution to various stake-

ix.  
x.

holders.

**NEEM PROJECT:** A project titled "Assessment of Genetic Potential of Neem Germplasm for Higher Yield and Oil Content through Molecular Markers" was implemented between December 2019 and December 2022 under an MoU with ICAR-CAFRI for ₹21.95 lakhs. Organised a meeting for all the stakeholders such as ICAR-CAFRI and ICFRE- FRI for coming together for promoting neem plantation near urea producing industries to supply neem coated oil for production of neem coated urea. The meetings with officials of concerned departments/ organizations, viz, Ministry of Chemicals & Fertilizers, ICAR, and fertilizer association of India were held to take up Neem plantation by fertilizer industries.

**Project on "Unlocking the Power of Apivectoring :** Precision bio-control and enhanced crop pollination & protecting crops through synergistic ecosystem services with special reference to rainfed areas which will help in minimizing the use of chemical insecticides as the insect pests may be managed by the use of eco-friendly biocontrol agents through apivectoring. The project proposal got prepared from TNAU, Coimbatore was examined and project with our observations submitted on e-file. The observations communicated to the University and the concerned scientists have been asked for Revision of the project by incorporating suggestions. The revised project proposal on "Unlocking the Power of Apivectoring: Precision bio-control and enhanced crop pollination & protecting crops through synergistic ecosystem services with special reference to rainfed areas" got prepared from TNAU and submitted for approval of CEO, NRAA. After getting approval of CEO, NRAA, the proposal was submitted to the Executive Director, National Bee Board (NBB) and Horticulture Commissioner, DA&FW for funding under National Beekeeping & Honey Mission (NBHM).

- xii. **Project proposal on Revival of Endangered Landraces:** Got prepared a project proposal on "Revival of Endangered Landraces under Temperate Conditions of North Western Himalayas". The PI was also asked to come to Delhi (NRAA office Krishi Vistar Bhavan) to discuss the proposal in detail. Accordingly, PI visited the office of the under-signed on 25th September, 2024 and made a detailed presentation on the project proposal. After detailed discussions on the proposal, among others, PI was asked to revise and resubmit the proposal by considering all the suggestions/ comments and also reducing the cost of project for further necessary action at our end. The revised project proposal on "Revival of Endangered Landraces under Temperate Conditions of North Western Himalayas" received from SKUAST, Kashmir was examined in detail and submitted with our technical comments/ suggestions to CEO, NRAA for approval on e-file. The final proposal was examined and submitted to CEO, NRAA for approval. CEO asked for details of budget.
- xiii. **Project proposal on "Promoting Horticulture for enhancing growers' income in rainfed areas of UP & MP":** The project proposal of Rs. 2.86 crores submitted by the RLBCAU, Jhansi has been examined and proposal with observations submitted on e-file to CEO, NRAA. TC (Agri./ Horti.) visited RLBCAU, Jhansi and it was decided to revise the proposal by RLBCAU and submit the same to NRAA for further necessary action.
- xiv. **The proposal received from SKNAU, Jobner on "Conservation and Standardization of Propagation Techniques for Major Endangered Medicinal Plants Grown in Rajasthan":** The proposal of Rs. 4.10 crores received from Sri Karan Narendra Agriculture University (SKNAU), Jobner was examined and proposal with observations put up on file to CEO, NRAA. STC (Agri. Horti.) visited SKNAU, Jobner from 19.12.2024 to 21.12.2024 to discuss the proposal. The proposal along with our observations was discussed with the VC and concerned Scientists. It was agreed that SKNAU will revise the proposal by reducing the cost (below 2.00 crores) and submit to NRAA for further necessary action.
- xv. **Document on Compilation/ Examination of Study Reports on Carbon Credits:** Draft document was prepared. A copy of draft document on compilation/ examination of study reports on "Carbon Credits/ Green Credits" has been handed over to CEO, NRAA. The draft is also being again examined to finalize the same.
- xvi. **Rainfed Area Development:** Examined the RAD document/ Cabinet Note/ Guidelines and prepared checklist for designing the proposals of RAD program and guided allotted States/ UTs for preparing AAP for RAD. Examined RAD proposals received from the allotted States/ UTs, prepared comments after reviewing the information/ data presented in AAP of the concerned States/ UTs and submitted.
- xvii. The RFS division DAFW organised a meeting virtually, on 20th March 2024, in C.R. 344A, at Krishi Bhawan, with all States/UTs regarding implementation of activities under RAD programme. The doubts & issues raised by the States/ UTs were addressed / resolved and also made suggestions for effective and smooth implementation of programme by the States/ UTs. Prepared detailed checklist for submitting the proposals by the States.
- xviii. **Climate Resilient Agriculture (CRA):** NRAA has gone through the draft guidelines, and prepared comments on Draft Operational Guidelines of Climate Resilient Agriculture.
- xix. NRAA in collaboration with Revitalizing Rainfed Agriculture Network of WASSAN has organized a "Multi-stakeholder Convention on Climate Resilient Agriculture Agrobiodiversity in Rainfed Areas through

## Department of Agriculture & Farmers Welfare

Traditional Varieties: on 24.12.2024 at NASC Complex. This programme was graced by Dr. Devesh Chaturvedi, IAS, Secretary Agriculture, DA&FW, GOI and Shri Faiz Ahmed Kidwai, IAS, CEO NRAA. The beneficiaries, farmers and traditional seed growers from various parts of the country were benefitted from the presentations of renowned academicians and researchers like Dr. K. Varaprasad, Former Director, ICAR-IIOR, Dr. Gyanendra Pratap Singh, Director, ICAR NBGR and Dr. P. K. Singh, Agriculture Commissioner, DA&FW, GOI.

NRAA is also associated with Working Group of Seed Systems focused on evolve a policy framework for "Establishing Inclusive,

Participatory and Decentralised Seed Systems for Rainfed Agriculture". The basic objective of executing MoU between NRAA and RRAN is to promote the vision and mission of NRAA, making rainfed agriculture regenerative and remunerative, synthesizing location-specific practices and community-centric approaches through capacity building of stakeholders at all levels from the national to the project locations and to take policy initiatives for rainfed area development. Further, action on identifying traditional seed growers will be taken up with RRA-N for considering to register under National Biodiversity Authority and PPVFRA.



Secretary Agriculture Dr. Devesh Chaturvedi chaired the Seed Convention 24.12.2024



Shri Faiz Ahmed Kidwai CEO NRAA visiting stalls of traditional seed growers during seed convention 24.12.2024

Apart from above, NRAA is engaged with ICAR institutes, state agricultural universities and other national and international institutes to drive the research agenda for rainfed agriculture and capacity buildings of stakeholders.

### Natural Resource Management

#### 9.4 National Bamboo Mission (NBM)

Brief on restructured National Bamboo Mission (NBM):

1. The restructured National Bamboo Mission (NBM) was launched during 2018-19 as a Centrally Sponsored Scheme (CSS) subsequent to the historical amendment of the Indian Forest Act during 2017 to exclude bamboo out from the definition of tree. Resultant to this historic amendment, bamboo grown in the non-forest area is out of the scope of regulations on the forest produces. During the year

2022-23 the NBM has been merged with Mission for Integrated Development of Horticulture (MIDH) scheme.

2. The restructured National Bamboo Mission (NBM) primarily focuses on the development of complete value chain of bamboo sector to link growers with consumers starting from planting material, plantation, creation of facilities for collection, aggregation, processing marketing, micro, small & medium enterprises, skilled manpower and brand building initiative in a cluster approach mode. Presently the scheme is being implemented in 24 States/UTs.

3. **Financial Status:** Details of Financial progress under restructured NBM (2018-19 to 2024-25) (as on 31.12.2024) is as under:

(Rs. In crore)

Year	BE	RE	Expenditure	
2018 -19	300.00	153.30	150.03	
2019 -20	150.00	87.00	84.51	
2020 -21	110.00	94.00	75.21	
2021 -22	100.00	70.00	20.58	
2022 -23	65.00	40.00	11.63	NBM merged with MIDH/KY
2023 -24	95.00	60.00	50.38	
2024 -25	105.76	-	60.46	

#### 4. Physical Progress:

Physical Progress under the major components of restructured NBM from (2018-19 to 2024-25 (as on 31.12.2024) is as under:

**Bamboo Nurseries:-** 408 Nos. of Bamboo nurseries including 14 accredited nurseries have been established.

**Bamboo Plantation:-** 60000 hectare non-forest area has been covered under bamboo Plantation.

**Promotion of bamboo treatment and preservation:-** 104 Nos. of bamboo treatment and preservation units have been set up.

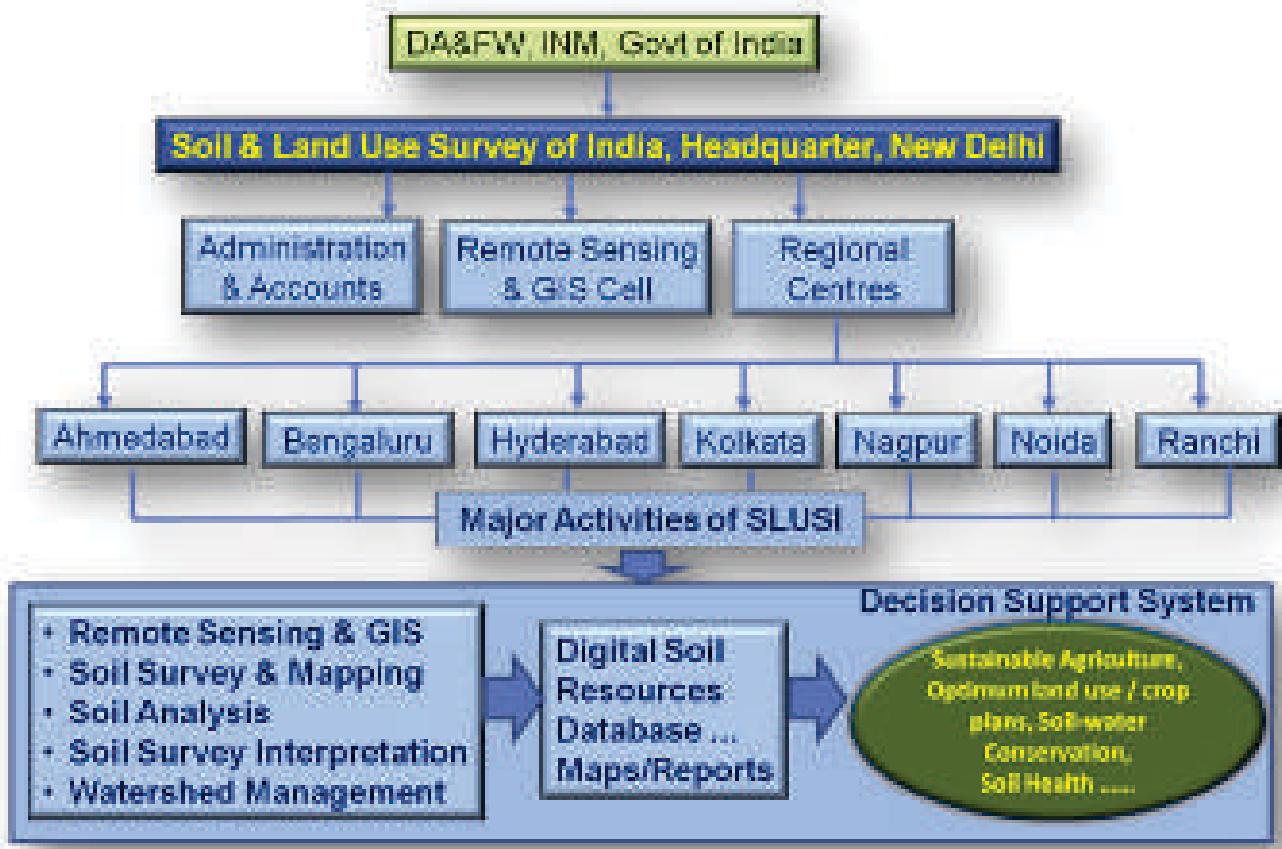
**Product Development and Processing:-** 528 Nos. of Product Development and Processing units have been set up.

**Infrastructure for Bamboo Market:-** 130 Nos. of Infrastructures for Bamboo Market etc. have been created.

#### 9.5 Soil and Land Use Survey of India (SLUSI)

Soil & Land Use Survey of India (SLUSI) is an apex organization in the country which deals with Soil Survey and Land Resource Mapping. The SLUSI is primarily engaged in conducting soil surveys of different intensities in order to provide a scientific database for developmental programmes encompassing soil and water conservation planning, watershed development, scientific land use planning etc. The database generation of the organization commensurate with the requirement of soil and land use information of various land-based development programmes. The organization is well equipped with Remote Sensing techniques, Geographic Information System (GIS), Image Analysis along with modern facilities of soil analysis and cartography laboratories for acquisition of soil and land information and for the development and management of digital spatial databases. The organization operates soil survey activities from Headquarters at New Delhi (Headed by Chief Soil Survey Officer) through seven Centers (Headed by Soil Survey Officer) located at Ahmedabad, Bengaluru, Hyderabad, Kolkata, Nagpur, Noida and Ranchi.

## SLUSI Organisation Chart



### Achievements of SLUSI so far

Following are the major achievements of SLUSI in the area of soil and land resource inventorying, mapping, monitoring & management in the country:

S.N o	Achievements of SLUSI
1.	Digital Micro-watershed Atlas of India (1:50K scale)
2.	Watershed Atlas of India (1:1M scale)
3.	Watershed prioritization using Rapid Reconnaissance Survey (1:50K scale) in 262.60 million ha
4.	Detailed Soil Survey 1:10K in 29.32 million ha for selected priority micro-watersheds, PMKSY command areas and Aspirational districts.
5.	Soil Resource Mapping (SRM) 1:50K in 346 districts covering 161.29 m ha
6.	Erosion Assessment and Prioritization of watersheds of vulnerable areas using Sediment Yield Index and Runoff Potential Index
7.	Monitoring and Evaluation of Watershed Development Programmes: NWDPRA and IGBP
8.	Land Degradation Mapping (1:50K scale) of 65 districts of country
9.	Publications: 2000 plus reports of RRS, DSS, LDM and SRM

## Present activities of SLUSI

### National One Soil Unified Information System (NOSUIS):

- Identification & sourcing of soil data available with all agencies / organizations.
- Harmonization & designing of interoperable mechanism for visualization.
- Integration of available soil data from different organization on single digital platform to make it accessible to farmers and all stakeholders for better decision-making, planning for soil health management and soil-watershed conservation.
- SLUSI to visualise all soil layers including soil maps on Krishi DSS.
- Development of Soil resources Atlas of country at 1:50,000 scale with NRSC, ISRO.

### National Soil Mapping Programme (NSMP) at 1:10,000 scale

- National soil mapping at a 1:10,000 scale at village level for crop planning and soil-water conservation.
- SLUSI has mapped soils in 29.32 million ha so far. This project is being up scaled to cover entire agricultural land in the country with support of other organisations in the country.

**Decision Support Systems (DSS):** The organization develops Decision Support System (DSS) that incorporates the spatial data, models, and analytical tools generated through RS and GIS techniques. This DSS platform provides farmers, policymakers and researchers, with interactive tools for making informed decisions related to watershed management, soil conservation, nutrient management and agricultural practices. The use case of this innovation is development of National One Soil Unified Information system (NOSUIS) module on Krishi-DSS portal. SLUSI has been identified as a focal point for implementing NOSUIS in the country.

## Other Activities

- Preparation of village-wise Soil Fertility Maps from Soil Health Card Data and Model

Village programme under Soil Health Card Scheme.

- Collaborative / Consultancy Projects on planning of Natural Resources Management.
- National Workshop, Short course / Trainings on use of Soil Resource Database for the officers of Central/State Govt. departments.

## Achievements of SLUSI during 2024-25 (as on 31st October, 2024) in Various Activities

### Development of Soil Mapping at 1:10000 scale under National Soil Mapping Programme (NSMP):

SLUSI is take up the task to carry out Detailed Soil Survey (DSS) to generate digital soil data base and integrating the basic soil properties of detailed soil data with Soil Fertility attributes to prepare integrated Map of Villages in various districts of the country. During 2024-25, the organization initiated the field work in 63 districts namely Morbi , Gir Somnath, Bharuch of Gujarat, Baran, Nim Ka Thana, Dantaramgarh, Ruwas, Bayan, Weir, Bharatpur of Rajasthan State; Villupuram Pudukottai, Cuddalore, Tiruchirapalli, Mayiladuthurai of Tamilnadu State; Puducherry (UT); Krishna , West Godavari, Konaseema , NTR, Chittoor, Elluru of Andhra Pradesh State; B.Kothagudem, Vikarabad , J.Gadwal, Nagarakurnool, Ranga Reddy, Mahabubnagar of Telangana State; Balrampur & Gariyaband of Chattisgarh State; West Garo Hills, South West Garo Hills, North Garo, East Garo Hills, South Garo Hills, South West Khasi Hills, West Khasi Hills, East Khasi Hills, Ribhoi, East Jaintia Hills, West Jaintia Hills of Meghalaya State; Harda, Betul of Madhya Pradesh; Parbhani, Bhandara, Aurangabad of Maharashtra State; Jhansi, Ghaziabad, Auraiya, Badohi, Bulandshahr, Hathras of Uttar Pradesh State; West Singhbhum, Simdega, Hazaribagh, Godda, Pakur, Bokaro, Dhanbad, Kodarma, Lohardaga, Sahibganj, Saraikela-Kharswan of Jharkhand State and Mayurbhanj of Odisha State having an area of 184 lakh ha. Out of which, the area of 63.91 lakh ha has been completed upto 30.10.2024 and the rest of area to be completed by March, 2025.

The National Soil Mapping Programme (NSMP) encompasses preparation of detail digital soil

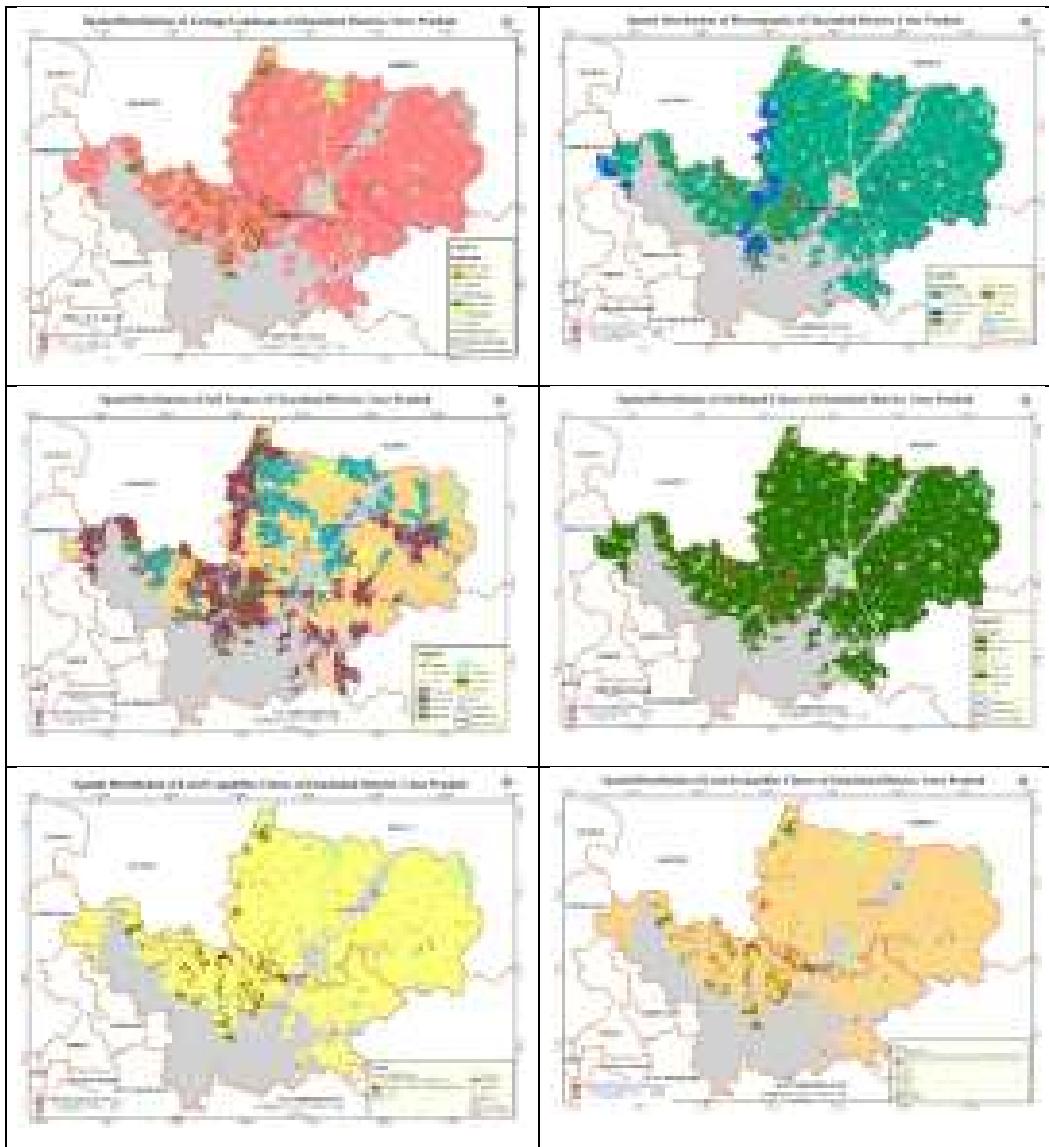
resource inventory of agriculture lands of the entire country on 1:10,000 scale at village-level. This Soil resource database will be very helpful for assessment of land capability, soil and land irrigation suitability, hydrologic grouping of soils and planning evaluation of soil-site suitability for different crops, soil-water conservation measures. Soil and other

datasets integrated in GIS for development of Gram Panchayat Spatial Developmental Planning and suggestions for targeted interventions. This soil database will provide scientific knowledge of the kind of soils occurring in the country, extent of their distribution including their potentials and limitations.

#### **Annual Target for Field Ground Truthing & Interpretation:**

Type of Survey	Target in lakh ha FY 2024 - 25	Achievements in lakh ha Up to 30.10.2024
Detailed Soil Survey & Soil Mapping at 1:10,000 scale	<b>184</b>	<b>63.91</b>

#### **Soil Map and Land Capability Maps @ 1:10K scale of Ghaziabad District, Uttar Pradesh**



## Glimpses of Soil Survey during Field Work



Team of SLUSI, Ranchi Centre explaining the farmers about importance of Soil Survey and Soil Mapping in village Chainpur, Block – Nirsa, District Dhanbad (Jharkhand)



Team of SLUSI, Ranchi Centre explaining farmer about Importance of Soil Health Card in village Pipra Ghogra, Block – Barhi, District Hazaribagh (Jharkhand)



Team of SLUSI, Ranchi Centre explaining women farmers about Importance of Soil Health Card in village Birajpur, Block – Govindpur, District Dhanbad (Jharkhand)



Team of SLUSI, Kolkata Centre explaining farmer about Soil Survey and Soil Mapping in South Garo Hills, Meghalaya



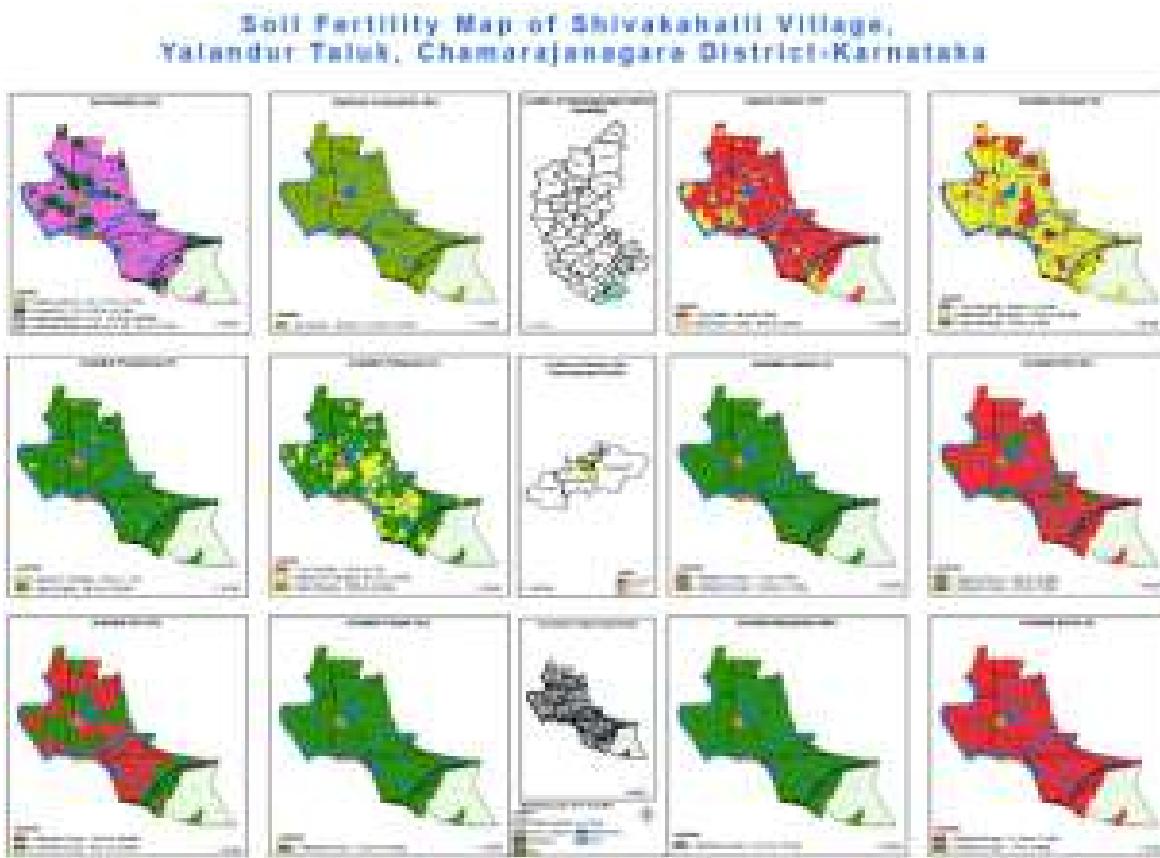
Team of SLUSI, Noida Centre explaining farmers about importance of Soil Survey and Soil Mapping in District Auraiya (UP)



- Generation of Soil Fertility Maps under Soil Health Card (SHC) Scheme:**

SLUSI is entrusted with task of preparation of village soil fertility maps aimed at delineating areas of varying nutrient status on cadastral level. It has generated district Soil fertility maps using second cycle SHC data in the country and also associated with the work of preparation of Soil Fertility Maps from Soil Health Card data in identified 6954 model villages to provide spatial information to farmers about the status of nutrient availability. The institute is preparing maps on digital / khasra map of villages sourced from State Govt department or through in-house digitization of village cadastral map. The soil

fertility maps developed are displayed in villages for spreading awareness about SHC and motivate farmers to use fertilizers judiciously. The work of preparation of soil fertility mapping has been accomplished in 2023 Nos. model villages and the mapping work of remaining villages is under progress to collaboration with State Agriculture department and SHC data provided by NIC. These maps serve as vital decision-support tools for farmers, agronomists, and policymakers, enabling them to optimize nutrient management practices, improve crop yields, and sustainably manage soil resources for long-term agricultural productivity.



- Collaborative work with other departments / organizations:**

**(a) SLUSI and GIZ Collaborative study on soil organic carbon**

Soil & Land Use Survey of India (SLUSI), DA&FW and GIZ (German Ministry of Economic Cooperation and Development, Natural Resource Management and

Agroecology group), has initiated a study on assessment of soil organic carbon & other soil parameters using Remote Sensing & GIS technology. Under this, evaluation of the GIZ developed open-source remote sensing based monitoring tool for soil carbon and regenerative agricultural analysis is being undertaken. This is a satellite imagery based machine learning algorithm to diagnose and monitor soil

organic carbon for soil health diagnostics and carbon sequestration analysis.

## (b) Collaborative Ventures with States

Recognizing the importance of stakeholder engagement and decentralized soil data management, SLUSI actively collaborated with state governments and local authorities to develop soil data for sustainable development planning at the regional level. Through capacity-building workshops, technical assistance programs, and collaborative research projects, SLUSI empowered state agencies and local communities to conduct soil surveys, establish soil testing laboratories, and integrate soil information into land use planning and natural resource management initiatives. These collaborative ventures have not only fostered knowledge exchange and capacity building but have also contributed to the formulation of evidence-based policies and programs for sustainable agricultural development, watershed management, and environmental conservation at the grassroots level.

### • Consultancy Project with other department / organization:

A consultancy project on "Soil Map of Meghalaya at 1:10K scale" is between three organizations namely North Eastern Space Application Centre (NESAC); Soil & Land Use Survey of India (SLUSI) and Directorate of Agriculture & Horticulture (DoA & DoH), Govt of Meghalaya. The funding agency is Directorate of Agriculture & Horticulture, Govt of Meghalaya through ISRO (Dept. of Space). The total cost of the project is Rs. 170 lakh. The period of the project is 2024-2027 (3 years). In first phase, the field work of the West Khasi Hills, South West Garo Hills, South Garo Hills, North Garo & East Garo Hills is already been taken up.

### • Publication (2024-25, upto 31.12.2024)

- » Detailed Soil Survey : 34 Reports
- » Soil Resource Mapping : 1 Report

### • Participation of SLUSI in Exhibitions / Farmers Mela

SLUSI actively participated in various exhibitions / farmers mela etc organized by different departments of Central / State Govt and showcase/display

the activities of the organization as

- » National Soil Mapping Programme at 1:10k scale (NSMP) and Soil Health Management
- » Village Soil Fertility Maps for 12 soil health attributes (Model Village & District wise)
- » Soil Health Card
- » Thematic maps of village level soil maps, land capability classes, crop suitability etc.
- » Soil Types of India – Different Soil Samples; Profile Monoliths
- » Audio-Video – LED TV
- » Use cases/ Success Stories of Soil Health Cards
- » Watershed Atlas and Micro-watershed Atlas of India

During 2024-25 (upto 30.10.2024), SLUSI has participated in following exhibitions / farmers mela as

- Noida Centre of SLUSI participated in "Pratigya 2024" Mega Exhibition at Bhiwani, Haryana from 22-24 August 2024
- Bengaluru Centre of SLUSI participated in Krishi Mela at UAS, Dharwad from 21-24 September, 2024
- Noida Centre of SLUSI participated in "All India Farmer's Fair and Agro-Industrial Exhibition" at SVP University of Agriculture and Technology, Meerut from 16-18 October, 2024

The list of upcoming exhibitions / farmers mela as

- Noida Centre of SLUSI participated in India Int. Trade Fair at Pragati Madan, New Delhi from 14-27 November, 2024
- Nagpur Centre of SLUSI will participate in AGROVISION (Workshop, National Expo & Conference) held at Nagpur from 22-25 November, 2024
- Hyderabad Centre of SLUSI will participate in 24th Edition of GeoSmart India 02-05 December, 2024, at HICC, Hyderabad
- Workshop, Capacity Building and Training

Recognizing the importance of stakeholder capacity building, SLUSI conducted training programs, workshops, and knowledge-sharing sessions with

probable project implementing agencies of National Soil Mapping Programme (NSMP).

The first National Workshop on “Land Resource Inventory for Sustainable Agriculture” was organized by SLUSI on 23rd September, 2024 at NASC Complex, New Delhi. The workshop was inaugurated by Shri Devesh Chaturvedi, Secretary, Department of Agriculture & Farmers Welfare, Ministry of Agriculture & Farmers Welfare in the presence of Dr. Yogita Rana, Joint Secretary, INM, Department of Agriculture & Farmers Welfare. The Directors / Scientists / Other Officers of various Central / State Govt, State Agricultural Universities and ICAR institutes had participated in the workshop.

The purpose of this Workshop of fine-tuning the methodology and operational procedures for soil

survey & mapping at 1:10,000 scale NSMP so as to finalize the draft methodology with input from participants to ensure alignment on procedures for soil survey & mapping.

Secondly drawing agricultural areas information using Land Use Land Cover layer of NRSC at 1:50k scale data of 2015-16 with Forest Survey of India (FSI) maps and topographic sheets is also vital for accurate delineation, will guide resource allocation over the project's five-year timeline.

The workshop has been attended by 81 participants from 36 partner agencies shown willingness to participate in National Soil Mapping Programme at 1:10k scale in the country.



Glimpses of National Workshop on “Land Resource Inventory for Sustainable Agriculture” on 23rd September 2024

# Department of Agriculture & Farmers Welfare

- **Data Integration and Sharing**

Through the establishment of data sharing protocols and interoperable systems, SLUSI facilitated the seamless integration of soil survey data, laboratory analysis results, and soil health parameters into the state soil health card databases. By harmonizing data formats, standards, and quality assurance protocols, SLUSI ensure the consistency, reliability, and compatibility of soil health information generated by different stakeholders, enabling comprehensive soil health assessments and personalized recommendations for farmers.

- **Community Engagement and Outreach**

SLUSI organized community events, outreach programs, and public awareness campaigns to raise awareness about soil health and conservation among parents, families, and community members. By involving the broader community in our soil health initiatives, SLUSI also foster a sense of collective responsibility and action towards protecting and preserving our soil resources for future generations.

- **Supporting NABL Recognition/ Accreditation of District Soil Testing Labs**

In addition to the efforts to raise awareness about soil health among students and educators, SLUSI is committed to supporting the NABL accreditation and capacity building of district soil laboratories. These laboratories play a critical role in providing farmers and policy makers with access to accurate and reliable soil testing services, enabling them to make informed decisions about soil fertility management, crop nutrition, and land use planning.

- **Technical Assistance and Training:** SLUSI provide technical assistance, training, and capacity-building support to district soil laboratories, helping them acquire the necessary equipment, infrastructure, and expertise to conduct soil testing, analysis, and interpretation effectively.

- **Quality Assurance and Accreditation:** SLUSI collaborated with accreditation bodies, regulatory agencies, and professional associations to establish quality assurance standards, accreditation criteria, and proficiency testing programs for district soil laboratories. By guiding laboratories through the accreditation process and assisting them in meeting national and international quality standards, SLUSI enhance the credibility, reliability, and accuracy of soil testing services, fostering trust and confidence among farmers and stakeholders.

- **Collaborative Networks and Partnerships:**

SLUSI works in collaboration has established networks and partnerships among district soil laboratories, ICAR-research institutions, State Agriculture University, National Remote Sensing Centre (NRSC-ISRO) and State Remote Sensing Application centre to facilitate knowledge sharing, resource mobilization, and collective action in support of soil health and fertility management. By promoting collaboration, information exchange, and mutual learning, SLUSI create synergies and amplify the impact of its efforts to strengthen National Soil Mapping Programme at 1:10k scale nationwide delivery.

## Glimpses of SLUSI (2024-25)



Annual Technical Meeting under the chairpersonship of Joint Secretary (INM), DA&FW



#EK Ped Maa Ke Naam #Plant4Mother



Swachchta Campaign 4.0 -2024



Meeting with world bank delegation led by Dr. Devesh Chaturvedi, Secretary, DA&FW and Mr. Martin Reiser, Vice President, South Asia Region of the World Bank

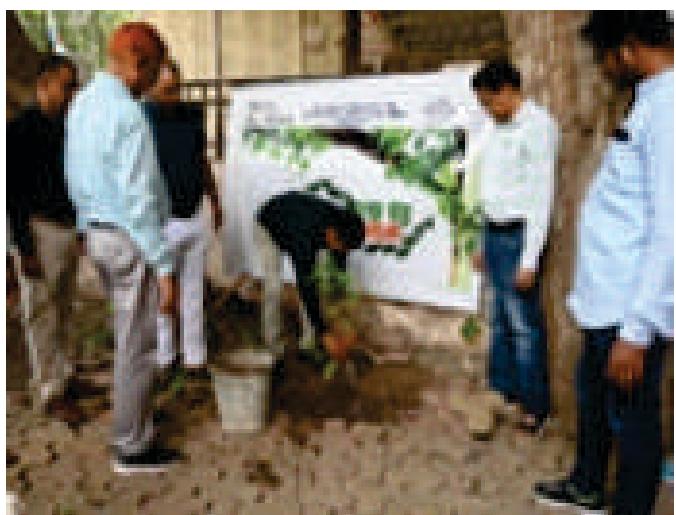
## Department of Agriculture & Farmers Welfare



Dr. P. L. Patil, Honourable Vice- Chancellor and Dr. S.S. Angadi, Director of Extension Education visit at SLUSI Bengaluru Centre stall in an Exhibition at University of Agriculture Sciences Dharwad



NOIDA Centre of SLUSI participation in Pratigya 2024 Mega Exhibition, Bhiwani district, Haryana on 22<sup>nd</sup>, 23<sup>rd</sup> and 24<sup>th</sup> Aug, 2024



Celebration of "Ek Ped Maa Ke Naam" on 21st August 2024



Participated in the National Conference on Space Driven Solutions for Agriculture Transformation in India on the occasion of National Space Day, 16<sup>th</sup> August 2024



Committee meeting chaired by Shri S. K. Chaudhari, DDG, NRM, ICAR to determine the rates for the Detailed Soil Survey on a 1:10K scale for National Soil Mapping Programme



मानगीय संसदीय राजभाषा समिति का निरीक्षण बैठक, 21<sup>st</sup> अक्टूबर, २०२४

## 9.6 Central Fertilizer Quality Control & Training Institute, Faridabad

### 9.6.1 Introduction

The Central Fertilizer Quality Control & Training Institute (Earlier-Central fertilizer Control Laboratory) was established during 4th Five Year Plan (1971-72) as a subordinate office of the Ministry of Agriculture & Farmers Welfare, Department of Agriculture & Farmers Welfare to undertake the Inspection and analysis of indigenous and imported fertilizers, standardization of Methods of analysis and providing technical guidance to the State Govts. on Fertilizer Quality Control.

The activities of the laboratory were further strengthened during successive Plan periods. Further in view of the increasing importance of fertilizer quality control and thrust on training to State Enforcement Officers, the laboratory was upgraded and renamed as Central Fertilizer Quality Control & Training Institute in 1982-83. Based on the activities, the Institute was also recognized as a Scientific and Technological Institute by the Department of Science and Technology (DST) in 1982. During 7th Plan, 3 Regional Laboratories of the Institute were also set up at Mumbai, Kalyani and Chennai, which started functioning from 1988-89 and are called as Regional Fertilizer Control Laboratories (RFCLs). The Institute as well as Regional Laboratories have been notified as Recognized Laboratory under clause 29 of Fertiliser (Control) Order, 1985 for analysis of samples throughout the country. The Fertiliser Inspectors of Institute & R.F.C.Ls have been notified as authorized Fertiliser Inspector under clause 27 of FCO (1985) having jurisdiction throughout the Country.

### 9.6.2 Functional jurisdiction and role of CFQC&TI/RFCLs:-

CFQC&TI as a Head quarter of all three Regional Fertiliser Control Laboratories (RFCLs), is responsible to decide jurisdiction of all 04 Centres in view of drawal of imported fertilisers & indigenous fertilisers and imparting the training programmes to all the State Agricultural Enforcement Officers. Imparting trainings at CFQC&TI and its RFCLs are mandatory as per provisions of Fertiliser Control Order,

1985. The Ministry has also assigned other quality control work to check the quality of fertilisers are being manufactured/imported/sold in the country.

In view of training programmes and imported fertilisers, the work has also been assigned zonewise to RFCLs located at Chennai/Mumbai/ Kalyani. The RFCL, Chennai, having its own land/building includes hostel facilities for the trainees, is responsible to impart training programme on Fertiliser Quality Control to the officers of Southern States as well as for drawal of samples from all the ports located at Southern States. The RFCL, Navi Mumbai, having its own land/building includes hostel facilities for the trainees, is responsible to impart training programme on Fertiliser Quality Control to the officers of Western States as well as for drawal of samples from all the ports located at Western States.

The RFCL, Kalyani (Kolkata) was established in view of Eastern and North Eastern States, having its own land/building includes hostel facilities for the trainees, is also responsible to impart training programme on Fertiliser Quality Control to the officers of Eastern & North Eastern States as well as for drawal of samples from all the ports located at Eastern States.

Further, the training programmes for all the State Fertiliser Analysts, Foreign Participants are being organized at CFQC&TI, Faridabad. The Institute is also organized training programme for Agricultural Officers of the Northern States. The Institute have 18 rooms with modern facilities includes an Auditorium having capacity of more than 100 persons.

### 9.6.3 Mandate

- i. Inspection, Drawal and Analysis of Imported Fertilizers.
- ii. Inspection, Drawal and Analysis of Indigenous Fertilizers (includes Dealers & Manufacturers).
- iii. Imparting training on Fertilizer Quality Control for States Agricultural Enforcement Officers.
- iv. Imparting training on Fertilizer Quality Control for Foreign participants.
- v. Imparting training on Fertilizer Quality Control for Fertilizer Dealers in the field.

- vi. Imparting training for Soil & Water Laboratory Assistant from time to time under "Skill India Training Program".
- vii. Acting as referee Laboratory besides an advisory body on technical matters.
- viii. Development and Standardization of new methods of analysis.
- ix. Regular member of Central Fertilizer Committee constituted under clause 38 of FCO,1985.
- x. Regular member of Central Bio-stimulant Committee constituted under clause 38A of FCO,1985.
- xi. Other task assigned by the Ministry from time to time.

#### **9.6.4 Main Activities & Achievements:-**

Effective implementation of the FCO is the main responsibility of the State Government, who have been given adequate powers for its implementation including drawal of samples from manufacturing units and retail outlets and its analysis in the State Laboratories. However, the Central Government also supplements their activities through random inspection and sampling by the Central Teams of the Institute and Regional Laboratories from manufacturing units and their retail points. The Central Teams are randomly sent to manufacturing nits and their dealer in different States for inspection and drawal of samples. The samples are analyzed at Institute/ RFCLs and report sent to respective State for taking further follow up action.

#### **Quality Control of Fertilizers**

- i. Analysis of fertilizer samples (both of imported and indigenous fertilizers).
- ii. Inspection of imported fertilizers at ports.

#### **9.6.5 Strength of CFQC&TI and its RFCLs as on 31.01.2025 :-**

S.No.	Group	Sanctioned Strength	Existing Strength	Projection during Feb & March 2025
1.	Group 'A'	22	11	02
2.	Group 'B'	11	04	-
3.	Group 'C'	73	25	05
	Total	103*	40**	07

\* 33 posts created in last year.

\*\* Actions are being taken to fill up the vacant posts.

- iii. Inspection of Manufacturing units, wholesale and retail dealers of the country through Central Teams.
- iv. Analysis of Referee fertilizer samples.

#### **Training:-**

- i. Organization of training programmes for State Enforcement Officers (i.e. for Fertilizer Inspectors, Registering Authorities, Analysts & Laboratory Incharges).
- ii. Organization of Orientation Training Courses (OTC) for Enforcement officers at District level.
- iii. Organization of Dealer Training Programme (DTP) at District level.
- iv. Organization of training programmes for Foreign participants at Institute under ITEC Scheme of Ministry of External Affairs.

#### **Development & standardization of Methods of Analysis:-**

The Institute has developed number of new methods of analysis for different new fertilizers notified during last one year under Fertilizer Control Order, 1985.

#### **Advisory Activities:**

The Institute as a Member of Central Fertilizer Committee and Central Bio-stimulants Committee advise the Central Government on technical aspects of Fertilizer Control Order and also State Governments on Fertilizer Quality Control.

#### **Compilation of Half Yearly/Annual Progress Reports of State Govts. on Fertilizer Quality Control:-**

The Institute compiles half yearly/annual progress report on Fertilizer Quality Control at national level.

## Department of Agriculture & Farmers Welfare

### **9.6.6 Target & Achievements during 2024-25 (upto 31.01.2025)**

During 2024-25, the Institute has achieved 100% of targets in respect of all consignment discharged at various sea ports/terminals in the country for

inspection and analysis of fertilizer samples and also achieved 122 % of the assigned targets of various training courses. The details of achievement (upto 31.01.2025) are as under:-

S. No.	Name of the item	Target	Achievement	Projection during Feb & March 2025
1.	No. of ships/containers covered and sample analyzed	4500	5500	1000
2.	Refresher Training Courses for Fertiliser Analysts & Fertiliser Inspectors	35	23	12
3.	Orientation Training Courses in States	48	33	15
4.	Dealers Training Programme in States	20	14	06
5.	Financial (Rs. in Crore)	BE 13.01	8.80	12.50

### **The details of ships/containers inspected by the Institute/RFCLs during 2019-20 to 2023-24**

S. No.	Name of Fertilizer	2019-20	2020-21	2021-22	2022-23	2023-24
1	Urea	202	216(1)	190	196	154(02)
2	DAP	127(1)	141	126	160	132
3	MOP/SOP	137(7)/ 200(10)	163(1)/ 271(10)	151(19)/ 307(06)	80/ 280(05)	81(01)/ 307(10)
4	NPK (C)	74(3)	139(16)	120(08)	131(11)	74(05)
5	MNF	75(15)	12(4)	15(03)	10(03)	17(05)
6	NPK 100% WS	2154(151)	1881(122)	1983(110)	1335(129)	1792(131)
7	Sulphur	45(10)	31(2)	51(03)	49(03)	31(05)
8	Others	869(26)	1093(75)	988(223)	578(153)	1154(120)
9.	Referee	125(20)	141(50)	225(102)	201(121)	1339(539)
10.	SSP/NPK(M)	-----	1194(487)*	1367(619)*	355(147)*	-
	<b>Total</b>	<b>3883(223)</b>	<b>5141(718)</b>	<b>5298(991)</b>	<b>3356(572)</b>	<b>5081(818)</b>

\*ADDITIONAL SAMPLES OF SSP, DAP, Zn/S etc. ANALYZED AS A SPECIAL TASK ASSIGNED BY THE MINISTRY. PARENTHESIS DENOTES NUMBER OF SAMPLES FOUND NON-STANDARD.

Photographs of Training Activities during 2024-25



Group photo of trainees/officers participated in Training Programme on Fertiliser Quality Control for Fertiliser Analysts at CFQCTI, Faridabad during 02.09.2024 to 27.09.2024.



Agricultural Enforcement Officers of State of Karnal (Haryana) attended 03 days Orientation Training Course on Fertiliser Quality Control conducted by CFQCTI during 31.07.2024 to 02.08.2024.



Officers of State of Uttar Pradesh attended 03 days Orientation Training Course on Fertiliser Quality Control conducted by CFQC&TI, Faridabad at Lucknow during 28.08.2024 to 30.08.2024.

## Format

S. No.	Year	No. of paras/PA reports on which ATNs have been submitted to PAC after vetting by Audit	Details of the Paras/PA reports on which ATNs are pending		
			No. of ATNs not sent by the Ministry even for the first time	No. of ATNs sent but returned with observations and Audit is awaiting their resubmission by the Ministry.	No. of ATNs which have been finally vetted by Audit but have not been submitted by the Ministry to PAC
1.	N.A.	N.A.	N.A.	N.A.	N.A.

Note: The following outstanding AG Audit Paras are lying pending (RFCL, Kalyani):-

Irregular reimbursement of Air Fare in TA – Proposal is sent for approval to waive off the charges claimed by unauthorized travel agent during booking of the flight tickets

## 9.7 National Centre of Organic and Natural Farming (NCONF)

### 1) Role of the NCONF as enabler and catalyst for implementation of Participatory Guarantee System of India (PGS-India)

Government is implementing Participatory Guarantee System of India (PGS-India) through NCONF

Ghaziabad as a quality assurance initiative for certification of organic produce that is locally relevant, emphasizing the participation of stakeholders, including producers / farmers and consumers and operate outside the frame of third-party certification. In the operation of PGS-India, stakeholders (including farmers/ producers) are involved in decision making and essential decisions about the

operation of the PGS-India certification itself by assessing, inspecting and verifying the production practices of each other and collectively declare produce as organic.

PGS-India has a number of basic elements which embrace a participatory approach, a shared vision, transparency and trust. Participation is an essential and dynamic part of PGS. Key stakeholders (producers, consumers, retailers, traders and others such as NGOs, PGS-facilitators and service providers) are helping in capacity building and making farmers aware in group formation, system operation, decision making and integrity management. In the operation of PGS, stakeholders (including producers) are involved in decision making and essential decisions about the operation of the PGS itself. PGS Groups in addition to being involved in the mechanics of the PGS, stakeholders, particularly the farm-producers are engaged in a structured ongoing learning process, which helps them improve what they do. The learning process is usually 'hands-on' and involves field days or workshops. The idea of participation embodies the principle of collective responsibility for ensuring the organic integrity of the PGS. Although PGS-India is basically a farmer group centric organic guarantee system but to integrate all sections of producers, processors, handlers and traders, to complete the value chain from farm to fork and keep the PGS-India programme as central guiding force to the entire organic agriculture movement, it also provides for an access to individual producers, individual processing and handling facilities under PGS groups, organized processing, warehousing, handling and packaging and trading entities away from producer groups. To ensure end-to-end traceability (as per the requirements of regulatory framework under FSS [Organic Foods] Regulation 2017). PGS-India programme also provides uninterrupted chain of custody, starting from producer groups till the products are processed and finally packed into retail packs.

To integrate traditionally organic areas in to mainstream organic and harvest the benefits of traditionally organic practices for safe and healthy certified organic food for consumers, PGS-India programme

also provides for a mechanism to certify large contiguous areas, involving village councils and Gram Panchayats by adopting village wise conformity assessment on annual basis.

#### **1(a). New Initiatives/Revisions in PGS India Certification include:**

- New modules have been developed and operationalized for additional scopes including Livestock, Beekeeping, and Wild Harvest.
- A PGS India Certification mobile app has been launched to facilitate mobile-based inspections of Local Groups (LGs) by Regional Councils (RCs).
- The PGS India Web Portal has been upgraded with MIS reporting capabilities and is currently being enhanced to empower Zonal Councils to conduct real-time annual surveillance of Regional Councils for more precise decision-making on their renewal.

#### **1(b). Present status of PGS-India progress (As on 31.12.2024) :-**

- Total Number of Groups : 76841
- Total Number of Farmers : 2028730
- Total number of valid Certificates : 200672
- Certified Cumulative Area (Ha) : 1285215

#### **2. Revision / Modifications in FCO 1985 with reference to Biofertilizers and Organic Fertilizers**

- Revision / Modification of Standards and protocols of sampling and testing of Biofertilizers and organic fertilizers based on recent advancements to remove inconsistencies in FCO 1985.
- NCONF Ghaziabad has played an important role in introducing new organic inputs in schedule -IV of FCO 1985 to promote the availability of quality inputs to farmers.
- Standard Operating Procedure has been adopted in accordance with FCO-1985 for disposal of samples received in the N/RCONF for testing.

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• Total Number of Groups	:	
76841	:	
• Total Number of Farmers	:	
2028730	:	
• Total number of valid Certificates	:	
200672	:	
• Certified Cumulative Area (Ha)	:	
1285215	:	

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- NCONF Ghaziabad has played an important role in introducing new organic inputs in schedule - IV of FCO 1985 to promote the availability of quality inputs to farmers.
- Standard Operating Procedure has been adopted in accordance with FCO-1985 for disposal of samples received in the N/RCONF for testing.
- All RCONF laboratories are running with State of Art testing facilities and in this context, NCONF has purchased nearly 55 instruments amounting to Rs 2.744 Crores through GeM Portal.
- Besides Technical upgradation, all RCONF laboratories are also under process of obtaining NABL accreditation to ensure quality testing and availability of quality organic and biological inputs for use by small and marginal farmers of the country. In this context, laboratory of RCONF Ghaziabad has received the NABL accreditation while other RCONF labs are also under process of obtaining it.
- Sample tested (01st January, 2024 to 31st December, 2024)

Bio fertilizers: (Total Tested -184, Substandard- 123)

Organic Fertilizers: (Total Tested -227, Substandard - 118)

## 3. Training programmes (online and offline)

Organic and natural farming in India has made remarkable progress over the past two decades, driven by dedicated efforts from the Government of India. As a result, India has emerged as the world's largest producer of organic products, with a substantial increase in land under organic cultivation. Recent policies and programs introduced by the Central Government, in collaboration with state governments, underscore a strong commitment to reducing chemical inputs in agriculture and promoting organic, natural, or non-chemical farming methods. This shift aims to provide citizens with safer and healthier food options, reinforcing the government's mission for nationwide chemical-free farming.

To support this mission, the National Centre for Organic and Natural Farming (NCONF) has proposed a range of targeted training programs for diverse stakeholders, including farmers, officers from central and state government departments, Regional Council (RC) and Service Provider (SP) members, Krishi Sakhis, Women Self-Help Groups, progressive and champion farmers, and master trainers. These programs are designed to promote chemical-free farming practices through awareness, mobilization, and capacity building at the grassroots level.

For the current financial year, NCONF Ghaziabad has secured administrative and financial approval of Rs 320.58 lakhs to conduct various HRD initiatives as outlined in the Annual Action Plan. These training sessions will not only enhance knowledge and skills but also identify key focus areas for implementing organic and natural farming across the country. Additionally, they will showcase the accomplishments of selected organic and natural farming practitioners, further inspiring a widespread shift towards sustainable agriculture.

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**Highlights of the various training programs organized and persons benefitted are given below:**

S.No	Name of the Online/Offline Training Program organized by N/RCONFs	Number of trainings/ Webinars	Number of Beneficiaries
1.	One Day Farmers Training and Demonstrations on Organic & Natural Farming	148	7373

To support this mission, the National Centre for Organic and Natural Farming (NCONF) has proposed a range of targeted training programs for diverse stakeholders, including farmers, officers from central and state government departments, Regional Council (RC) and Service Provider (SP) members, Krishi Sakhis, Women Self-Help Groups, progressive and champion farmers, and master trainers. These programs are designed to promote chemical-free farming practices through awareness, mobilization, and capacity building at the grassroots level.

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### 4(a) Progress/Achievements of HRD Programs:

During the period from January 2024 to December 2024, a total of 258 programs either in online or offline mode on organic and natural farming have been organized covering around 11991 participants including farmers, college students, members of Regional Councils, Service Providers, Officers of State Agriculture, Horticulture Depts., Day NRMs, Krishi Sakhis, Women SHGs, Farmers, progressive farmers, Champion farmers and other Stakeholders etc associated with chemical free farming methods.

**Highlights of the various training programs organized and persons benefitted are given below:**

## Department of Agriculture & Farmers Welfare

S.No	Name of the Online/Offline Training Program organized by N/RCONFs	Number of trainings/ Webinars	Number of Beneficiaries
2.	One day Stakeholder consultation on Natural Farming	04	395
3.	One day Jaivik evam Prakritik Kisan Sammelan	02	1016
4.	01 Day consultation on <b>Natural Farming</b> organized by INM Division, MoA&FW in collaboration with NCONF Ghaziabad	02	800
5.	01 Day Regional Seminar/Consultation/ conference on Organic Farming for 100 participants	05	531
6.	One day Training/Workshop on PGS for RCs & other stakeholders	11	199
7.	01 Day refresher training for Fertilizer Inspectors	10	196
8.	One day online Awareness workshop on Organic food, natural farming and Certification for schools, colleges, farmers and other stakeholders	08	463
9.	Online/Offline trainings on APURVA AI imparted to RCs	05	362
10.	Two Days Training on PGS for State Govt. Extension Officers/ RCs/ SPs/ LRP etc	18	389
11.	Two days Training for Extension Officers/LRPs/ Farmers on organic and Natural farming	15	311
12.	5 days training on Quality Control for State Government Analysts/Fertilizer Inspectors	13	257
13.	10 Days Training of practicing Farmers in Organic Farming at identified Model Demo Farms/KVKs for 30 participants	01	30
14.	21 Days Residential Certificate Course on Organic Farming and certification for 30 participants	06	191
15	30 days certificate course on Organic and Natural Farming	10	302
	<b>Total Beneficiaries</b>	<b>258</b>	<b>12815</b>

## 5. Important Publications of the Organization:

NCONF has published the following literatures for the promotion of Organic & Natural Farming in the country:

<b>IMPORTANT PUBLICATIONS</b>	
I. Organic Farming News letter (Quarterly)	<b>01</b>
II. Bio -fertilizer News letter (Bi-annual)	<b>01</b>
III. Comprehensive Training Manual on Organic Farming (English)	<b>01</b>
IV. Organic Food & Certification (Hindi & English)	<b>02</b>
V. Schemes for promotion of organic farming (Hindi & English)	<b>02</b>
VI. Organic Package of Practices for Horticultural Crops (English)	<b>01</b>
VII. Field Guide for Organic Grower	<b>01</b>
VIII. Jaivik Kheti Sahayak Pustika (Bengali, Malayalam Khasi and Garu)	<b>04</b>
IX. Booklets & Pamphlets on Organic Farming (Hindi & English)	<b>11</b>
X. PGS -India Training Manual	<b>01</b>
XI. FAQs on PGS India Certification	<b>01</b>
XII. Compilation on PGS India certified progressive farmer success stories	<b>01</b>
XIII. Leaflets for PGS India Local Groups	<b>05</b>
XIV. Bhu -Sanrakshan pamphlet	<b>01</b>
XV. Comprehensive Training Manual on Natural Farming	<b>01</b>
XVI. Compilation of Natural Farming Practices	<b>01</b>
XVII. Two Days Training Module on Natural Farming (English)	<b>01</b>
XVIII. One Day Training Module on Natural Farming (English)	<b>01</b>
XIX. Field Guide for Natural Farming (Hindi & English)	<b>01</b>
XX. Farmer Field School (English)	<b>01</b>
XXI. Published pamphlets on organic and natural farming in English and Hindi	<b>11</b>
XXII. E-Module on FCO	<b>01</b>
XXIII. Other publications (Newsletters published by other agencies/journals etc)	<b>01</b>
XXIV. Training Module for two days training to master trainer for Natural Farming Convergence to NRLM/SRLM	<b>01</b>
XXV. Training Module for five days training to Krishi Shakhis and Pashu Shakhis for Scheme Convergence to NRLM/SRLM	<b>01</b>
XXVI. Training Module for Natural Farming Mass awareness through Krishi Shakhis and Pashu Shakhis of NRLM/SRLM	<b>01</b>

## 6. Farmers Outreach Initiatives:

- More than 3313 farmers have been contacted through various outreach activities including farmers visit/ trainings/ webinars/ Exhibitions etc organized or attended by officials of N/RCONFs on organic and natural farming.
- N/RCONFs have participated in more than 26 events such as Seminars/ Webinars/ Exhibitions/ Trainings/ Workshops etc organized for

promotion of organic and natural farming in the country.

## 7. Awareness Creation through Print, Electronic and Digital media:

- To create mass awareness among the farmers, students, State Government Officers and other stakeholders practicing and encouraging organic and natural farming in the country, activities and efforts of NCONF Ghaziabad

- were recognized and telecasted on DD Kisan Channel through a special programme viz., “एग्री की उड़ान—कृषि में शिक्षा है जरूरी: NCONF, Ghaziabad”.
- Promotion of Organic and Natural Farming is also being done through various digital media platforms like X and website of NCONF Ghaziabad. Till date around 305 informative posts on Organic and Natural Farming have been posted on X and Youtube accounts of NCONF Ghaziabad.
  - Officials of N/RCONFs have created mass awareness on organic and natural farming activities through deliberation of Guest Lectures, radio talks, TV talks altogether in more than 167 events such as trainings, seminars, webinars, exhibitions etc organized by premier Govt. and private Institutes of India.
  - Around 57983 copies of publicity material for awareness creation on organic and natural farming have been distributed to visiting farmers, stakeholders/Industry people in numerous events organized and participated by N/RCONFs.

## 8. Ongoing initiatives:

- To make India a reliable hub of organic/natural produce and to protect consumer interest with quality assurance
- To create a centre of excellence for addressing growing needs of training in Organic and Natural Farming. Working on proposals on Establishing new HRD Cell with State of Art infrastructure & facilities
- Quality assurance of organic inputs by improving testing infrastructure, modernization of equipments and NABL accreditation of all RCONF labs.
- Working on proposal for establishing new Certification Secretariat equipped with modern facilities and amenities
- Implemented Livestock Module and Working on implementing Bee Keeping and Wild Harvest Collection under PGS India module

- Working on developing PGS India Mobile app for easy accessibility by farmers.
- Working on proposal for random residue testing of PGS India produce through FSSAI, PP Division and new technology(Rapid Residue Testing Kit)
- Working on identification of Centre of Excellence to facilitate promotion of chemical free farming across the country.

## 9.8 Paramparagat Krishi Vikas Yojana (PKVY)



The PKVY Scheme is implemented in a cluster mode with min. 20 ha size and states have been asked to implement in cluster size of 1000 ha in plain area and 500 ha in hilly area to facilitate marketing of organic produce. All farmers are eligible but within a group a farmer can avail benefit to a maximum of 2 ha. and the limit of assistance is Rs.31, 500 per hac., out of which 47.62% i.e., Rs. 15,000 is given as incentives to a farmer for organic conversion, organic inputs, on farm inputs, production infrastructure, etc., shall be provided directly through DBT during the conversion period of 3 years.

**Objectives** - PKVY was launched in 2015-16 with the following broad objectives:

- To promote natural resource based integrated and climate resilient sustainable farming systems that ensure maintenance and increase of soil fertility, natural resource conservation, on-farm nutrient recycling and minimize dependence of farmers on external inputs.
- To reduce cost of agriculture to farmers through sustainable integrated organic farming systems thereby enhancing farmer's net income per unit of land

- iii. To sustainably produce chemical free and nutritious food for human consumption.
- iv. To protect environment from hazardous inorganic chemicals by adoption of eco-friendly low-cost traditional techniques and farmer friendly technologies
- v. To empower farmers through their own institutional development in the form of clusters and groups with capacity to manage production, processing, value addition and certification management.
- vi. To make farmers entrepreneurs through direct market linkages with local and national markets

#### **Achievements since 2015-16:**

- i. Total funds released under PKVY scheme is Rs 2265.86 Crore during the period 2015-16 to 2024-25 (as on 30.01.2025).
- ii. Total fund released Rs 205.46 Cr for PKVY component of RKVY cafeteria scheme during the CFY 2024-25.
- iii. Continuing work in existing 2.40 lakh ha area sanctioned in 2022-23 (including Namami Gange Program & including Large Area Certifi-

cation Program) and 2.41 lakh farmers for the three-year conversion period to achieve full organic certification.

- iv. Work also continues in existing area of 1.26 lakh hectares adopted in 2023-24 by the States (including Large Area Certification Program) and 0.92 lakh farmers for the three-year conversion period to achieve full organic certification.
- v. 1.98 lakh ha (including Large Area Certification Program) new area covered adopted by the State in CFY 2024-25 for the three-year conversion (2024-25 to 2026-27) period to achieve full organic certification which is under implementation.
- vi. **Jaivik Kheti Portal:** A dedicated online web portal-[www.Jaivikkheti.in/](http://www.Jaivikkheti.in/)has been created to encourage, sale of organic products directly by farmers to consumers. On Jaivik-kheti portal total 6.23 lakh farmers are registered, 19016 local groups have been formed, 89 input supplier and 8676 buyers have registered themselves.
- vii. **Various brands have been developed under PKVY scheme**

States	Brand Name
Madhya Pradesh	Made in Mandla
Uttarakhand	Organic Uttarakhand
Tamil Nadu	Tamil Nadu Organic Product (TOP)
Maharashtra	Sahi organic, Nasik Organic & Gadchirrolia Organic Farming
Jharkhand	Jaivik Jharkhand , from the land of Jharkhand
Chhattisgarh	Aadim brand of Bhoomi Gadi FPO, Bastar Naturals
Punjab	Five Rivers
Tripura	Tripureshwari Fresh

#### **viii. Business tie-ups have been formed with various business groups for marketing of organic produce:**

- M/s Adani Group
- M/s Home Burps
- Priyank Associate

- Advance Crop Care (India) Pvt. Ltd.
- Prasad Nutriments Pvt. Ltd.
- All Season Farm Fresh, Jamshedpur
- Big Basket
- Ambe Phyto Extracts

# Department of Agriculture & Farmers Welfare

## ix. Large Area Certification under PGS-India Programme:

- Government has initiated Large Area Certification (LAC) programme since 2020-21 to certify large traditional/default organic areas such as hills, islands, tribal or desert belt with no past history of GMO and agro chemical uses. Under the LAC program of PKVY scheme Rs 2000/ha per year is provided for 3 years period for certification.
- Under this programme 14491 ha area under Car Nicobar and Nancowry group of islands in Union Territory of A&N Islands have been certified to transform entire territory of these islands to organic similar to Sikkim.
- Total 5000 ha area has been covered under LAC program in Ladakh.
- The entire cultivable land of 2700 ha area of Lakshadweep have been certified organic under LAC.
- Recently 60,000 ha area has also been supported for certification continuation in Sikkim, which is the only 100% organic state in the world under LAC
- Chhattisgarh have adopted new area 50279 ha in Daantewada District in 2023-24 under LAC.
- West Bengal have adopted new area 4000 ha in 2023-24 under LAC.

- Tamil Nadu have adopted new area 10,000 ha under Individual Farmers Certification in 2023-24.

## 9.9 Mission Organic Value Chain Development for North Eastern Region (MOVCDNER)



The MOVCDNER scheme aims at development of commodity specific, concentrated, certified organic production clusters in value chain mode to link growers with consumers and to support the development of entire value chain starting from inputs, seeds, certification, to the creation of facilities for collection, aggregation, processing, marketing, and brand building initiative in Northeast Region (Arunachal Pradesh, Assam, Manipur, Meghalaya, Mizoram, Nagaland, Sikkim, and Tripura). The main focus of the scheme is on development of export market for organic produce. The scheme has completed three phases of three years each and is now moving forward in Phase IV.

## Summary Achievements are as follows (As on 30.01.2025)

S.No.	Particulars	Remarks
1.	Launched in	2015 -16
2.	Implementation schedule	Phase I – (2015 -16 to 2017 -18) Phase II – (2018 -19 to 2020 -21) Phase III – (2021 -22 to 2023 -24) Phase IV - (2024 -25 to 2026 -27) - Ongoing
3.	Area covered	2.00 lakh ha
4.	No. of Farmers	2.20 lakh farmers
5.	No. of FPOs formed	434
6.	Funds released	Rs. 1300.43 Cr (since 2015 -16 to 2023 -24)
	Funds released in 2024-25	Rs. 150.34 Cr

S.No.	Particulars	Remarks
7.	Infrastructure created	<p>265 Collection and aggregation Centres      294 Custom hiring Centres      144 Processing Units      208 Transport vehicles      9 Cold storages      21 Packhouses      24 Organic outlets      16 IPU</p>

- With the inception of Phase IV (2024-25 to 2026-27), following initiative have been taken under the schemes.
  - » The DPR components of Rs.200 Cr per year has been approved by Cabinet as financial support to FPOs for infrastructure development
  - » A series of video conferencing with states (Nodal officers) chaired by JS-INM has been conducted on DPR component to motivation in creation of annual action plan
  - » For the first time, district level committee has been formed in all the states of NER for better implementation and evaluation of scheme.
  - » Till 2022-23, the ratio of LRP: Farmer was 1:200, which has been institutionalized to 1:75. The LRP engagement now accounts for 100% of farmer engagement, as opposed to the earlier 20%
- » For the first time, the FPOs were graded into – Excellent, Good and Poor based on the grading tool. Out of a total of 327 Unique FPOs, grading tools were received for 238 FPOs, with 15 deemed "Excellent" and 145 rated as "Good."
- » Before 2023, DBT Input distribution to farmers was both in-kind and monetary. However, from 2023 onwards, DBT shall be monetary.
- » Mandatory registration on Krishi Mapper for farmers and provide regular updates on the MOVCDNERIT Portal.
- » Overall, 17 video conferencing and 5 physical meeting have been conducted for regular monitoring and seamless delivery of the scheme.



## **9.10 Soil Health & Fertility of RKVY Scheme**

Soil Health Management was one of the most important interventions for Sustainable Agriculture. During 15th finance commission period, Soil Health & Fertility is implemented to promote the Integrated Nutrient Management through judicious use of chemical fertilizers including secondary and micro-nutrients in conjunction with organic manures and bio-fertilizers for improving soil health and its productivity as component of RKVY Cafeteria Scheme. The strengthening of soil and fertilizer testing facilities is to provide soil test based recommendations to farmers for improving soil fertility, up-gradation of skill and knowledge of soil testing laboratory staff and extension staff and farmers through training & demonstrations etc.

The Soil Health & Fertility include setting up of new static Soil Testing Laboratories (STLs), setting up of new Mobile STLs, setting up of Village Level STLs/ Mini STLs, strengthening of existing Static/ Mobile

STLs, setting up of new Fertilizer Quality Control Laboratory (FQCL), strengthening of FQCL, Setting up of Bio-fertilizer & Organic Fertilizer Quality Control Laboratories (BOQCL), strengthening of BOQCL, promoting Micro-nutrients and testing soil samples to issue Soil Health Cards. Soil samples should be processed standard procedures and analyzed for 12 parameters viz, pH, electrical conductivity (EC), Organic Carbon, available N, P, K, S and micronutrients (Zn, Cu, Fe, Mn & B). Soil Health Card provides information to farmers on soil nutrient status of their soil and recommendation on appropriate dosage of nutrients to be applied for improving soil health and its fertility.

### **Physical Progress:**

The components/activities of the Annual Action Plan approved under the Scheme during 2023-24 and 2024-25 are as under:

S. No.	Name of activity	Components/activities approved during	
		2023-24	2024-25
1	Setting up of Static Soil Testing Laboratories (STLs)	23	25
2	Strengthening of existing Static Soil Testing Laboratories	137	206
3	Setting up of Mobile STLs		
4	Setting up of new Fertilizer Quality Control Laboratory (FQCL)	04	10
5	Strengthening of Fertilizer Quality Control Laboratory	29	25
6	Promotion/Distribution of Micro-nutrients	133227	171192
7	Soil Samples Collection, Testing and Printing & Distribution of SHCs	6349558	8201725
8	Incentive to Entrepreneurs' (VLSTLs) for Soil Testing	1392350	15200
9	Demonstrations, Training and knowledge sharing on farmers field	34772	6716
10	Setting up of Village Level Soil Testing Labs	1091	424
11	Setting up of BOQCLs	02	24
12	Strengthening of BOQCLs	01	6
13	Reclamation of problem Soils (ha.)	12352	39088
14	NABL Accreditation of Labs	18	485
15	New Initiatives (Research & Development)	1361	2

Soil samples are collected through Mobile App for testing for online generation & distribution of Soil Health Cards on Soil Health Portal to the farmers. Till date, 62,73,108 numbers of soil Health Cards have been generated during current financial year 2024-25.

**Financial Progress:**

Under the Soil Health & Fertility under RKVY Cafeteria Scheme, the fund of Rs.174.83 crore was released to the States for implementation in the year 2023-24. The fund of Rs. 147.16 crore has also been released to the States for implementation in the current financial year 2024-25 (up to the month of 17th February, 2025).

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# Chapter 10

## PRADHAN MANTRI KISAN SAMMAN NIDHI (PM-KISAN)

### 10.1 Overview

Farmers' Welfare Division of this Department is entrusted with the formulation, implementation, monitoring and evaluation of two new Central Sector Schemes of the Government, namely, the Pradhan Mantri Kisan Samman Nidhi (PM-KISAN) and the Pradhan Mantri Kisan Maan Dhan Yojana (PM-KMY).

### 10.2 Pradhan Mantri Kisan Samman Nidhi (PM-KISAN):

PM-KISAN is a central sector scheme launched on 24 February 2019 to supplement the financial needs of cultivable land-holding farmers.

Under this scheme, the financial benefit of Rs. 6,000/- per year in three equal instalments of Rs. 2,000/- every four months is transferred into the bank accounts of eligible farmers' families across the country through Direct Benefit Transfer (DBT).

#### 10.2.1 Salient Features

- The objective of the scheme is to augment the income of families of all land holding farmers subject to certain exclusion criteria relating to higher income status. The Scheme was formally launched on 24th February, 2019.
- The scheme was originally started for Small & Marginal Farmers (SMFs) only, possessing a combined holding of upto 2 hectares of land, but later w.e.f. 01.04.2019 the Scheme was extended to all farmers, irrespective of the size of their land holdings.
- The Scheme aims to provide a payment of Rs. 6000/- per year to be transferred in three equal installments of Rs. 2000/- each, every four months directly into the bank accounts of eligible landholding farmer families.
- For effective implementation of the Scheme, detailed Operational Guidelines have been issued which are amended from time-to-time as and when considered necessary.
- The Scheme is being implemented online through the Direct Benefit Transfer (DBT) mode for which an exclusive web-portal [www.pmkisan.gov.in](http://www.pmkisan.gov.in) has been created.
- The identification of beneficiaries for the Scheme is the sole responsibility of the State/UT Governments which upload their necessary details on the PM-KISAN portal for enabling transfer of benefits to them.
- The Scheme is effective from 01.12.2018.
- The cut-off date with regard to the eligibility of farmers for the scheme is 01.02.2019.
- Land seeding of the data is mandatory to receive benefits of the Scheme, with exceptions to a few States/UTs.
- For enrollment, a farmer has to approach the local Patwari / Revenue Officer / Nodal Officer (PM-Kisan) nominated by the State Government. In addition to this, a special facility at web portal has been created at Farmers Corner through which farmers can also register themselves. Farmers can also edit their names in PM-Kisan database as per their Aadhar card through Farmers Corner. They can also know their payment status through Farmers Corner.
- A special mobile app has also been launched which provides facilities available through Farmers Corner which also provides facility of e-KYC through OTP and face-authentication.
- Farmers can also utilize the services of the chat-bot launched for PM-KISAN for knowing the status of their application and benefit transfer under PM-KISAN in 11 languages.
- PVTG/FRA Relaxations under few eligibility criteria have been provided to further the objectives of Vibrant Villages Programme of the Government of India.

### **10.2.2 Objectives of the Scheme**

The scheme aims to supplement the financial needs of all landholding farmers' families in procuring various inputs to ensure proper crop health and appropriate yields, commensurate with the anticipated farm income as well as for domestic needs.

The PM-KISAN scheme stands as a transformative initiative, empowering millions of farmers with direct financial support, fostering resilience, and driving a new era of inclusive agricultural growth in India.

### **10.2.3 Eligibility for Scheme**

All cultivable land holding farmers' families are eligible for the scheme subject to exclusion criteria of the scheme.

### **10.2.4 Exclusion criteria:**

The following categories of farmers are not eligible for benefit under the scheme:

- Institutional Land Holders
- Farmer families with members in the following categories:
- Former or present holders of constitutional posts.
- Former or present Ministers/State Ministers, Members of Parliament (Lok Sabha/Rajya Sabha), State Legislative Assemblies/Councils, Mayors of Municipal Corporations, or Chairpersons of District Panchayats.
- Serving or retired officers/employees of Central/State Governments, PSEs, Autonomous Institutions, or Local Bodies (excluding Multi-Tasking Staff/Class IV/Group D employees).
- Superannuated/retired pensioners with a monthly pension of ₹10,000 or more (excluding Multi-Tasking Staff/Class IV/Group D employees).
- Income taxpayers.
- Professionals such as doctors, engineers, lawyers, chartered accountants, and

architects registered with professional bodies and practicing their professions.

- Non-Resident Indian (NRI) Land-Holding Farmer Families

### **10.2.5 Technological Interventions under the PM-KISAN Scheme**

- Since its inception, the PM-KISAN scheme has leveraged technology to ensure that all eligible farmers receive their due benefits. The scheme has integrated Digital Public Infrastructure, including authentication through UIDAI, Aadhaar Payment Bridge-based transfers, Income Tax and PFMS verification, and land records validation as per States/UTs' Record of Rights.
- The PM-KISAN Mobile App, equipped with a Face Authentication Feature, simplifies the e-KYC process. Farmers can download the app from the Google Play Store and complete their e-KYC from home, even in remote areas, without OTPs or fingerprints, using facial recognition. Additionally, beneficiaries can complete e-KYC for up to 100 other farmers, facilitating compliance across communities.
- To enhance farmer engagement, the AI-powered chatbot "Kisan-eMitra" was launched in September 2023. Available 24/7 in 11 regional languages, including Hindi, English, Tamil, Bengali, and more, it overcomes technological and linguistic barriers. Farmers can check their application status, payment details, and get accurate, instant responses to their queries. With a user-friendly interface accessible through the PM-KISAN portal and mobile app, the chatbot also supports voice-based interactions, enabling farmers to speak their queries and receive prompt answers.
- The Ministry mandated land seeding, benefits transfer to Aadhaar seeded bank account and e-KYC of the beneficiaries to ensure that the benefits are delivered to the intended farmers.

By implementing these innovative tools, the Ministry seeks to enhance the overall efficiency of

the scheme's support system, empowering farmers with easy access to information and timely resolution of any concerns they may have.

## 10.2.6 Ensuring that No Eligible Farmers are left out

To ensure that all eligible beneficiaries are onboarded and meet the mandatory requirements, several saturation drives have been conducted by the Department between instalments in collaboration with the State/UT Governments, IPPB and CSC.

With the assistance of the India Post Payments Bank (IPPB), these drives opened Aadhaar-seeded bank accounts for beneficiaries who previously lacked them at their doorsteps. Furthermore, dedicated e-KYC saturation drives were carried out with the help of Common Service Centres (CSCs) to complete the e-KYC process for all remaining farmers before releasing the instalments. During this period States/UTs were fully committed for the completion of e-KYC of all eligible farmers, ensuring smooth processing of financial assistance. The drives undertaken during FY 2024-25 are detailed as under:

- i. Viksit Bharat Sankalp Yatra is a nationwide campaign to raise awareness through outreach activities to achieve saturation of schemes of Govt. of India across the country covering all Gram Panchayats, Nagar Panchayats and Urban Local Bodies. During Viksit Bharat Sankalp Yatra starting from 15th Nov. 2023, more than 1 Cr. eligible farmers were covered under the scheme.
- ii. In the first 100 days of the new Government (Jun 24- Sep 24), more than 25 lakh eligible farmers were covered under the scheme.
- iii. During the Swachh Bharat Abhiyan (1st Oct. to 31st Oct. 2024) campaign over 52.10 lakh self-registration pending applications were disposed out of which over 15 lakh applications have been approved. Now such farmers became eligible to receive the benefits of the scheme.

With these efforts, over 9.58 Cr farmers received the benefits during the 18th instalment period (Aug -

Nov 2024).

## 10.2.7 Inclusion of FRA Patta Holders in the PM-KISAN scheme

The Pradhan Mantri-Janjati Adivasi Nyaya Maha Abhiyan (PM-JANMAN) Mission initiated by the Ministry of Tribal Affairs, aims to uplift the life of 75 Particularly Vulnerable Tribal Groups (PVTG) communities spread across 18 States and Union Territories in India by addressing their unique challenges and providing essential infrastructure for a brighter future.

Given the significance of the PM-JANMAN mission, the Department decided to saturate the PM-KISAN scheme with all the FRA patta holders and PVTG farmers. To facilitate the registration of FRA patta holders/ PVTG farmers, the Ministry has allowed the registration of the FRA Patta-holders and has relaxed the mandatory land record requirement. Additionally, the Department has temporarily relaxed the mandatory e-KYC requirement for the FRA patta holders / PVTG farmers to ensure seamless access to benefits for the deserving beneficiaries. The Ministry has held several meetings with the States and MoTA to facilitate the registration of FRA patta holders / PVTG farmers in the PM Kisan scheme. Currently, the only mandatory criteria for benefits disbursal is having active Aadhaar seeded bank account.

As of date, over 9.33 lakh FRA patta holders/PVTG farmers have been registered in the scheme.

## 10.2.8 Inclusion of Farmers in the PM-KISAN scheme under the Vibrant Villages Program

The Government of India launched the Vibrant Villages Programme (VVP) as a Centrally Sponsored Scheme in April 2023 for comprehensive development of the selected 662 villages in 46 blocks of the 19 districts in the States/UTs of Arunachal Pradesh (455 villages), Himachal Pradesh (75 villages), Sikkim (46 villages), Uttarakhand (51 villages), and Ladakh (35 villages). The basic objective of the program is to bring the development of villages of blocks on the northern border and improve the quality of life of individuals staying in identified border villages. As a result, this will motivate people to stay in their native locations in

border areas and retain the population in the villages.

Farmers living in VVP villages face immense hardships due to their remote and challenging geographical conditions. Limited access to roads, internet, and other communication modes severely restricts their connectivity and awareness of government schemes. Extreme weather, physical terrains, and the infrequent visits of state government officers further exacerbate their difficulties. The process of land mutation, which requires multiple follow-ups with government offices, becomes nearly impossible for these residents. Without land ownership documentation, many farmers are excluded from schemes like PM-KISAN, leaving them deprived of essential support. These adversities often force residents to abandon their native villages in search of better opportunities. To address these challenges and include farmers in the PM-KISAN scheme from VVP villages, the following eligibility criteria were relaxed:

- i. All superannuated/retired pensioners belonging to Group C and Group D, including army personnel
- ii. Ex-Gram Pradhan, if otherwise eligible, may also be considered for enrolment in the PM-KISAN scheme
- iii. Relaxation of mandatory land seeding in the border villages under the Vibrant Villages Program in the States of Himachal Pradesh and Uttarakhand and mandatory land seeding is already relaxed for Arunachal Pradesh, Sikkim and Ladakh.

As of date, over 16,000 farmers from VVP villages are registered in the PM-KISAN scheme. Through these dedicated efforts, the PM-KISAN scheme has emerged as a remarkable beacon of inclusivity, setting a benchmark for transformative impact.

#### **10.2.9 Milestones**

- One of the largest DBT scheme across the world
- Over Rs. 3.46 lakh crore disbursed through 18 instalments. The instalment wise table is available in Annexure - I.

- More than 85 per cent of small and marginal farmers being the beneficiaries under the scheme.
- At least one out of four beneficiaries is a woman farmer
- 100% payment to e-KYC verified and Aadhaar seeded bank accounts of the beneficiaries
- The 18th instalment of the scheme benefitted over 9.58 Cr farmers amounting over Rs.20,657 Cr. The State/UT-wise no. of beneficiaries and amount disbursed is available in Annexure - II.

#### **10.2.10 Impact of the Scheme**

- A study conducted by the International Food Policy Research Institute (IFPRI) on farmers of Uttar Pradesh indicates that the benefits under the PM-Kisan scheme reached the majority of farmers, and they received the full amount without any leakages. The study strongly suggests that the funds disbursed under the PM-KISAN scheme have acted as a catalyst in rural economic growth, aided in alleviating the credit constraints for farmers, and increased investments in agricultural inputs. The scheme has enhanced farmers' risk-taking capacity, leading them to undertake riskier but comparatively productive investments. The funds received by recipients under PM KISAN are helping them with their agricultural needs and catering to other expenses such as education, medical, marriage, etc.
- The Department of Agriculture and Farmers Welfare, committed to continuous improvement and ensuring the scheme's effectiveness, have implemented a comprehensive feedback mechanism. Utilizing Kisan Call Centres (KCC), the Department conducted voice-based surveys with farmers nationwide. Survey results revealed that over 92% of beneficiaries are satisfied with the PM KISAN scheme, and more than 93% use the benefits for agricultural activities.

**Instalment Period-wise No. of Beneficiaries and Amount Disbursed:**

#	Instalment Period	No. of Beneficiaries	Amount Transferred (in Rs. Cr.)
1 <sup>st</sup>	FY 2018-2019 (Dec - Mar)	3,16,19,876	6,323.98
2 <sup>nd</sup>	FY 2019-2020 (Apr - Jul)	6,00,34,451	13,271.93
3 <sup>rd</sup>	FY 2019-2020 (Aug - Nov)	7,65,99,700	17,526.86
4 <sup>th</sup>	FY 2019-2020 (Dec - Mar)	8,20,90,050	17,942.66
5 <sup>th</sup>	FY 2020-2021 (Apr - Jul)	9,26,93,619	20,989.37
6 <sup>th</sup>	FY 2020-2021 (Aug - Nov)	9,72,25,907	20,475.94
7 <sup>th</sup>	FY 2020-2021 (Dec - Mar)	9,84,73,258	20 ,474.54
8 <sup>th</sup>	FY 2021-2022 (Apr - Jul)	9,99,10,512	22,413.21
9 <sup>th</sup>	FY 2021-2022 (Aug - Nov)	10,34,41,240	22,394.51
10 <sup>th</sup>	FY 2021-2022 (Dec - Mar)	10,41,66,702	22,342.93
11 <sup>th</sup>	FY 2022-2023 (Apr - Jul)	10,48,38,981	22,616.31
12 <sup>th</sup>	FY 2022-2023 (Aug - Nov)	8,57,30,450	18 ,039.80
13 <sup>th</sup>	FY 2022-2023 (Dec - Mar)	8,12,34,379	17,649.42
14 <sup>th</sup>	FY 2023-2024 (Apr - Jul)	8,56,76,569	19,202.49
15 <sup>th</sup>	FY 2023-2024 (Aug - Nov)	8,12,16,250	19,596.60
16 <sup>th</sup>	FY 2023-2024 (Dec - Mar)	9,04,27,479	23,087.44
17 <sup>th</sup>	FY 2024-2025 (Apr - Jul)	9,37,67,395	21,029.96
18 <sup>th</sup>	FY 2024-2025 (Aug - Nov)	9,58,97,635	20,657.36
<b>Total</b>			<b>3,46,035.32</b>

## Annexure -II

## Benefit transferred under 18th instalment of PM-KISAN

#	State/UT	No. of Beneficiaries	Amount Transferred (in Rs. Cr.)
1	ANDAMAN AND NICOBAR ISLANDS	12,832	2.80
2	ANDHRA PRADESH	41,22,252	836.31
3	ARUNACHAL PRADESH	90,444	25.60
4	ASSAM	18,87,227	403.44
5	BIHAR	75,80,445	1,544.40
6	CHHATTISGARH	24,96,294	566.34
7	DELHI	10,765	2.23
8	GOA	6,332	1.33
9	GUJARAT	49,12,111	1,038.67
10	HARYANA	15,98,937	341.98
11	HIMACHAL PRADESH	8,17,494	171.88
12	JAMMU AND KASHMIR	8,58,257	182.54
13	JHARKHAND	19,97,224	545.97
14	KARNATAKA	43,47,737	941.76
15	KERALA	28,15,143	597.93
16	LADAKH	18,201	3.77
17	LAKSHADWE EP	2,198	0.45
18	MADHYA PRADESH	81,36,105	1,681.86
19	MAHARASHTRA	91,41,983	1,888.21
20	MANIPUR	85,917	42.78
21	MEGHALAYA	1,50,412	33.91
22	MIZORAM	1,10,285	31.36
23	NAGALAND	1,71,914	42.84
24	ODISHA	31,48,993	688.53
25	PUDUCHERRY	8,032	1.63
26	PUNJAB	9,26,039	272.77
27	RAJASTHAN	70,31,163	1,544.86
28	SIKKIM	28,100	6.66
29	TAMIL NADU	21,94,272	455.86
30	TELANGANA	30,77,274	627.46
31	THE DADRA AND NAGAR HAVELI AND DAMAN AND DIU	11,587	2.44
32	TRIPURA	2,29,303	47.6 5
33	UTTAR PRADESH	2,25,72,533	4,980.88
34	UTTARAKHAND	7,96,926	168.75
35	WEST BENGAL	45,02,904	931.49
<b>Grand Total</b>		<b>9,58,97,635</b>	<b>20,657.36</b>

## **10.3 Pradhan Mantri Kisan Maan Dhan Yojana (PM-KMY)**

The Pradhan Mantri Kisan Maan Dhan Yojana (PM-KMY) is an old age pension scheme for all land holding Small and Marginal Farmers (SMFs) in the country. The Scheme was launched on 12th September 2019.

All Small and Marginal Farmers having cultivable landholding up to 2 hectares falling in the age group of 18 to 40 years and whose names appear in the land records of States/UTs as on 01.08.2019 are eligible under the Scheme. It is a voluntary and contributory pension scheme. The contribution amount ranges from Rs 55 to Rs 200 per month based on the entry age of the farmer. Government of India also contribute the matching amount for every subscriber (farmer). The LIC is the Pension Fund Manager for the scheme and responsible for Pension pay-out.

### **10.3.1 Enrolment of Farmers Under the Scheme**

Eligible Small and Marginal Farmers (SMFs) can enrol in the PM-Kisan Maan-Dhan Yojana (PM-KMY) scheme by visiting the nearest Common Service Centre (CSC). Farmers must bring their Aadhaar card, bank passbook or account details, and a mobile number for OTP verification.

#### **Steps:**

- Visit the nearest CSC with the following documents:
- Aadhaar number

- iii. Bank account details
- iv. Mobile Number
- In the scheme, the registration process is completely paperless.
- CSC completes the registration process by verifying the farmer's Aadhaar and bank details.
- The farmer then reviews and signs the mandate form, which the VLE scans and uploads online. The initial contribution payment is processed digitally during this step.
- Upon successful registration, the farmer is assigned a unique Pension Account Number and issued a pension card. The original enrolment form is returned to the farmer, and the data is forwarded to LIC for further processing.
- The contribution for the subsequent months is auto debited from the farmers' bank account. For this, the farmer has to ensure sufficient balance in his/her bank account.
- The registration process is completely free for the farmers. Farmers are not required to pay any charges for registration except for his/her first months' contribution.

The amount of the monthly contribution shall range between Rs.55 to Rs.200 per month depending upon the age of entry of the farmers into the Scheme, as per the following contribution chart:

<b>Entry Age</b>	<b>Superannuation Age</b>	<b>Member's contribution (Rs.)</b>	<b>Government's contribution (Rs.)</b>	<b>Total contribution (Rs.)</b>
(1)	(2)	(3)	(4)	(5)
18	60	55	55	110
19	60	58	58	116
20	60	61	61	122
21	60	64	64	128

<b>Entry Age</b>	<b>Superannuation Age</b>	<b>Member's contribution (Rs.)</b>	<b>Government's contribution (Rs.)</b>	<b>Total contribution (Rs.)</b>
22	60	68	68	136
23	60	72	72	144
24	60	76	76	152
25	60	80	80	160
26	60	85	85	170
27	60	90	90	180
28	60	95	95	190
29	60	100	100	200
30	60	105	105	210
31	60	110	110	220
32	60	120	120	240
33	60	130	130	260
34	60	140	140	280
35	60	150	150	300
36	60	160	160	320
37	60	170	170	340
38	60	180	180	360
39	60	190	190	380
40	60	200	200	400

### 10.3.2 Features of the Scheme

- All small and marginal farmers aged between 18 to 40 years are eligible for the scheme. The State/UT-wise no. of farmers enrolled in the PM-KMY scheme is available at Annexure – I.
- Seamless Enrolment: Over 5 lakh Common Service Centers (CSCs) facilitate an easy enrolment process integrated with Aadhaar and PM-KISAN databases.
- Government Co-Contributions: Equal contributions by the Central Government match farmers' payments, enhancing the pension fund's sustainability.
- Flexibility in Contributions: Farmers can choose monthly, quarterly, 4-monthly, or half-yearly payment modes, enabling adaptability to their financial cycles.
- Spousal and Nominee Protections: Provisions ensure family benefits, including continued pensions for spouses or refunds of contributions to nominees in cases of the subscriber's demise.

# Department of Agriculture & Farmers Welfare

## **Annexure – I: State-wise details of number of farmers enrolled under PM KMY (As on 25th Nov 2024)**

S. No.	State	Grand Total
1	ANDAMAN AND NICOBAR ISLANDS	521
2	ANDHRA PRADESH	32,350
3	ARUNACHAL PRADESH	2,375
4	ASSAM	13,502
5	BIHAR	3,45,038
6	CHANDIGARH	530
7	CHHATTISGARH	2,02,734
8	DELHI	354
9	GOA	150
10	GUJARAT	66,491
11	HARYANA	5,74,467
12	HIMACHAL PRADESH	3,561
13	JAMMU AND KASHMIR	1,26,577
14	JHARKHAND	2,53,105
15	KARNATAKA	49,721
16	KERALA	1,350
17	LADAKH	114
18	LAKSHADWEEP	72
19	MADHYA PRADESH	1,17,307
20	MAHARASHTRA	80,393
21	MANIPUR	590
22	MEGHALAYA	729
23	MIZORAM	301
24	NAGALAND	1,182
25	ODISHA	1,57,342
26	PUDUCHERRY	146
27	PUNJAB	13,040
28	RAJASTHAN	38,913
29	SIKKIM	34
30	TAMIL NADU	1,10,582
31	TELANGANA	9,719
32	THE DADRA AND NAGAR HAVELI AND DAMAN AND DIU	287
33	TRIPURA	831
34	UTTAR PRADESH	2,51,976
35	UTTARAKHAND	2,148
36	WEST BENGAL	8,098
	<b>Total</b>	<b>24,66,630</b>

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# Chapter 11

## NATIONAL CROP INSURANCE PROGRAMME (NCIP)

### 11.1 Agriculture Insurance

Keeping in view the risks involved in agriculture and to insure the farming community against various risks, the Ministry of Agriculture & Farmers Welfare introduced a crop insurance scheme in 1985 and thereafter brought improvements in the erstwhile scheme(s) from time to time based on the experience gained and views of the stakeholders, including States and, farming community etc. The insurance schemes currently under implementation are the Pradhan Mantri Fasal Bima Yojana (PMFBY)

and the Restructured Weather Based Crop Insurance Scheme (RWBCIS).

Considering the experience gained, demands from farmers and Performance Study and Evaluation Reports, the Operational Guidelines of the Scheme have further been revised with effect from Kharif 2023 season.

The total funds released by Government of India during last 5 years and current year under crop insurance schemes are as under

Plan / Year	Insurance Schemes	(Rs. crore)
2018-19	Pradhan Mantri Fasal Bima Yojana (PMFBY) and Restructured Weather Based Crop Insurance Scheme (RWBCIS)	11945.38
2019-20	-do -	12638.32
2020-21	-do -	13902.79
2021-22	-do -	13549.70
2022-23	-do -	10807.31
2023-24	-do -	12950.53
2024-25	-do -	11891.37

As on 24.01.2025

### 11.2 Brief details of the crop insurance schemes being implemented in the country are given below:

#### 11.2.1 Pradhan Mantri Fasal Bima Yojana (PMFBY)

The Pradhan Mantri Fasal Bima Yojana (PMFBY), a flagship scheme of Ministry of Agriculture and Farmers Welfare, launched in 2016 with the objective to protect farmers from crop loss due to unforeseen natural calamities from pre-sowing to post harvest and to provide adequate financial support to farmers in the event of loss of crops.

#### 11.2.2 Restructured Weather Based Crop Insurance Scheme (RWBCIS)

With the objective to provide coverage for those crops for which there is no standard/approved methodology for assessment of yield and to overcome the shortcoming under erstwhile NAIS, a pilot Weather Based Crop Insurance Scheme (WBCIS) was launched in 20 States (as announced in the Union Budget 2007-08). However, WBCIS was implemented as a full-fledged component scheme of the National Crop Insurance Programme (NCIP) from Rabi 2013-14 season to Rabi 2015-16. WBCIS intends to provide insurance protection to the farmers against adverse weather incidence, such as deficit and excess rainfall, high or low temperature,

humidity etc. which are deemed to impact crop production adversely. It has the advantage to settle claims within the shortest possible time. The scheme has further been restructured on the basis of premium and administrative structure on the lines of PMFBY and is available in the country since Kharif 2016 as Restructured WBCIS.

The Schemes are being implemented through 20 General Insurance Companies including all the 5 Government Sector Companies. Under PMFBY, a uniform maximum premium of only 2% of the sum insured is paid by farmers for Kharif and 1.5% for Rabi food and oilseed crops. In case of annual commercial and horticultural crops, the maximum premium to be paid by farmers is upto 5%. The premium rates to be paid by farmers are very low and uniform across the country and the balance of actuarial premium is being borne by the Government, to be shared equally by the State & Central Government, except in North Eastern States – from 2020-21 and Himalayan States – from 2023-24, where the subsidy sharing pattern between Central and State Govt. is 90:10.

The key indicators of the scheme are as under:

- a. 1st Largest crop insurance scheme in the world in terms of farmer enrolments
- b. 3rd Largest scheme in the World in terms of insurance premiums.
- c. Currently being implemented in 23 States/UTs. However the scheme has been implemented in 27 States/UTs in one or more seasons in last 8 years.
- d. States of Andhra Pradesh, Bihar, Gujarat, Jharkhand, Telangana & West Bengal exited from the scheme during 2018-20 period. Later Andhra Pradesh re-joined from Kharif 2022. Jharkhand has also re-joined the Scheme while Telangana has announced joining the scheme. Further, Punjab and Nagaland have shown keenness to join the scheme.
- e. PMFBY is the only area-based scheme globally to leverage technology so extensively in its implementation

## 11.3. Major Achievements & Important Policy Decisions/activities taken

**Alternative Risk Management Mechanisms (ARTM):** Based on demand from State Govts. a committee of experts under Joint Secretary (Insurance), Department of Financial Service (DFS) and Actuaries from the insurance industry recommended ARTM to be made available to states to choose from.

**Alternative Risk Management Models of Profit & Loss Sharing, Cup & Cap (60-130) & Cup & Cap (80-110)** were implemented from Kharif 2023 giving flexibility to states to choose suitable model in addition to existing comprehensive insurance scheme under standard PMFBY.

This on one hand helps the states with multiple options to choose from as per their agriculture practices and agro-climatic requirements and on the other hand rationalize their fiscal expenditure on premium subsidies. The alternate models have been chosen by many states including, Madhya Pradesh, Maharashtra, Uttar Pradesh, Rajasthan, Tamil Nadu & Andhra Pradesh etc. and have led to considerable reduction in overall cost of premium and savings to Governments.

NCIP ([www.pmfby.gov.in](http://www.pmfby.gov.in)) has been developed as a single source of Data for Actual Yield (AY) & Threshold Yield (TY) values for current and historical years in order to have a correct and similar data sets for Tendering and claim settlement. This has also enabled access to individual farmer-wise detailed data. This has built trust based transparency in the scheme ecosystem and Insurers have responded with better pricing in the recently concluded tendering cycle.

**Digi-Claim-Payment Module:** All PMFBY claim calculation and settlement is now done through Digi-Claim module of National Crop Insurance Portal (NCIP) using Public Finance Management System (PFMS) Platform. Govt. has complete visibility of quantum of eligible claims, claims paid by the Insurance Company and actual claims transferred to beneficiary farmers for which till Govt. had dependence on data from Insurance Company.

**AIDE (App for Intermediary Enrolment):** In addition to the existing channels of enrollment for non-loanee farmers viz. CSC, Banks, Post Offices etc, a smart-phone App has been designed and rolled out in Kharif 2023 for enrollment of farmers at their door-steps through a large network of Insurance Intermediaries. This App has been designed to streamline the process of enrollment and offer a completely paper-less and cash-less experience to a farmer to get enrolled leveraging the digital technology for registration, documentation and premium payment.

**Krishi Rakshak Portal & Helpline:** A single toll-free phone number integrated grievance redressal mechanism having digital portal and a call centre has been developed to enable farmers to lodge their grievances/concerns/queries.

It shall be dovetailed with National Crop Insurance Portal and integrated with all stakeholders for real-time tracing, monitoring and redressal of grievances and queries.

**Digitized Land Record Integration:** The intervention is to ensure de-duplication of land parcels and uniquely identify the land parcels of insured farmers thereby ensuring rationalization of premium subsidies and genuine utilization of scheme benefits.

**Mechanism of Escrow Account:** This is to enable States to ensure that the premium subsidies payments are not delayed beyond the prescribed timelines as per provisions of Operational Guidelines. NCIP to be opened up for enrollments only after commitments of states in terms of deposit of premium liability into Escrow Account.

#### 11.4. New Technologies

Under PMFBY, Crop Cutting Experiments (CCEs) have increased manifold. Every year around 70 lakh CCEs need to be conducted to arrive at yield data within a short harvesting window of 15-20 days is a

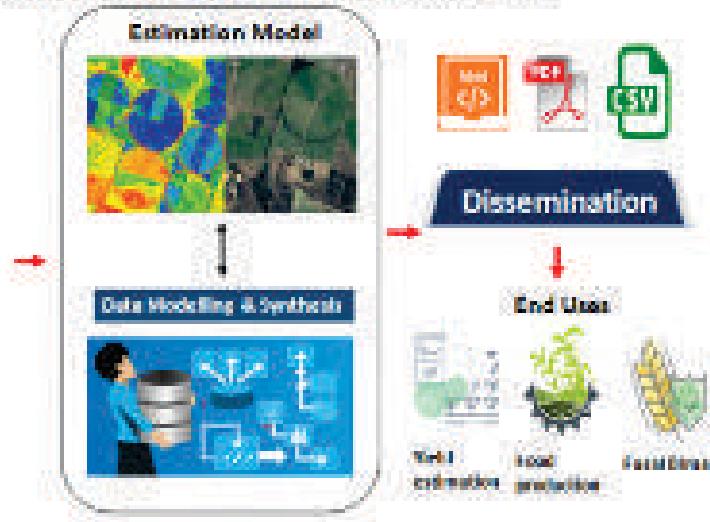
challenging task. With the primary objective to reduce the delays in claim payment to farmers, efforts have been made to make the scheme technology driven. Capturing of CCEs data on smartphones/CCE Agri App and its real-time transfer on the National Crop Insurance Portal (NCIP) has been made mandatory from Kharif 2017 to ensure transparency and real time transfer of data. Remote sensing is being used to rationalize the number of Crop Cutting Experiments (CCEs) at unit area level.

To this extent, this Department has conducted large scale pilot studies through technology organizations (Government/ private/ national/ international) to estimate crop yield at village/GP level using innovative technologies. Smart Sampling and Two Step Yield Estimation has been adopted under PMFBY implementation to rationalize and reduce number of CCEs to be conducted. This will ensure reduction in CCE numbers without impacting quality of sampling and yield estimation results. Further, after detailed analysis of the technology driven approaches developed during pilot studies for Gram Panchayat (GP) level crop yield estimation in Kharif 2019, Rabi 2019-20 for Rabi 2020-21 Government has approved following three major initiatives from Kharif 2023 onwards.

**11.4.1 YES-Tech (Yield Estimation based on Technology)** is technology based yield estimation mechanism developed after 2 years of rigorous testing and pilot runs across 100 districts of the country. It does crop Loss assessment and Yield estimation assisted by data inputs from sources such as Remote Sensing indices, Weather indices, crop phenological information, soil types etc. MNCFc in collaboration with other experts has approved 5 Models Technologies/Approaches for adoption for Paddy and Wheat crops from Kharif 2023 onwards and for Soyabean from Kharif 2024. The guidelines of the same have been issued to the all concerned and are also available on NCIP.

## YES-TECH: Automation of Yield Estimation

Collaboration with – Top Technical Institutions as IITR for modeling

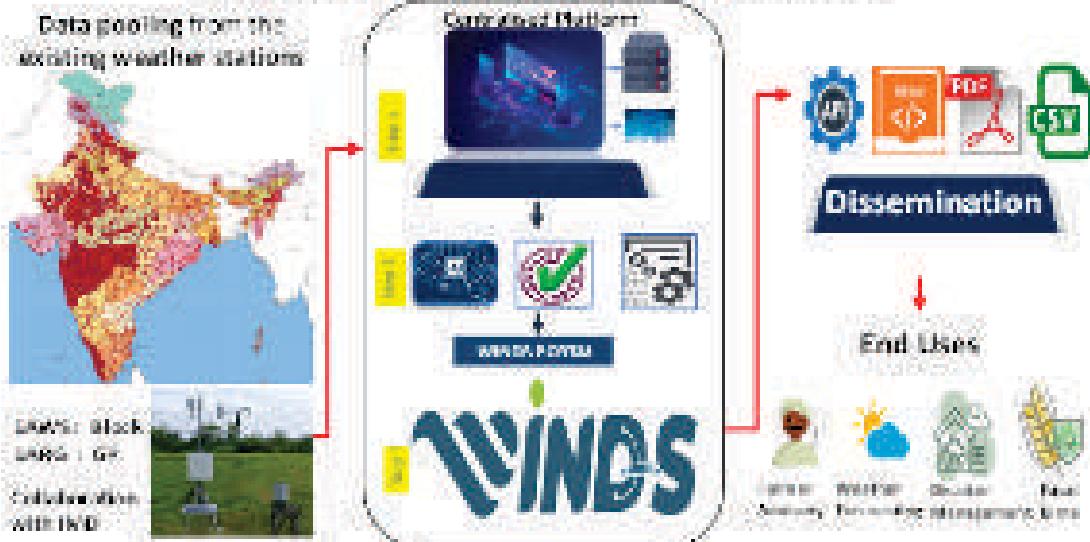


**11.4.2 WINDS** (Weather Information Network & Data System) is a pioneering initiative of the country to set-up a network of Automatic Weather Stations & Rain Gauges. It will entail the installation of one AWS at Taluk/Block level and one ARG at the Gram Panchayat level to create a strong database of hyper-local weather data for the different Govt. and other entities to use for all farmer and farming oriented services. The data so collected will be used for claim assessment under Parametric Crop insurance, Yield estimation through Technology, Crop-Region specific Agriculture Advisories to the Farmers, Disaster Risk Resilience & Mitigation needs. As of

now the country has approx. 13,000 AWS and 20,000 ARGs installed for all institutions including IMD. Under WINDS, an additional 3,500 AWS and Approx. 1.6 lakh ARGs are proposed to be established across the country. IMD and DA&FW has collaborated for setting up quality control mechanism under this system.

Nine states namely, Himachal Pradesh, Uttarakhand, Rajasthan, Chhattisgarh, Uttar Pradesh, Maharashtra, Andhra Pradesh, Kerala & Karnataka are in the process of implementing WINDS and other States are being encouraged to implement the same.

## WINDS: One Nation One Weather Portal



## **11.5. Review of Operational Guidelines of the Scheme and issue of Revised Guidelines**

The schemes' implementation is reviewed/monitored constantly through weekly video conferences, one to one meeting with the stakeholders on a regular basis and the National Level Monitoring Committee (NLMC). Learning from the Scheme implementation experience, an extensive consultative exercise with all implementing partners was made and Operational Guidelines (OGs) of PMFBY/RWBCIS were revised with effect from 1st October, 2018 from Rabi 2018-19 season and further revamped for implementation wef Kharif 2020 season and thereafter from Kharif 2023 as well.

## **11.6. Coverage of Women Farmers under PMFBY**

All farmers, whether sharecroppers, tenant farmers, including women farmers growing crops in the areas notified by the concerned State/UT Government, are eligible for coverage under the scheme and can insure themselves as per provisions of the scheme. The coverage under the scheme is subject to land records and tenancy contracts. Further, the Scheme is demand-driven. Since the scheme has been made voluntary for participation, all farmers, including woman farmers, are eligible to enroll under the scheme. The scheme has no specific extra benefits/provisions for women farmers. However, the Government is bound to pay its share in premium subsidies for all the farmers, including women who take up crop insurance.

The insured area owned by women farmers in the State of Maharashtra has been the highest among all participating States until 2020-21, whereas during 2021-22, 2022-23 and 2023-24 area insured by women farmers has been highest in the State of Rajasthan. Union Territories and North East States have recorded fairly improved enrolment of women farmers over the years.

## **11.7. Trainings of Stakeholders**

Training and Capacity Building of the stakeholders is one of the important areas identified by the Department in reaching out to farmers with credit and insurance support. PMFBY scheme was revamped in 2020 and participation was made voluntary for all farmers, it was compulsory for loanee farmers earlier. Since, the scheme is implemented through multiple stakeholders time to time (both Kharif and Rabi seasons) training and capacity building is pertinent. This department is already conducting trainings for State Govt/UTs, Bankers, Insurance Companies CSC and Post-Offices on various aspects of PMFBY in both online and offline mode. In collaboration with NeGD, the Department has also implemented Learning Management System (LMC) for this purpose.

## **11.8. Pending Audit Para**

Action Taken Notes on the recommendations of the 78th Report of Public Accounts Committee (PAC) on Performance Audit of Agricultural Crop Insurance Schemes has been prepared and after vetting from C&AG, final ATN has been sent to the PAC.

**PMFBY & RWBCIS - Coverage Statistics since Implementation as on 31.12.24**

<b>Season/Year</b>	<b>Total Farmer Applications Insured (lakh)</b>	<b>Area Insured (lakh ha)</b>	<b>Sum Insured</b>	<b>Farmers Share in Premium</b>	<b>Paid Claims</b>	<b>Farmer Applications Paid Claims (lakh)</b>
	All figures in Rs. Cr					
<b>Kharif 2016</b>	408	377	1,30,635	2,814	10,596	116
<b>Rabi 2016-17</b>	176	189	72,247	1,288	6,213	41
<b>2016-17 Total</b>	584	565.64	2,02,882	4,102	16,809	156
<b>Kharif 2017</b>	357	330	1,24,588	2,801	18,167	147
<b>Rabi 2017-18</b>	175	179	78,054	1,403	4,020	30
<b>2017-18 Total</b>	533	508.15	2,02,642	4,204	22,187	177
<b>Kharif 2018</b>	348	318	1,39,869	3,045	19,934	146

# Department of Agriculture & Farmers Welfare

Season/Year	Total Farmer Applications Insured (lakh)	Area Insured (lakh ha)	Sum Insured	Farmers Share in Premium	Paid Claims	Farmer Applications Paid Claims (lakh)
						All figures in Rs. Cr
<b>Rabi 2018-19</b>	234	217	95,885	1,660	9,511	90
<b>2018-19 Total</b>	582	534.91	2,35,754	4,705	29,445	236
<b>Kharif 2019</b>	425	337	1,45,249	3,058	21,986	196
<b>Rabi 2019-20</b>	192	235	76,090	1,422	5,926	46
<b>2019-20 Total</b>	617	572.04	2,21,338	4,481	27,911	243
<b>Upto 2019-20</b>	2,316	2,181	8,62,616	17,492	96,352	813
<b>Kharif 2020</b>	424	285	1,16,157	2,625	14,771	129
<b>Rabi 2020-21</b>	199	198	83,308	1,421	6,453	70
<b>2020-21 Total</b>	623	483.09	1,99,464	4,046	21,225	198
<b>Upto 2020-21</b>	2,938	2,664	10,62,081	21,537	1,17,577	1,011
<b>Kharif 2021</b>	504	251	1,02,087	2,335	15,151	258
<b>Rabi 2021-22</b>	326	200	78,286	1,378	5,694	89
<b>2021-22 Total</b>	830	451.75	1,80,373	3,713	20,845	347
<b>Upto 2021-22</b>	3,768	3,116	12,42,453	25,251	1,38,422	1,358
<b>Kharif 2022</b>	692	267	1,27,052	2,547	12,148	225
<b>Rabi 2022-23</b>	429	234	86,490	1,470	6,064	94
<b>2022-23 Total*</b>	1,121	501.07	2,13,542	4,017	18,212	319
<b>Total upto 2022-23*</b>	4,889	3,617	14,55,995	29,268	1,56,633	1,677
<b>Kharif 2023</b>	878	325	1,67,752	1,780	12,629	229
<b>Rabi 2023-24</b>	551	279	1,05,647	1,427	2,876	52
<b>2023-24 Total \$</b>	1,429	604	2,73,399	3,207	15,505	282
<b>Total upto 2023-24</b>	6,319	4,221	17,29,395	32,475	1,72,138	1,959
<b>Kharif 2024**</b>	923	308	1,57,590	1,958	53	1
<b>Rabi 2024-25</b>	19	6	3,629	75	-	-
<b>2024-25 Total \$</b>	942	315	1,61,219	2,032	53	1
<b>Total upto 2024-25</b>	7,261	4,536	18,90,613	34,507	1,72,192	1,961

##Kharif 2023 Yield based claims yet not finalized; Rabi 2023-24 Claims Data yet to be initiated;

\*Rabi 2022-23 claim calculations not yet finalized for Andhra Pradesh;

\*\*Kharif 2024 data finalization is under progress.

# Chapter 12

## AGRICULTURAL CREDIT

### 12.1 Overview

Providing adequate credit support to all farmers, especially small and marginal farmers and vulnerable sections of society, is crucial for adopting modern technology and improved agricultural practices to boost production and productivity. Recognizing this, the GoI has consistently worked to ensure the availability of timely, affordable, and sufficient credit, aiming to reduce reliance on non-institutional sources and promote greater agricultural investment. The Credit Division of the Department of Agriculture and Farmers' Welfare has the mandate of catering to the credit needs of the farmers in India. The division administers the Kisan Credit Card- Modified Interest Subvention Scheme (KCC-MISS). The division is also involved in the administration of the AgriSURE fund.

### 12.2 Kisan Credit Card Scheme (KCC)

The Government of India introduced the Kisan

Credit Card (KCC) as an innovative credit delivery mechanism to enable the farmers to meet their short-term working capital requirements in a timely and hassle-free manner in 1998 which has been highly instrumental in enhancing flow of working capital to agriculture and allied sectors. As of March 31, 2024, the country has 7.75 crores operational KCC accounts with a loan outstanding of Rs. 9.81 Lakh crores. KCC was further extended to meet the working capital needs of fisheries and animal husbandry in 2018-19, along with the enhancement of the limit for collateral-free loans to ₹1.6 Lakh. As of March 31st, 2024, 3.49 Lakh KCC and 40.07 Lakh KCC were issued to Fisheries and animal husbandry activities, respectively. The year wise progress of KCC operative accounts and amount outstanding in operative accounts is depicted in figure 1. The number of operative accounts and amount outstanding in the accounts grew at 5.58% and 10.85% respectively from 2022-23 to 2023-24.

Figure 1: Year wise progress in KCC operative accounts and amount outstanding



Source: DFS

\*As on 30.09.2024

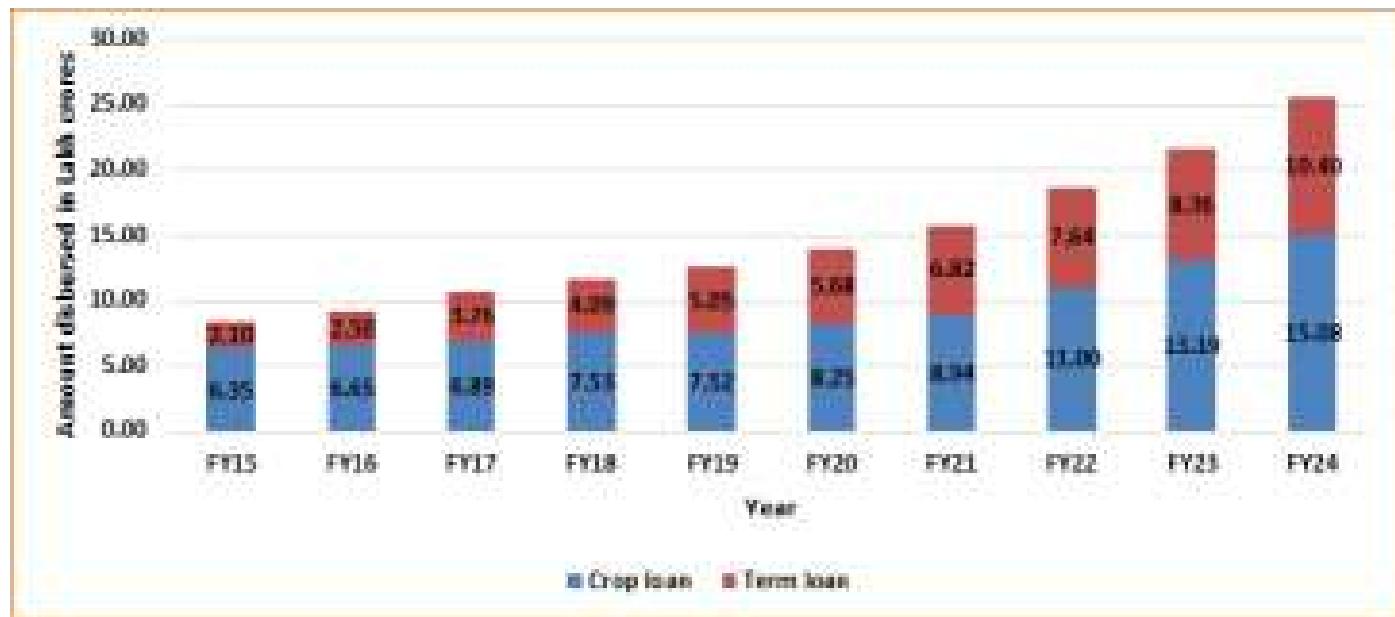
## 12.3 Modified Interest Subvention Scheme

The Modified Interest Subvention Scheme (MISS), a Central Sector Scheme, 100% funded by GoI, was launched in the year 2006-07 with a view to provide short term Agri-loans availed by farmers through KCC for their working capital requirements at concessional interest rate. The MISS provides upfront Interest Subvention (IS) of 1.5% per annum to financial institutions on use of their own resources used for lending short term crop loans up to Rs.3.00 lakhs per farmer, provided that the lending institutions make short-term credit available at 7% per annum to farmers. Additionally, 3% Prompt Repayment Incentive (PRI) is provided to farmers who repay on time, effectively bringing down the rate of interest to 4% per annum. During the period from 2014-15 to 2024-25 (as on February, 2025), the GoI has provided over Rs. 1,60,446.88 crores as subsidy to farmers through the MISS averaging around 14,500 crores per year, which is a demand driven product and the release of funds depends on the demand for crop loans from the ground level. Staring from FY 2024-25, the claim

processing has been digitized through the Kisan Rin Portal (KRP) developed by the DA&FW for faster and efficient capturing and settlement of MISS claims. For the FY 2024-25, as on February, 2025, Rs. 15773.15 crores have been processed through the KRP.

The KCC-MISS plays a crucial role in enhancing the Ground Level Credit (GLC) to Agriculture. The Ground level credit (GLC) to agriculture includes both short term and long term credit has also shown impressive growth with a CAGR of 12.98% over the last decade from 2014-15 to 2024-25, raising from Rs. 8.45 lakh crores in 2014-15 to Rs. 25.49 lakh crores in 2023-24. The year of year growth from 2022-23 to 2023-24 has been 18.28%. The growth in GLC over the years is provided at figure 2. Within this, the share of credit disbursed to small and marginal farmers has significantly increased from Rs. 3.47 lakh crores (41%) to Rs.14.39 lakh crores (57%) during the period from 2014-15 to 2023-24. A 19.82% Year on Year growth was registered in credit extended to small and marginal farmers from 2022-23 to 2023-24.

**Figure 2: Growth in GLC (Crop loans and Term loans over the years)**



Source: ENSURE portal, NABARD

## 12.4 AgriSURE Fund

Along with equipping farmers with affordable access to inputs through institutional credit mechanism, access to low-cost innovation, is also a cornerstone of modern agriculture, driving both productivity and profitability. By embracing affordable and accessible technological advancements, farmers can transition away from traditional, less efficient methods. Startups play a pivotal role in this transformation, developing and disseminating innovative solutions that empower farmers and enhance agricultural sustainability. Hence it is inevitable that the impactful startups are nurtured and provided with the support that is deemed essential for them to serve the farming community. The GoI in collaboration with NABARD, initiated the AgriSURE (Agri Fund for Start-ups & Rural Enterprises) Fund to support startups that work in agriculture and rural development to cater to the same. The AgriSURE is a blended capital fund with a corpus of Rs. 750 crores which supports startups through investing directly and through Funds of Funds and is expected to support more than 85 startups with maximum ticket size of Rs.25 crores in the next ten years. A detailed description of AgriSURE is provided below:

The AgriSURE Fund's unique model relies on blended capital, combining resources from the Government of India (Rs. 250 crores), NABARD (Rs. 250 crores), and Rs. 250 crores from private investors, banks, and insurance companies. With a total corpus of Rs. 750 crores under category -II, Alternative Investment Fund (AIF), the fund is designed to unlock the potential of agritech, food processing, animal husbandry, fisheries, biotechnology, waste management, renewable energy, and supply chain management, while attracting private investment into agri startups.

The Fund operates through two key schemes, tailored to meet the needs of early-stage startups and broader investments:

- i. **Direct Funding Scheme:** With a corpus of Rs. 300 crores, this scheme focuses on startups tackling critical agricultural challenges. It provides equity investments of

up to Rs. 25 crores per startup, enabling innovators to scale their businesses and amplify their impact.

- ii. **Fund of Funds (FoF) Scheme:** This scheme, with Rs. 450 crores, channels investments into SEBI-registered Category I and II AIFs (Alternative Investment Funds), which in turn support agriculture and allied sectors. Each AIF can receive up to 5% of its corpus or Rs. 25 crores, whichever is lower, ensuring capital flows into high-potential ventures.

AgriSURE is not just about financial support but about creating a robust ecosystem for agricultural innovation. By combining funding with strategic backing, the fund aims to strengthen agricultural value chains, improve productivity, generate employment, and promote technology-driven solutions to longstanding challenges. The key focus is empowering rural and urban youth, especially those with technical expertise, to become leaders in sustainable agricultural practices.

The AgriSURE Fund's objectives extend beyond investment. It seeks to foster a culture of innovation, enhance investment absorption, and inspire others to join the agricultural startup movement. By blending public and private sector resources, AgriSURE is helping create an agriculture sector that is inclusive, resilient, and sustainable for future generations.

NABVENTURES Ltd., a subsidiary of NABARD, manages the fund, ensuring compliance with SEBI regulations and precise allocation of resources. By aligning the interests of the government, financial institutions, and private investors, the AgriSURE Fund is positioning India's agricultural sector to lead on the global stage.

## 12.5 Kisan Rin Portal: Bridging Gaps and Empowering India's Agricultural Ecosystem

In India's rural heartland, where agriculture is not just a livelihood but a way of life, access to timely and affordable credit has always been a major hurdle for farmers. Until recently, they faced procedural delays and manual processes that hindered their ability to access crucial financial support. This scenario is

# Department of Agriculture & Farmers Welfare

changing with the launch of the Kisan Rin Portal (KRP), a transformative digital platform aimed at revolutionizing agricultural credit systems across the country.

Launched on September 19, 2023, by the Government of India, the KRP addresses key challenges in the Modified Interest Subvention-Kisan Credit Card (MISS-KCC) scheme. Previously, banks had to submit claims for Interest Subvention (IS) and Prompt Repayment Incentive (PRI) manually to the Reserve Bank of India (RBI) and NABARD, leading to significant delays and inefficiencies. The Kisan Rin Portal digitizes this process, ensuring that farmers and lending institutions benefit from quicker, seamless transactions, improving access to credit for agricultural needs.

## Empowering Farmers with Seamless Access to Credit

For farmers, the Kisan Rin Portal is a game-changer. The access to financial support will be reduced to minimum. The portal simplifies the process, enabling access to low-cost credit not only for traditional cropping activities but also for dairy, poultry, fisheries, and beekeeping. This ensures that every farmer, whether in remote rural areas or urban pockets, can obtain the credit they need to grow and sustain their ventures. By reducing the delays associated with manual claims, farmers are empowered to make timely decisions, improving productivity and livelihoods.

## Benefiting Financial Institutions: Banks and Cooperatives

Banks, including Rural Regional Banks (RRBs), Cooperative Banks, and Scheduled Commercial Banks (SCBs), are at the heart of the Kisan Rin Portal's success. Previously, these institutions struggled with slow, manual processes that often hampered their ability to serve farmers effectively. With the help of the portal, banks can now submit digital claims in real time, streamlining the entire process. This not only improves efficiency but also helps banks track and manage claims more effectively. By facilitating prompt disbursal of benefits, the KRP strengthens the financial health of

these institutions, helping them extend support to farmers efficiently.

Through the portal, Primary Agricultural Societies (PACS) and District Central Cooperative Banks (DCCBs) at the village level submit claims to State Cooperative Banks (StCBs), which are forwarded to NABARD and then to the Government of India. Public and private sector banks submit their claims directly to the RBI, which then forwards them to the Government of India. This digital transformation ensures that data is handled accurately and swiftly, improving financial inclusion by targeting specific gender and social categories for assistance.

## Enhancing Government Efforts and Supporting Policy Initiatives

The Kisan Rin Portal is not just an administrative tool; it is a catalyst for change within the Department of Agriculture and Farmers Welfare (DA&FW). By integrating the portal with ongoing government initiatives like PM Kisan, PMFBY, and the Viksit Bharat Sankalp Yatra, it plays a crucial role in improving efficiency and transparency in the agricultural credit system. The integration with UIDAI and PM Kisan databases helps ensure data accuracy, reducing fraud and ensuring that subsidies and incentives are delivered to the right beneficiaries.

Through these integrations, the Kisan Rin Portal supports the financial inclusion agenda of the Government of India, ensuring that marginalized groups, including Particularly Vulnerable Tribal Groups (PVTGs), can access the benefits of agricultural credit. Moreover, it addresses the challenge of duplicate beneficiaries, helping to streamline processes and make government programs more effective.

## Reaching the Grassroots: Training and Support

As on February 3, the Kisan Rin Portal's impact extends to over 449 banks across the country, with 1.89 lakh branches actively involved in processing claims. By bringing together rural and urban banking branches, the portal enhances efficiency and coverage. The Department of Agriculture has trained 630 master trainers, who in turn ensure that

bank employees are equipped to use the platform effectively. Regular support via video calls, voice calls, and a Learning Management System (LMS) further empowers banking personnel, making them proficient in using the portal to assist farmers.

### **A Future of Digital Integration: Expanding the Kisan Rin Ecosystem**

As the Kisan Rin Portal matures, its vision expands into a comprehensive ecosystem. Future integrations with the Public Financial Management System (PFMS) will enable Direct Benefit Transfer (DBT) of the Prompt Repayment Incentive (PRI) directly to farmers. This ensures that financial assistance reaches farmers quickly, enhancing the overall impact of the portal.

One of the most notable advancements is the forthcoming integration with AgriStack, the Bharat Pasudhan Livestock Data Stack, and the National Fisheries Digital Platform, creating a Unified Agri Credit Stack. This initiative will offer farmers one-stop access to agricultural credit across multiple sectors, including crops, livestock, and fisheries, thereby promoting financial inclusion and facilitating easier access to essential resources.

In addition, a mobile app is being developed to reach farmers who are currently not covered under the KCC-MISS scheme. With a facilitator model involving Krishi Sakhis, Common Service Centres (CSCs), and Banking Correspondents (BCs), the app will help

ensure that all eligible farmers can access subsidized agricultural credit.

### **Current Success and Achievements**

Since its launch, the Kisan Rin Portal has already made significant strides. By February 3, 2025, it had processed claims of worth ₹15,773.15 crores including Interest Subvention (IS) and Prompt Repayment Incentive (PRI), with another ₹6,826.85 crores in the pipeline. KRP has helped map 5.99 crore farmers that are currently getting benefitted under the KCC-MISS scheme. The KRP's integration with initiatives like the Ghar Ghar KCC Abhiyan and the Viksit Bharat Sankalp Yatra has been instrumental in expanding the reach of agricultural credit, ensuring that all farmers, especially marginalized groups receive their due share.

### **Conclusion: A New Era for Agricultural Finance**

The Kisan Rin Portal is more than just a platform for disbursing agricultural credit. It is the backbone of a modernized agricultural finance system that aims to empower farmers, banks, and government policymakers alike. By digitizing the claims process and enabling faster, more efficient transactions, this initiative establishes a mutually beneficial outcome for all stakeholders involved. As the portal evolves and integrates with other digital initiatives, it will play a central role in transforming India's agricultural landscape, ensuring sustainable growth for its farmers and contributing to the nation's economic prosperity.

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# Chapter 13

## AGRICULTURAL MARKETING

### 13.1. Overview

The Government has been playing a pivotal role in developing Agriculture Marketing system in the country. Agricultural Marketing Division of Department of Agriculture & Farmers' Welfare (DA&FW) is entrusted to look after a gamut of issues relating to agricultural marketing, starting from conceptualization and formulation of farmers oriented policies and programmes to effective monitoring thereof for proper and efficient implementation.

### 13.2 Major Schemes

Major schemes of Agri. Marketing Division consist of Integrated Scheme for Agricultural Marketing (ISAM) and Central Sector Scheme for Formation & Promotion of new 10,000 FPOs.

ISAM consists of 05 sub-schemes viz. Agricultural Marketing Infrastructure (AMI), National Agriculture Market (e-NAM), Marketing Research and Information Network (MRIN), Strengthening of Agmark Grading Facilities (SAGF) & CCS-National Institute of Agricultural Marketing (CCS NIAM).

### 13.3 Implementation structures and stakeholders

The sub schemes under ISAM namely Agricultural Marketing Infrastructure (AMI), Marketing Research and Information Network (MRIN) and Strengthening of Agmark Grading Facilities (SAGF) is implemented by the Directorate of Marketing & Inspection (DMI), an attached office of Department of Agriculture and farmers welfare. Small Farmers Agri- business Consortium (SFAC) implements the sub scheme of e-NAM. CCS National Institute of Agricultural Marketing (CCS-NIAM), provides training, research and consultancy in agri-marketing sector.

### 13.4 Integrated Scheme for Agricultural Marketing (ISAM):

#### 13.4.1 Agricultural Marketing Infrastructure (AMI):

To develop Agricultural Marketing Infrastructure including storage infrastructure, Ministry of Agriculture & Farmers Welfare is implementing capital investment subsidy sub-scheme "Agricultural Marketing Infrastructure (AMI)" of Integrated Scheme for Agricultural Marketing (ISAM). The erstwhile two schemes viz (i) Grameen Bhandaran Yojana (GBY) implemented since 01.04.2001, and (ii) Scheme for Strengthening/ Development of Agricultural Marketing Infrastructure, Grading & Standardization (AMIGS) implemented since 20.10.2004 have been subsumed into one scheme known as Agricultural Marketing Infrastructure (AMI) w.e.f. 01.04.2014 and continued/ extended till 31st March, 2026, with the following objectives:

- i. To develop marketing infrastructure to effectively handle and manage marketable surpluses of agricultural and allied produce including horticulture, livestock, poultry, fishery, bamboo, minor forest produce and such like produce supportive to enhance farmers' income.
- ii. To promote innovative and latest technologies in post-harvest and agricultural marketing infrastructure.
- iii. To develop alternative & competitive marketing channels for agricultural and allied produce through incentivizing private and cooperative sectors to make investments there for.
- iv. To benefit the farmers individually and collectively through FPOs from farm level processing and marketing of processed produce along with promotion of small size processing units.
- v. To promote creation of scientific storage capacity for storing farm produce, processed

- farm produce and agricultural inputs etc. to reduce post-harvest & handling losses, promote pledge financing and market access.
- vi. To incentivize developing and upgrading of Gramin Haats as GrAMs to make better farmer-consumer market linkages and also to assist in integration of GrAMs with e- NAM portal so as to improve transparency in trading and better price discovery.
- vii. To provide infrastructure facilities for grading, standardization and quality certification of agricultural and allied produce with the objectives of (a) ensuring produce quality based value realization to farmers, and (b) promoting pledge financing, e-NWRS and futures trading.
- viii. To promote Integrated Value Chains through minimal processing/value addition to make the produce more marketable, which includes washing, sorting, cleaning, grading, waxing, ripening, packaging, labeling etc., wherein the product form is not changed.
- ix. To undertake publicity and awareness campaign among the stakeholders including farmers, agri.preneurs, market functionaries of sub-scheme and on other various aspects and functions of agricultural marketing including grading, standardization, quality certification, regulation, reforms , e-trading, promoting farmers facilitation centre for market information & intelligence by FPOs etc.

### **Brief of the scheme**

- i. AMI sub scheme is a capital investment, open ended, demand driven & back ended capital subsidy scheme, under the AMI sub-scheme, there are two components: (i) Storage Infrastructure, and (ii) Marketing Infrastructure other than storage. The main objective of the scheme is to promote development of agricultural marketing infrastructure including storage infrastructure in the country. The scheme is meant for holistic development of agricultural value chain critically focusing

each linkage of post-harvest eligible primary, secondary & tertiary processing.

- ii. Channelizing Agencies : The AMI Scheme is channelizing through (i) NABARD – Individuals, Group of farmers/ growers, FPOs/FPCs, Partnership/ Proprietary firms, Companies, Non-Government Organizations (NGOs), Self Help Groups(SHGs), etc. (ii) NCDC – Cooperatives (iii) DA&FW – Own funded State agency projects, subject to have undertaken reforms in their respective APMC Acts to make provision for (i) Direct Marketing (ii) E-trading (iii) Unified Single trading license valid across the State/UT (iv) Single point levy of market fee
- iii. The provisions with admissible rate of subsidy, subsidy pattern etc. under revised operational guidelines of the scheme are as follows:

### **Eligible Beneficiaries under the Scheme:**

- i. Individuals, Group of farmers / growers, FPOs/ FPCs registered under respective companies Act/cooperatives societies Act/ societies registration Act (with minimum 50 number of farmer members); Partnership/ Proprietary firms, Companies, Corporations; Non-Government Organization (NGO), Self Help Group (SHG); Cooperatives, Cooperative Marketing Federation; Autonomous Bodies of the Government, Local Bodies, Panchayat, State agencies including State Government Departments and autonomous organization / State owned corporations such as Agricultural Produce Market Committees & Marketing Boards, State Warehousing Corporations, State Civil Supplies Corporations etc.
- ii. Subsidy pattern under the Scheme including Women farmers and entrepreneurs are as follows:
- iii. AMI Scheme is a back ended capital subsidy scheme in which the rate of subsidy varies from 25% to 33.33% based on the category of eligible beneficiary and provided on the capital cost of the project.

# Department of Agriculture & Farmers Welfare

The detail of subsidy pattern is as under:

Category	Rate of Subsidy (on capital cost)	Subsidy ceiling for Storage Infrastructure projects		
		50-1000 MT (in Rs./MT)	More than 1000 MT (in Rs./MT)	Maximum ceiling (Rs. Lakhs)
A) State agencies in NE States, Sikkim, UTs of And. & Nicobar & Lakshadweep Islands, hilly Areas & Projects of Coop. channelized through NCDC	33.33%	2666.40	2666.40	266.64
B) For all other categories of beneficiaries in NE States, Sikkim, UTs of And. & Nicobar & Lakshadweep Islands, hilly Areas & PACS	33.33%	2666.40	2666.40	133.32
In other Areas				
1. State agencies & Projects of Coop. channelized through NCDC	25 %	1750.00	1500.00	150.00
2. For Registered FPOs, Panchayats, Women, SC / ST entrepreneurs or their coops. /SHGs & PACS	33.33%	2333.00	2000.00	100.00
3. For all Other categories of beneficiaries	25 %	1750.00	1500.00	75.00

\* Hilly area is a place at an altitude of more than 1,000 meters above mean sea level

\*\* SC/ST Cooperatives to be certified by the concerned officer of the State Government

The detailed Operational Guidelines 2018 is available at <https://dmi.gov.in/Schemeamigs.aspx>

For Other than Storage Infrastructure: -

Category	Rate of Subsidy (on capital cost)	Maximum Subsidy Ceiling # (Rs. in lakhs)
A) North Eastern States, Sikkim, States of Uttarakhand, Himachal Pradesh, Jammu & Kashmir, UTs of Andaman & Nicobar and Lakshadweep Islands, hilly* and tribal areas	33.33%	30.00 Lakhs
B) In Other Areas		
1. For Registered FPOs, Panchayati Raj Institutions, Women farmers/ entrepreneurs, Scheduled Caste(SC)/ Scheduled Tribe (ST) entrepreneurs and their cooperatives**	33.33%	30.00 Lakhs
2. For all Other categories of beneficiaries	25%	25.00 Lakhs

\* Hilly area is a place at an altitude of more than 1,000 meters above mean sea level

\*\* SC/ST Cooperatives to be certified by the concerned officer of the State Government

The detailed Operational Guidelines 2018 is available at <https://dmi.gov.in/Schemeamigs.aspx>

**Achievement of AMI scheme:**

Since inception of scheme up to 31.12.2024, a total number of 48,698 storage infrastructure projects (Godowns), with storage capacity of 94.72 million MT were sanctioned under the scheme and subsidy of Rs. 4819.55 crore has been released and 24,240 other marketing infrastructure projects have also been sanctioned and subsidy of Rs. 2167.64 crore.

In order to promote women farmers and entrepreneurs including women Self Help Groups (SHGs), the assistance in the form of subsidy is provided to all the women beneficiaries at a higher rate i.e. @33.33% instead off 25%.

Progress of Women Beneficiaries assisted under AMI for Storage and Other than Storage Infrastructure since inception as on 31.12.2024 is given below:-

Storage Infrastructure Projects					Other than Storage Projects	
S.N.	Name of the State	No. of women beneficiaries	Capacity created (MT)	Subsidy Released (Rs. in Lakh)	No. of women beneficiaries	Subsidy Released (Rs. in Lakh)
1.	Andhra Pradesh	647	3073089.28	16202.98	86	651.95
2.	Assam	49	157781.22	1494.50	0	0.00
3.	Bihar	245	552214.146	1926.83	0	0.00
4.	Chhattisgarh	55	87638	967.11	11	191.78
5.	Goa	0	0	0.00	2	0.00
6.	Gujarat	1649	1693757	8969.70	109	1078.67
7.	Haryana	392	2446240	15686.07	31	272.48
	Himachal Pradesh					
8.	Pradesh	6	1173.83	49.70	0	0.00
9.	Jammu & K	1	5000	25.00	0	0.00
10.	Jharkhand	7	29046.304	124.57	0	0.00
11.	Karnataka	738	975419.54	4556.91	86	599.86
12.	Kerala	5	11013	51.93	25	207.10
13.	Madhya Pradesh	4071	17318699	82394.16	212	4488.62
14.	Maharashtra	574	1779275.795	444 4.30	185	1777.21
15.	Meghalaya	2	5155.28	34.36	0	0.00
16.	Odisha	96	243221	1187.66	1	0.00
17.	Punjab	188	1446136.75	10221.46	7	60.00
18.	Rajasthan	399	1335544.75	6309.17	88	1492.07
19.	Tamil Nadu	129	578674.29	2866.15	52	133.96
20.	Telangana	308	1604651.59	9171.20	122	798.98
21.	Uttar Pradesh	159	793501.397	4807.02	2	15.00
22.	Uttarakhand	129	452541.539	2129.80	0	0.00
23.	West Bengal	32	68611.552	350.85	0	0.00
	<b>Total</b>	9881	34658385.26	173971.41	1019	11767.67

# Department of Agriculture & Farmers Welfare

## Progress of Storage Infrastructure assisted under AMI as on 31.12.2024 (since inception i.e. 01.04.2001)

(Rs. in lakh)

S. No.	State	No. of Projects Sanctioned	Capacity Sanctioned (MT)	Subsidy Released
1	Andhra Pradesh	1547	6138520	31935.42
2	Arunachal Pradesh	1	945	6.30
3	Assam	364	1127566	7415.50
4	Bihar	1247	1187975	5639.96
5	Chhattisgarh	1401	2304464	8920.34
6	Goa	1	299	0.94
7	Gujarat	12383	6014002	35638.32
8	Haryana	2345	7824890	45134.22
9	Himachal Pradesh	88	30826	180.77
10	Jammu & Kashmir	17	98027	801.45
11	Jharkhand	243	223327	1076.33
12	Karnataka	5054	4458936	21816.50
13	Kerala	198	113911	640.57
14	Madhya Pradesh	8412	28814930	173965.75
15	Maharashtra	4069	8092474	35361.46
16	Meghalaya	17	26012	253.41
17	Mizoram	4	705	6.45
18	Nagaland	36	26887	354.38
19	Odisha	718	1080646	4393.69
20	Punjab	1829	7111635	25362.08
21	Rajasthan	1890	3782495	15031.18
22	Tamilnadu	1234	1503895	5457.37
23	Telangana	1360	6105082	32333.87
24	Tripura	5	28764	296.61
25	Uttar Pradesh	1275	5965098	17614.94
26	Uttarakhand	334	924083	6789.76
27	West Bengal	2626	17373 43	5528.42
	<b>Total</b>	<b>48698</b>	<b>94723737</b>	<b>481955.99</b>

**Progress of Other than Storage Infrastructure assisted under AMI as on 31.12.2024 (since inception i.e. 20.10.2004)**

(Rs. in lakh)

S. No.	State	No. of Projects Sanctioned	Subsidy released
1	Andhra Pradesh	564	8585.50
2	Arunachal Pradesh	1	0.00
3	Assam	13	588.52
4	Bihar	0	0.00
5	Chhattisgarh	366	6972.88
6	Delhi	1	30.41
7	Goa	1	50.00
8	Gujarat	12322	35141.52
9	Haryana	186	2424.06
10	Himachal Pradesh	63	1643.04
11	Jharkhand	430	277.94
12	Karnataka	954	10025.06
13	Kerala	451	6373.11
14	Madhya Pradesh	1400	36138.96
15	Maharashtra	1722	46666.30
16	Manipur	17	0.00
17	Mizoram	2	4.94
18	Nagaland	72	1422.33
19	Odisha	27	915.82
20	Punjab	2109	27095.08
21	Rajasthan	500	8881.10
22	Sikkim	1	15.52
23	Tamil Nadu	2050	5530.78
24	Telangana	961	15098.20
25	Uttar Pradesh	20	1018.81
26	Uttarakhand	7	1864.20
	<b>Total</b>	<b>24240</b>	<b>216764.08</b>

#### **13.4.2 Marketing Research & Information Network (MRIN)**

Marketing Research and Information Network MRIN sub scheme of ISAM under the umbrella scheme of Krishi Unnati Yojana aims to links important agricultural markets spread all over the country and the State Agriculture Marketing Boards and Directorates through a dedicated portal (<https://agmarknet.gov.in/>)

#### **Agricultural Marketing Information Network**

(AGMARKNET), since March, 2000. The project is being executed with the technical support of National Informatics Centre (NIC). Presently, about 3900 major markets in the country are onboarded on this platform and more than 300 commodities and 2000 varieties are covered on the database. This is one of the largest Market Information System in the world and having richest data base available.



## Objectives:

- To establish a nation-wide information network for speedy collection and dissemination of market information.
- To facilitate collection and dissemination of information for better price realization by the farmers.
- To sensitize and orient farmers to respond to new challenges in agricultural marketing by using Information and Communication Technology (ICT).
- To improve efficiency in agricultural marketing through regular training and extension for reaching region-specific farmers in their own language.
- Linking of all important agricultural markets of the country.
- Daily prices and arrivals of more than 300 commodities and 2000 varieties are reported on the portal.

## Assistance under the Scheme:

- Provision of financial support for organizing training, research, awareness and sensitization campaign to state govt. organizations.
- Provision of financial incentive @ Rs.1000/- per month to the marketing personnel of the

market for uploading data in the portal for more than 20 days in a month and

- Provision of financial incentive @ Rs.1000/- per month to the State level monitoring officials is also provisioned.

## Benefits:

The main users of AGMARKNET website are Farmers, Traders, Research Institutes, Exporters, Commodity Boards/Various Government Departments(DoFPD), Niti Ayog, , ECO- STAT. The linkages are also provided to Kisan, Krishi World, Indian Agro-net, Agri watch, Indian Dairy Industry, Agro-India, Forwards Markets Commission, National Multi Exchange of India Limited and NCDEX through the portal to form a close user-group. Information linkages were provided to UPAg portal, Kisan Suvidha , UMANG mobile app, nNAM mobile app, eNAM- portal, BITCOE, IKSL, a Cooperative Sector company, has been involved in disseminating the price information to a large network of farmers cooperatives, Public sector banks, commodity exchanges, newspapers, etc. are using the site for publishing the data on prices of agricultural commodities apart from other international organizations. Daily Mandi Prices data are shared through api with open data portal(<https://data.gov.in>) and intendent users and researchers are

taking daily prices data through API from the open data portal.

Agmarknet data set as a benchmark for referral price for disposal of pulses the states under PSS for calculation of issue price by the DA&FW. The data are also used as calculation of dynamic reserve prices for PSF under PSF scheme. Apart from this several stakeholders like farmers, traders, policy holders, researchers and others refer the historical data of agricultural and allied commodity market arrival and price data as an advisory service free of cost which is on public domain.

Apart from the price and arrival information, AGMARKNET also provides with in-depth research studies, post-harvest market profile for major commodities, wholesale markets details, performance monitoring system, CODEX Standards of agricultural commodities, etc. E-mail addresses of APMC Secretaries are progressively being published for public access for facilitating direct interaction.



### Available Information on the Portal

#### I. Queries on Prices & Arrivals.

- Commodity-wise, Market-wise Daily Report
- Commodity-wise, Market-wise Daily Report (weighted average)
- Market-wise, Commodity-wise Daily Report
- Market-wise Daily Report for Specific Commodity
- Commodity Prices during last week
- Market-wise Prices during last week
- Commodity Transactions Below MSP

- Commodity Transactions Above MSP
- Commodity-wise, Market-wise Daily Report for a State
- Commodity-wise, Market-wise Daily Report for a State (Market Category wise)
- Date wise Prices for Specified commodity
- Market-wise, Commodity-wise Daily Report for a State

#### II. Various Statistical Analytical Reports.

##### 1. State wise Reports

- State wise Wholesale Prices Monthly Analysis
- State wise, Variety wise Prices Monthly Analysis
- State wise Wholesale Prices Weekly Analysis
- State wise, Variety wise Prices Weekly Analysis
- Statistical and Analytical Reports

##### 2. Districtwise Reports

- District wise Wholesale Prices Monthly Analysis
- District wise, Variety wise Prices Monthly Analysis
- Districtwise Wholesale Prices Weekly Analysis
- District wise, Variety wise Prices Weekly Analysis

##### 3. Marketwise Reports

- Market wise Wholesale Arrivals Monthly Analysis
- Marketwise Wholesale Prices Monthly Analysis
- Market wise, Variety wise Prices Monthly Analysis
- Market wise Wholesale Arrivals Weekly Analysis
- Market wise Wholesale Prices Weekly Analysis
- Market wise, Variety wise Prices Weekly Analysis

##### 4. Marketwise Reports (All Districts)

- Market wise Wholesale Arrivals Monthly Analysis
- Marketwise Wholesale Prices Monthly Analysis
- Market Wise Wholesale Arrivals Weekly Analysis

# Department of Agriculture & Farmers Welfare

- Market wise Wholesale Prices Weekly Analysis
- 5. Daily Market Arrivals and Prices Trends for specified period**
- For Top Five states in terms of arrivals
  - For States in terms of arrivals -All
  - For Metros
  - State wise total arrivals
- 6. Daily Market Prices Trends for specified period**
- For Top Five states in terms of arrivals

- For Top Five states in terms of arrivals - All
- For Metros for a specified date
- For Metros for specified period

## Dissemination of Mandi Information:

Latest mandi price information is disseminated from the Agmarknet portal through Agmarknet portal (<https://agmarknet.gov.in>), UPAg portal, Kisan Suvidha App, UMANG App, e-NAM app, DD Kisan Channel, Kisan Call Center etc.

## State wise coverage of markets onboarded on Agmarknet Portal

### State wise coverage of markets onboarded on Agmarknet Portal

S.No.	Name of the State/UT	Number of Market Nodes(APMC/Sub Market yards) Covered on Agmarknet Portal
1	Andaman and Nicobar	4
2	Andhra Pradesh	195
3	Arunachal Pradesh	15
4	Assam	83
5	Bihar	99
6	Chandigarh	1
7	Chhattisgarh	189
8	Goa	8
9	Gujarat	304
10	Haryana	128
11	Himachal Pradesh	49
12	Jammu and Kashmir	25
13	Jharkhand	28
14	Karnataka	162
15	Kerala	215
16	Lakshadweep	0
17	Madhya Pradesh	440
18	Maharashtra	433
19	Manipur	5
20	Meghalaya	19
21	Mizoram	3
22	Nagaland	19
23	NCT of Delhi	7
24	Odisha	104

S.No.	Name of the State/UT	Number of Market Nodes (APMC/Sub Market yards) Covered on Agmarknet Portal
25	Pondicherry	4
26	Punjab	240
27	Rajasthan	206
28	Sikkim	7
29	Tamil Nadu	387
30	Telangana	167
31	Tripura	32
32	Uttar Pradesh	242
33	Uttarakhand	22
34	West Bengal	76
<b>Total</b>	<b>All India</b>	<b>3918</b>

API integration of state marketing portals of Maharashtra, Karnataka, Madhya Pradesh, Bihar, Tamilnadu, Meghalaya and Assam have been completed with Agmarknet portal.

Agmarknet net portal under the MRIN scheme is under revamping process for capturing of mandi prices and arrival data in the Digitisation process at the APMC level.

#### **13.4.3. Strengthening of Agmark Grading Facilities (SAGF):**

Quality Control Division (QC Division) of Directorate of Marketing & Inspection (DMI) implements Agricultural Produce (Grading and Marking) Act, 1937 (as amended up to 1986) and other provisions as mandated by Food Safety Standards Regulations 2011 under Food Safety and Standards Act 2006. The agricultural produce are certified under AGMARK if they conform to grade standards under Agricultural Produce (Grading Marking) Act, 1937 (as amended upto 2023), General Grading and Marking Rules, 1988 (as amended up to 2024) and specific commodity Rules notified by DMI, Department of Agriculture and Farmers Welfare, Ministry of Agriculture & Farmers Welfare. These standards differentiate between quality and 2-3 grades are prescribed for each commodity. Agmark standards for 248 agricultural commodities have been notified and granted approval for 3697

Certificate of Authorization (CA), 637 Printing Presses, 98 State Agmark Grading Laboratories/ SGLs, 71 Private commercial laboratories for domestic trade and 27 Private commercial laboratories for export under Agmark under the provisions of the APGM Act 1937 with an aim to provide premium quality products to the consumers, graded raw materials to processor/ manufacturers/ packers and remunerative prices to the farmers. These 248 Agri- commodities includes Food grains & allied products, Fruits & Vegetables, Spices & Condiments, Edible Nuts, Oil Seeds, Vegetable Oils & Fats, Oil Cakes, Fiber Crops, Dairy & Poultry products & other products, like Honey, Dates, Lac, Tobacco, Jaggery, Tamarind, Tapioca Sago, Amla Dried, Forest produce, etc

**Export:** European Union has notified vide commission regulation No 1580/2007 dated 21 December 2007, Agricultural Marketing Adviser to the Government of India as Official Authority and DMI as Inspection Body for checks on conformity of fresh fruits and vegetables for export to Europe from India. In line to that Directorate General of Foreign Trade (DGFT) has notified DMI as inspection and certification body for exports of fruits and vegetables to EU countries. DMI has approved 27 private commercial labs to issue Certificate of Agmark Grading (CAG) for fruits and vegetables (Green chilies, Curry leaves, Okra, Grapes,

Pomegranate and Onions etc.) for export.

**Implementation & Monitoring:** The Agmark certification scheme is implemented by 11 Regional Offices, 27 Sub Offices, 11 Regional Agmark Laboratories (RALs) and a Central Agmark Laboratory (CAL). All the Agmark Laboratories have been accredited with the National Accreditation Board for testing and Calibration Laboratories (NABL) following International Standard ISO 17025. DMI laboratories are equipped with modern sophisticated instruments like GC-FID, GC-MSMS, AAS, HPLC, UV Visible Spectrophotometer, Tintometer, Refractometer etc. to ensure the food safety requirements as specified under the Food Safety and Standards (Contaminants, Toxins and Residues) Regulations, 2011, Food Safety and Standards (Food Product Standards and Food Additives) Regulations, 2011, and other regulations under the provisions of Food Safety and Standards Act, 2006 (34 of 2006).

## **Agmark Quality Control Management System (AQCMS):**

The application/approval processes related to Agmark certification was envisaged to make online and user friendly from offline mode. The software requirement specification (SRS) was prepared to bring physical processes to online mode with several modules. While developing the online software, the application forms were appropriately reoriented to make online filing process simple, fast, transparent, 24x7 and paperless with a facility to upload scanned /PDF documents. There is a provision of online receipt of fees and e-signing at relevant stages in new online application, launched on 27th September 2018 by the Hon'ble Minister of Agriculture and Farmers Welfare, Government of India, having three major modules:

- I. The Certification Management Module (for DMI)
- II. The Laboratory Management Module (For RAL and CAL)
- III. The CMS Module (to manage informational content)

Application/approval/renewal processes related to AGMARK certification of Certificate of Authorization

(Domestic & Export), Printing Presses and Private Commercial Laboratories (Domestic & Export) was envisaged to make online and user friendly from offline mode. Laboratory information Management System (LIMS) having Online submission of Sample details to Laboratory, Online Result Processing of Samples for AGMARK Gradation, Sample assist analytics for AGMARK Laboratory, Assist in harmonizing central AGMARK standards with International Standards, Carry out Research and Standardization work in Food and Agricultural Commodities. Under AQCMS Phase-II, Replica Auto Generation and Allocation, Advance Payment management Module, 15 Digit code, E code all other approval/renewal like export Lab, Addition/Deletion for Approval of Designated Persons for issue of CAG, Modification of Commodities in CA / Printing / Lab, etc. also have been incorporated.

Department for Promotion of Industry and Internal Trade (DPIIT) has sought on board of software of all the Ministries/Departments with NSWS. AQCMS portal of Directorate of Marketing and Inspection successfully integrated with National Single Window System (NSWS) portal of DPIIT, a portal which facilitates all approvals through a single window. Any individual, firm, Company or Association of individual who are in agriculture-based business could also register themselves through NSWS.

## **Extension and Statistics Division**

Extension and Statistics Division created wef from 1st August, 2023 at Head Office Faridabad is working with the objectives of Social Media, publication of Quarterly News letter, Bi-annual Agricultural Marketing Journal and Annual Statistical Bulletin. The works of the Division also includes structuring and extending the extension activities through Directorate of Marketing and Inspection field offices for participation in Farmers Centric Kisan Melas/Events/fairs including trade fairs organized by Universities, State Governments, KVKS and Other institutions etc., with the objective to create awareness and sensitization of the Schemes including flagship Ministry of the Schemes like FPOs and e NAM among the farmers/FPOs at the grass root level. During 2024-25, the Extension and

Statistics Division of the Directorate has conceptualized calendar of the Extension and Exhibition to conduct more than 119 events focusing Farmers and Consumers Centric Activities. Till December, 2024 the Directorate has participated in All India Farmers Fair and Agro-Industrial Exhibition also known as Krishi Kumbh organized by the G B Pant University of Agriculture and Technology during 4-7th October, 2024, Krishimela-24 organized by the University of Agricultural Sciences, Bangalore from 14th to 17th November, 2023 which witnessed the presence of more than lakhs of the gathering of farmers, apart from the participation in IITF, Delhi wef 14th to 27th November, 2024 and aspiring Odisha Agri-Excellence Exhibition 12 to 14 Dec 2024 in Baripada, Mayurbhanj Dist., Odisha along with other farmers focused events. In addition, the Division has celebrated National Farmers Day on 23rd December, 24 in all over the country though Regional/Sub Offices of the Directorate, demonstration/ awareness programmes for checking adulteration of food products by the Regional Agmark Laboratories (RALs) of Directorate. The Division has released its first Quarterly News Letter for the period October-December, 2023, Annual Statistical Bulletin 2022-23 . The Division has also released the Newsletter for the period July-September, 2024 and planning its Bi-annual Agricultural Marketing Journal in the month of March, 2024.

#### **13.4.4 CH. CHARAN SINGH NATIONAL INSTITUTE OF AGRICULTURAL MARKETING, (CCS NIAM), JAIPUR FOR THE YEAR 2023-24**

##### **Introduction**

Chaudhary Charan Singh National Institute of Agricultural Marketing (CCS NIAM) is an autonomous organization of the Ministry of Agriculture and Farmers' Welfare, Government of India. It was set up as a registered Society in 1988 to strengthen Agricultural Marketing in India and South East Asian Countries. The Institute is mandated to carry out academic activities i.e. Training, Research, Consultancy, Policy Advocacy, International Programs and Education in Agricultural Marketing.

##### **Training**

In 2024-25, 150 (Offline Training Programs, and Consultancy). Programs wise organized by the faculty and with the help of partner Institutes of CCS NIAM, covering 4,500 participants.

##### **Consultancy**

Consultancy Programs under WDRA: Nine One Day Farmers Awareness Programs (FAP) for the farmers, traders and Dal Mil Owners were organized in the states of Rajasthan and Gujarat. Total of 471 participants have attended these programs. Three days assaying training programs for the technical staff of warehouse. These programs were sponsored by Warehousing Development and Regulatory Authority (WDRA)

Consultancy Programs sponsored by Syngenta Foundation: In this FY 2024-25 a total of 70 programs were conducted under this category for the stakeholders and 2,158 participants have been trained in different parts of the country. The objective of the programme is to strengthen the Entrepreneurship skills of the rural youth of the country. These awareness programs were organized in the various state of India. This was funded by Syngenta Foundation. Two training programs were conducted to Tamil Nadu government officials. Sixty-Three participants were trained in the training programs.

##### **Education**

Post Graduate Diploma in Agri-Business Management (ABM) - CCS NIAM has one flagship program under the domain of education as a two-year residential Post Graduate Diploma in Management (Agri-Business Management) PGDM (ABM). The program is approved by AICTE and being run since 2001 with 100% placement. The program aims to train Agricultural and allied Sciences graduates in the field of Agri- Business to build techno-managerial competence among them. We have a strong global alumni base of 1000+ technocrats holding positions of national and international repute in various sectors like Agri Inputs, Banking and Micro-Finance, Food Processing, Consulting, Commodities, Rural

## **Department of Agriculture & Farmers Welfare**

Development, Agripreneurs etc. The PG program is running under self-finance mode wherein entire revenue is being generated from student's fee and accordingly entire budget is to be met from the fee collected from the students. The capacity of intake is 120 students per batch and admission intake is depending on the CAT score and individual performance in the Interview and Group discussion. Highest domestic package this year was 22.5 LPA (CTC) and the average package was 11.36 LPA approx. Also, the international package stands with 82 LPA (CTC). Placement demand has been emerging from a wide range of sectors, including Agri-input, Retail, Commodity, Banking, Consultancy, Sustainability, etc.

- This is two years full time Post Graduate Diploma in Management (Agribusiness Management).
- AICTE approved program intended to produce techno-managers for the agribusiness and food sector.
- The course curriculum consists of 36 core courses, 2 projects (SIP and Individual Project/Village visit), and 9 electives courses comprising a total of 118 credit load.
- The program is composed of agribusiness courses like Agricultural Input Marketing, Agri-Business Environment and Policy, Risk Management in Agribusiness, Agribusiness Project Management, Agri Supply Chain Management, etc., and core management subjects like Business Communications, Marketing Management, Financial Management, Strategic Management, etc.
- A constant endeavor is to give students exposure to real life problems through case-studies application of theories in practice, application of AI in agribusiness management.
- Constant industry interface is an integral part of PGDM (ABM).
- The Courses are delivered by faculty from reputed management institutes of the country and executives from leading agribusiness companies.

### **USP of the program**

- Two years residential program started in 2001.
- Approved by AICTE.
- Aims to develop Techno-managerial competence.
- Program delivered through 7 trimesters, 118 credits, 36 core courses, 2 projects and 9 elective courses.
- EXIM Bank merit Scholarship for meritorious students.
- 1000+ Alumni base serving agriculture value chain across the world
- Affordable fee structure-Rs. 9.00 Lakh for two years all inclusive (tuition fee, boarding and lodging, computer lab, library, caution money, and health insurance).
- 100% placement since inception.
- Guest Lecture series by industry professionals.
- Students come from diverse educational backgrounds and geographical diversity.
- Continuous industry interface.

### **Post Graduate Diploma in Innovation Entrepreneurship and Venture Capital- CCS**

NIAM offers a specialized two-year Post Graduate Diploma in Management – Innovation, Entrepreneurship & Venture Development (PGDM-IEV), aimed at fostering entrepreneurial talent and innovation-driven leadership. The program is AICTE-approved and aligns with the Government of India's vision to strengthen the startup ecosystem. It equips graduates with business acumen, innovation strategies, and entrepreneurial skills to develop scalable ventures and drive sustainable business solutions.

- The program follows a self-financed model, where revenue is generated through student fees, covering the operational budget. With an intake capacity of 30 students per batch, admission is based on academic qualifications, an entrance test, and personal interviews.
- Program Highlights:

- Dedicated Startup Incubation Support – Access to NIAM's incubation facilities, mentorship, seed funding opportunities, and industry connections.
- Hands-on Learning – Industry collaborations, live projects, and milestone-based venture development.
- Expert-Led Curriculum – Designed with inputs from IIMs, EDI Ahmedabad, and leading startup founders.
- Strong Entrepreneurship Outcomes – Graduates venture into agribusiness, fintech, sustainability, agritech, and consulting, with many launching their own start-ups.
- The program is creating a new generation of entrepreneurs, innovators, and venture leaders who are driving impact in diverse sectors, bridging the gap between agriculture, business, and technology.
- Aspirants willing to start their business/startup soon after completion of their formal education.

### **RKVY-RAFTAAR**

Innovation and Entrepreneurship Federation (IEF) of CCS NIAM (Section 8 Company) is running Innovation and Agri Entrepreneurship Programme under RKVY-RAFTAAR Project as Knowledge Partner to Ministry of Agriculture & Farmers Welfare, Govt. of India. Over the years, it has emerged as a leading force in fostering innovation and entrepreneurship within the agribusiness sector. The centre has proudly established itself as a "Friend of the Farmer," playing a pivotal role in shaping and nurturing the Agri-Startup ecosystem. Through its unwavering support, IEF of CCS NIAM has been promoting, mentoring, and helping agribusiness startups thrive, providing significant social and economic benefits to the farming community.

In addition to training and funding agri-startups, the centre has created a conducive environment for innovative agribusiness ideas to take root and grow into sustainable ventures.

### **Knowledge Partner**

The Innovation and Entrepreneurship Federation (IEF) of CCS NIAM, comprehensive handholding and incubation support to the RKVY-RAFTAAR Agri-Business Incubators (RABIs). These RABIs are situated across five states in India, namely: the Central Rice Research Institute, Cuttack Odisha; Sri Karan Narendra Agriculture University Jobner, Rajasthan; Indian Institute of Technology, Kharagpur West Bengal; and Bihar Agriculture University Sabour Bhagalpur, Bihar. IEF of CCS NIAM continues to play a critical role in nurturing and supporting agribusiness ventures in these regions.

Highlights: IEF of CCS NIAM as Knowledge Partner of Innovation and Agri Entrepreneurship Programme under RKVY – RAFTAAR Project of Ministry of Agriculture & Farmers Welfare, Govt. of India

- 800+ agri startups incubated
- 300+ startups recommended for grant-in-aid
- INR 39+ crores grant-in-aid
- INR 51.00 Crores external funding (angel / VC) raised by our startups
- 600+ innovative products & services commercialized
- 150+ IPR filed by our startups (Patent, Trademark, Copyright, etc.)

### **Indo-German Cooperation on Agriculture Market Development (AMD) project**

#### **Indo-German Agricultural Market Development (AMD) Project**

##### **Project Management Unit (PMU)**

The AMD Project core team was recruited and mobilised in July 2021. AMD project team consists of a Team Leader (International Position), Agribusiness Expert (national position), Project Assistant (national position) and three Field Executives (national positions). The AMD operational project office was fully established and equipped in NIAM since August 2021. The AMD project website has been designed, launched, and integrated to MoA&FW website. The project

# Department of Agriculture & Farmers Welfare

webpage can be accessed at <https://amd-india.net/where all the project progress updates are regularly posted>.

The AMD Project Management Unit (PMU) has been established, and thirteen meetings have been organized to steer the project progress on regular basis. The PMU meetings are chaired by Director (Marketing), DA&FW. A wide range of stakeholder consultation meetings and visits have been undertaken with the support of CCS NIAM and DMI. This has included meetings with other institutions involved with AMD including APEDA, Spice Board of India, and NIPHM. Regular state level meetings in

Rajasthan, Odisha and Uttar Pradesh have been organized and visits to selected APMC's and FPOs are being regularly done by the project staff to implement the project activities.

## Selection of Value Chains and Commodities in pilot regions

Based on the studies commissioned under the project and different stakeholders' consultations at national and state level, the project has selected 6 potential commodities for value chain development. The details of the state and potential commodity have been given in the table below.

#	State	Potential Commodity
1	Rajasthan	Cumin and Coriander
2	Uttar Pradesh	Mangoes and Green Chili
3	Odisha	Turmeric and Ginger

After the identification of commodities in the pilot regions, the project has selected 10 Farmers Producer Organizations (FPOs) to pilot its value chain development initiatives in three states. Export value chain studies and FPOs business plans have been developed. Around ninety-five FPOs members from the states of Rajasthan, Uttar Pradesh, and Odisha were trained on Good Agricultural Practices (GAP) with association of National Institute of Plant Health Management (NIPHM).

## Technical Discussions and Dialogues

The project, in association with the CCS National Institute of Agricultural Marketing (CCS NIAM) and Spice Board of India conducted its first technical webinar on "Best practices and challenges in spices exports" on 5th July, 2022 where around 40 participants participated to exchange their knowledge and information on spice trade. The webinar was attended by Spice Board of India, European Spice Association, Marketing Division GoI, private traders and exporters. Second technical discussions were carried out for discussing the best practices and challenges in fruits and vegetables exports during March 2023.

The project has also subsequently conducted the technical discussions on the following topics-

- Technical dialogue meeting on pesticide residue compliance for exports (16th May 23)
- Technical dialogue meeting on standards and certifications for EU export (17th May 23)
- Technical dialogue meeting on traceability mechanisms (18th May 23)
- Technical dialogue meeting on TRACES (29th May 2024)
- Technical dialogue meeting on Organic certification systems in India and Germany (3rd May 24)

These technical dialogue were carried out with participants from CCS NIAM (Moderation), APEDA, Spices Board, DMI, GLOBALG.A.P, NIPHM, The Federal Office of Consumer Protection and Food Safety (BVL), Ecocert, Rainforest Alliance, and AMD team.



Figure 1 Technical Dialogue between Indian and EU counterparts on TRACES

## Studies and Reports

The project had commissioned, completed, and published five studies during inception phase on the thematic areas of:

- I. *Commodities Export potential Assessments* (including specific herbs, spices, fruits, vegetables, cereals, pulses, oilseeds, organic products, medicinal & aromatic plants) to assess the supply and demand trends for EU markets.
- II. *State agriculture and markets profiling* of Uttar Pradesh, Rajasthan & Odisha to understand the current situation with agriculture marketing in each target State.
- III. *Learnings from FPOs engaged in exports* thorough case studies to identify key lessons learned, best practices and actionable recommendations.
- IV. *Assessment of digital innovations in the area of agriculture and market* to undertake targeted analysis of existing and potential agri-food market technological innovations, aimed at strengthening forward linkages for selected agri-food value chains. This includes consideration of AI tools, management of market data, application of GIS systems and related information services, block chain and e-business platforms and tools.

- V. *Repository of agriculture and markets development projects* in India and to identify and map existing projects in support of AMD, both nationally and regionally.

AMD project has commissioned and completed additional twelve studies, and the findings have been shared with the project PMU members. The studies primarily covered the thematic areas of

- a) EU market requirements for the AMD project selected commodities;
- b) Assessment of existing value chain for project commodities and recommending development of sustainable export-oriented value chains for the commodities;
- c) Diagnostic study to assess existing APMCs infrastructures and services to act as export-oriented service providers; and
- d) Assessment of the existing production systems, institutional capacities, marketing, and business models of the FPOs and later, develop viable export-oriented business plans (including traceability, certifications, and quality assurance systems) for up to 12 pilot FPOs in the three pilot states of the project.
- e) Probable profit analysis for farmers planning to enter export production systems.
- f) The study on the likely profitability of Indian

# Department of Agriculture & Farmers Welfare

- farmers planning to enter the export markets was completed in November 2023.
- g) Study on Navigating Challenges in Indian Organic Certification for a Sustainable in March 2024
  - h) Comprehensive Learning Report on the Export of Mangoes from India to EU Markets by Farmers Producer Companies July 2024
  - i) Comprehensive Learning Report on the Export of Spices from India to EU Markets by Farmers Producer Companies July 2024
  - j) DMI laboratories assessment to test organic food produce –July 2024
  - k) Gender participation in agri-value chain systems -Dec 2024
  - l) Scope of FPOs to access domestic market channels - Dec 2024

## **Training program for Farmer Producer Organizations (FPOs)**

Trainings for FPO members on GAP and quality assurance systems related to exports are being conducted at local level. Till date, project has completed 110 cluster level training programs with FPO members on the topics of Principles of Good

Agricultural Practices+IPM and Nutrient Management, Present use of active substances by farmers and EU approved active substance, quality specification and requirements for exports, and standard protocols for exports.

The project has conducted MRL testing of 30 AMD project commodities samples and all the spice samples and Mango samples have qualified for the EU food safety standards. The project further facilitated with the FPOs to plan for first trial shipments to EU countries.

The project also conducted separate training programs for FPOs in Odisha, Rajasthan and Uttar Pradesh on agri-export management systems to support the promising FPOs to enter the agri export operations.

The second phase of the cluster level training programs for the members of the FPOs started from May 2024. The second phase of the training program focused to reinforce the learnings of the first phase with the training participants. Till end of December 2024, 114 cluster level training programs for the FPO members have been organized. The details of the second phase of the training program at the cluster level for each province are listed below:

Odisha				
Thematic area	No of trainings	Male	Female	Total
Present use of Active Substances by Farmers and EU Approved Active Substance	9	189	50	239
Good Agricultural Practices	10	200	49	249
Integrated Pest Management	8	154	53	207
Integrated Nutrient Management	6	91	59	150
Quality Standards and Specification Requirements	2	26	26	52
Post Harvest Management	9	106	78	184
Certification System for Agri- Export	1	12	3	15
<b>Total</b>	<b>45</b>	<b>778</b>	<b>318</b>	<b>1096</b>

Uttar Pradesh				
Thematic area	No of trainings	Male	Female	Total
Present use of Active Substances by Farmers and EU Approved Active Substance	8	86	43	129
Good Agricultural Practices	7	59	43	102
Integrated Pest Management	6	46	56	102
Integrated Nutrient Management	0	0	0	0
Quality Standards and Specification Requirements	6	67	43	110
Post Harvest Management	5	67	60	127
Certification System for Agri - Export	1	4	16	20
<b>Total</b>	<b>33</b>	<b>329</b>	<b>261</b>	<b>590</b>

Rajasthan				
Thematic area	No of trainings	Male	Female	Total
Present use of Active Substances by Farmers and EU Approved Active Substance	6	118	19	137
Good Agricultural Practices	9	87	72	159
Integrated Pest Management	11	126	87	213
Integrated Nutrient Management	4	16	67	83
Quality Standards and Specification Requirements	4	70	5	75
Post Harvest Management	2	58	0	58
Certification System for Agri- Export	0	0	0	0
<b>Total</b>	<b>36</b>	<b>475</b>	<b>250</b>	<b>725</b>



Figure 2 -Cluster level training program conducted by the Indo-German AMD project

In May 2024, the Indo-German Cooperation on Agricultural Market Development Project also conducted field level training programs specifically targeting the FPO office bearers and staff. The training program for FPO office bearers and staff was specifically focused to train participants for strengthening the export agri-business systems and value chains at "institution level" (FPO level). Till December 2024, 25 FPO level training programs have been scheduled by the project.

### **State-Level Training Program for Spice Sector in collaboration with Spices Board of India**

During the reporting period, capacity building for the spice industry on EU Regulations for sampling and certification was carried out from 6 December to 13 December 2024. The training programme was jointly organized by the Spices Board of India and the Indo-German AMD project at three locations in India namely, Kochi, Unjha and Mumbai. During the training sessions an overview of EU regulations, that is required in terms of analysis and what regulations exist with regard to the associated sampling (Regulation (EC) No 401/2006 / Commission Directive 2002/63/EC for pesticide residues, other applicable regulations etc) was given. Two days sessions were organized that consisted of theoretical and practical sessions.

Details of sampling plan for Spices and spices products (including spices with large particle size), preparation of a bulk sample and preparation and tamper-proof sealing of the sample and sampling equipment requirements were shared with the training participants. Mr. Jorg Lickfett, an expert and

international trainer specialized in the European spice sampling process, conducted sessions on EU regulations, spice sampling protocols, and demonstrated the sampling procedures. The training program was attended by 160 participants comprised of exporters, spice board officials, representatives of sampling companies and testing laboratories and Indo-German AMD project staff.

### **State-Level Training Program for FPOs on Agri-Export Management**

The second phase of the Agri-export management training program for Farmers Producer Organizations (FPOs) was scheduled from 8 November to 6 December 2024 in an online mode. The objective of the agri-export management training program for FPOs were –

- To enhance the knowledge of the Farmers Producer Organizations (FPOs) and Cluster Based Business Organizations (CBBOs) on Agri-export management processes and to empower the FPOs to find avenues for export of their agri-produce;
- Amongst the FPOs, cross share the learnings of the Indo-German AMD project agri-export experiences; and
- To enable FPOs to prepare and engage in export of their agri-produce

The session focuses on developing the understanding of agri-business scope of the FPOs, processes and procedures to be followed by FPOs for undertaking Agri-export, experience of the Indo-German AMD project- Processes and procedures for

linking farmers with international markets, market and product specification requirements for Agri - exports - Certification and Traceability Systems requirements, Mandatory requirement for exporting spices and programs of Spice Board of India, and Domestic Marketing Strategies for FPOs. The session were undertaken by key Indian experts and spice board official along with Indo-German AMD team. 84 FPO representatives from Odisha, Uttar Pradesh and Rajasthan participated in the 7 sessions of the training program.

### **Facilitating FPOs for Export Shipments**

The Indo-German AMD project has facilitated four FPOs to participated in the trial shipment. The details of the FPOs participating in the export shipments are –

- Gumapadar Farmers Producer Company from Kandhamal dispatched its first shipment to a leading exporter NedSpice, The FPO sent its first trial shipment of EU-compliant 22 MT of polished turmeric fingers from Kandhamal to Kochi.
- Sarnagiti Kisan Agro Producer Company from Ramganjmandi dispatched its first shipment to

a leading exporter Asian Spice. They sent their first trial shipment of EU-compliant 19 MT of Coriander

- Golden Cent Farmer Producer Company from Jaisalmer dispatched its first shipment to a leading exporter Asian Spice. They sent their first trial shipment of EU-compliant 10 MT of Cumin.
- The farmers of IRADA farmers producer company from Lucknow, Uttar Pradesh sent their export consignment of Dasheri Mangoes to Europe for the first time, creating a pathway for a new potential market through NextOn, a leading exporter of fruit and vegetables in India. Facilitated by the Indo-German AMD project, along with the Marketing Division of the Department of Agriculture and Farmers Welfare, GoI, Directorate of Agricultural Marketing and Foreign Trade, Govt of Uttar Pradesh, and Agricultural and Processed Food Products Export Development Authority (APEDA) jointly supported the maiden export consignment to the EU markets. The GI Dusheri Mangoes exported are from the farms that are certified under GLOBALG.A.P and comply with the EU food safety standards



Figure 3-Exports of Dusheri Mangoes from Uttar Pradesh to Europe

## Summary

During the financial year 2024-25, Institute has conducted 150 training programs covering major states and Union Territories. Total. 4,500 stakeholders were trained. Under consultancy head, 81 programs were conducted. CCS NIAM has successfully run two years' residential course approved by AICTE and achieved 100% placement of students. Total available fund is Rs. 981 Lakhs during the year 2024-25 out of which Rs. 826 Lakhs were utilized by the Institute

## 13.4.5 NATIONAL AGRICULTURE MARKET (e-NAM)

### Scheme Overview

Electronic National Agriculture Market (e-NAM) is a pan-India electronic trading (e-trading) portal which seeks to network the existing physical APMCs through a virtual platform to create a unified national market for agricultural commodities. NAM is a "virtual" market, but it has a physical market (mandi) at the back end. The NAM Portal provides a single window service for all APMC related information and services. This includes inter alia commodity arrivals, quality & prices, buy & sell offers, provision to respond to trade offers and electronic payment settlement directly into farmers' account. While material flow (agriculture produce) shall continue to happen through mandis, the online market aims at reducing transaction costs, bridging information asymmetry and help in expanding the market access for farmers.

Ministry of Agriculture & Farmers' Welfare, Department of Agriculture & Farmers' Welfare (DA&FW) has mandated Small Farmers'

Agribusiness Consortium (SFAC) as the Lead Implementing Agency of e-NAM.

### Key journey points in FY 24-25 (till 31st Dec 2024):

#### Registration of key stakeholders

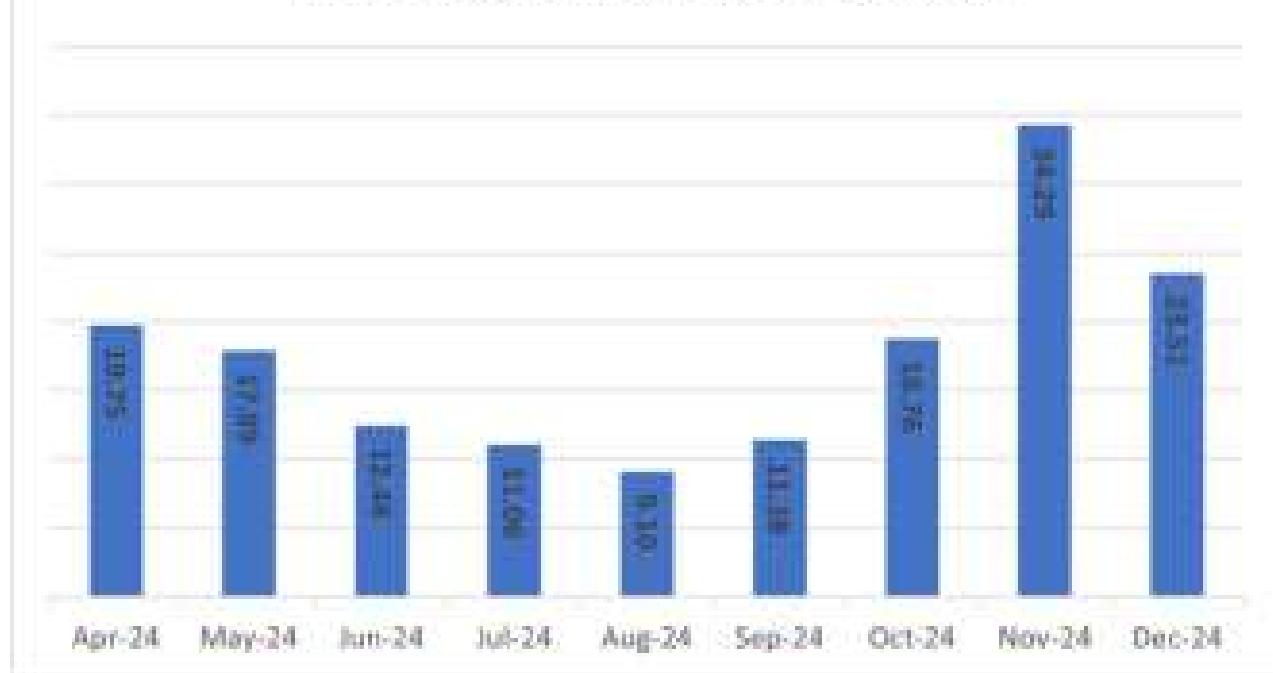
- A total of 1.38 Lakh farmers have been registered on the e-NAM portal in FY 24-25 taking the consolidated figures to 1.786 Crores.
- The e-NAM ecosystem has added 6511 traders in the current financial year so far taking the final figure to 2.634 Lakhs.
- A total of 2,630 commission agents have been registered in this financial year taking the consolidated figures to 1.15 Lakhs.
- A total of 677 FPOs have been registered on the e-NAM portal in this financial year taking the consolidated figures to 4,362.

#### Trade Performance

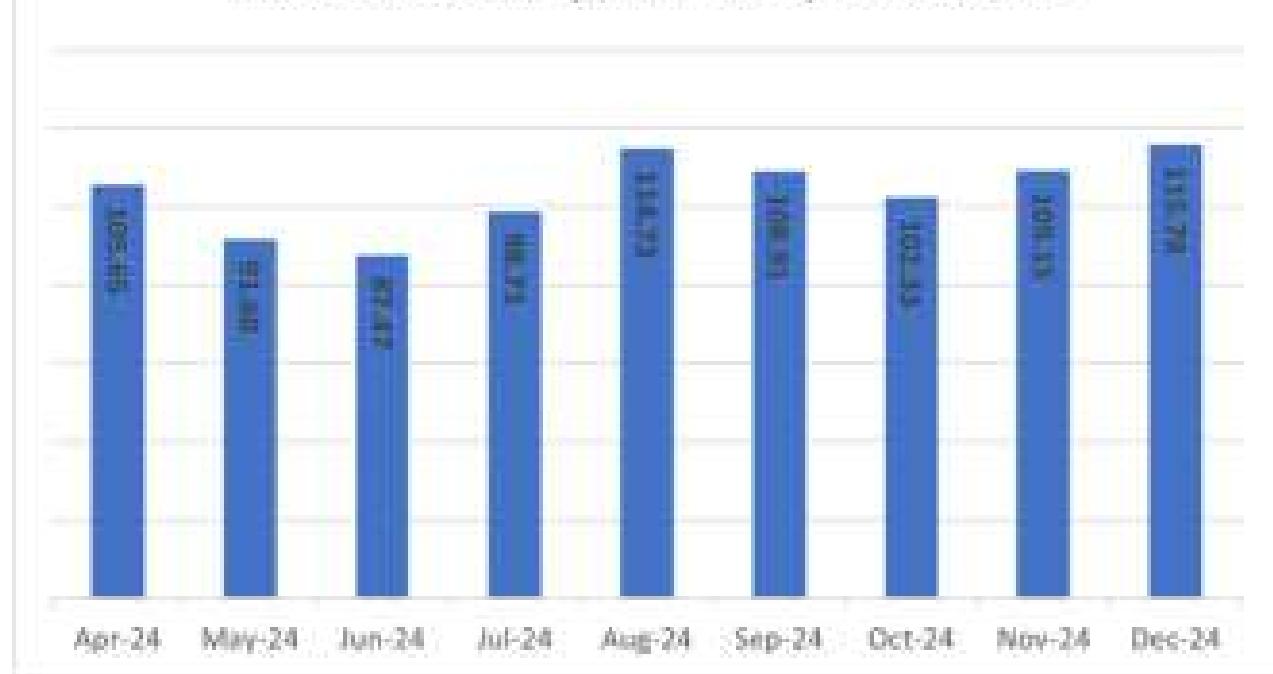
- Till 31st December 2024, a total of 11.02 crore MT of various agricultural commodities and 42.89 crore Nos. of commodities like Coconut, Betel leaf, Sweet Corn, Lemon and Bamboo (which are traded in numbers) were traded since the inception of the e-NAM scheme. This financial year has added 1.58 crore MT and 9.35 Crore units of commodities like Coconut, Betel leaf, Sweet Corn, Lemon and Bamboo.
- e-NAM portal has witnessed a total trade value of Rs. 61,017 crores in this financial year so far taking the consolidated figures to Rs. 401220.57 Crores.
- A total of 2 notified commodities have been registered on the e-NAM portal taking the consolidated figures to 221.

Monthly Trade Value (Rs. Cr) & Volume (Lakh MTs & Lakh Nos) for FY 2024- 25 (Till 31st Dec '24)

### TRADE VOLUME (LMT)- FY 2024-25



### TRADE VOLUME (LAHK NOS.)- FY 2024-25

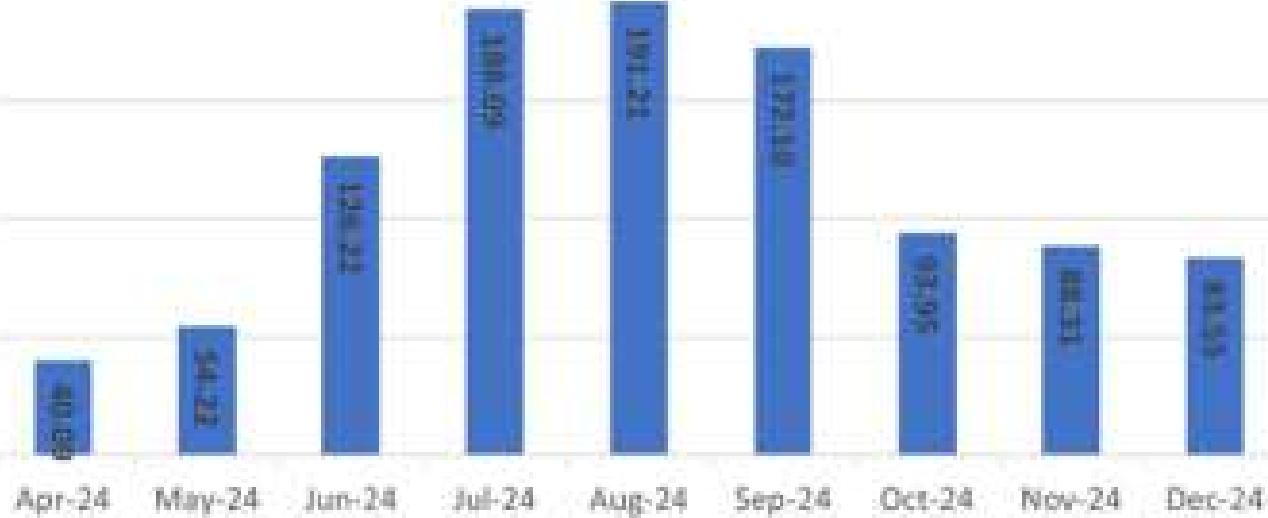


\*Bamboo, Betel Leaf, Coconut, Lemon, Sweet Corn

**TRADE VALUE (Rs Cr.)- FY 2024-25**



**E-PAYMENT VALUE (Rs Cr.)- FY 2024-25**



**Table 1 C : Inter-State Trade on e-NAM in FY 2024-25**

Buyer State	Seller State	Lots Traded Count	Trade Vol (Qty)	Total Trade Value (Rs)
ANDHRA PRADESH	TAMIL NADU	632	3328.0019	22582857.34
JHARKHAND	JAMMU AND KASHMIR	5	351.93	2177978
KARNATAKA	TA MIL NADU	556	2935.096	19799503.93
KERALA	MAHARASHTRA	31	43.4174	2446428.26
ODISHA	JHARKHAND	11	20	60000
PUDUCHERRY	TAMIL NADU	2816	10182.8077	67142458.86
TAMIL NADU	PUDUCHERRY	292	1471.55	9883084.21
TAMIL NADU	TAMIL NADU	4	115.7	245325.77
TELANGANA	ANDHRA PRADESH	462	2905.55	31157506.85
TELANGANA	HARYANA	6	165	469475
UTTAR PRADESH	HARYANA	82	1388	5135665
UTTAR PRADESH	UTTARAKHAND	98	446	626380
UTTARAKHAND	UTTAR PRADESH	635	12074.04	22614862
<b>Grand Total</b>		<b>5630</b>	<b>35427.093</b>	<b>184341525.2</b>

**Table 2 D : Inter-Mandi Trade on e-NAM in FY 2024-25**

State	Mandi Participated	Total Trade Qty (in MT)	Total Trade Qty (in Nos)	Total Trade Value (Rs In Lakhs)
ANDHRA PRADESH	11	3187.516	0	1397.72709
ASSAM	0	0	0	0
BIHAR	8	15965.345	300	167.3284275
CHANDIGARH	0	0	0	0
CHHATTISGARH	7	11706.032	0	2529.555166
GOA	0	0	0	0
GUJARAT	0	0	0	0
HARYANA	27	84993.616	0	30302.18561
HIMACHAL PRADESH	0	0	0	0

# Department of Agriculture & Farmers Welfare

<b>State</b>	<b>Mandi Participated</b>	<b>Total Trade Qty (in MT)</b>	<b>Total Trade Qty (in Nos)</b>	<b>Total Trade Value (Rs In Lakhs)</b>
JAMMU AND KASHMIR	8	436.437	0	327.734976
JHARKHAND	3	545.6151	0	108.52086
KARNATAKA	0	0	0	0
KERALA	2	0.01	0	0.026
MADHYA PRADESH	2	61.69	0	8.80603
MAHARASHTRA	0	0	0	0
NAGALAND	2	0.7	0	0.56
ODISHA	66	13393.441	36356142	3129.638957
PUDUCHERRY	0	0	0	0
PUNJAB	0	0	0	0
RAJASTHAN	20	206.225	0	160.1609572
TAMIL NADU	144	277407.1415	531701	90060.36598
TELANGANA	20	12377.947	0	3306.636318
TRIPURA	0	0	0	0
UTTAR PRADESH	8	717.475	0	111.069451
UTTARAKHAND	19	2716.46	0	369.0811825
WEST BENGAL	18	1152.855	0	175.576188
<b>National Total</b>	<b>365</b>	<b>4,24,868.506</b>	<b>3,68,88,143</b>	<b>132,154.973</b>

\$Odisha traded Betel leaf, Coconut, Lemon, Sweet Corn in

## #Tamil Nadu traded Coconut in number

### Success Story of Shimilipal Farmers Producer Company Limited, Udala, Odisha.

Registered through e-NAM Mandi Udala at Regulated Market Committee Udala Ofiice Campus,Udala,MayurbhanjPicture of Media publications on trading of agricultural produce through e-NAM Mandi UdalaPicture of training awareness programs at field level & mandi levelPicture of Trading of multiple vegetables like

Watermelon, Pumpkin & Biittergourd through eNAM Mandi UdalaShimilipal Farmers Producer Company Limited. (SFPC) registered as a FPO/FPC in the year of 2021. The Shimilipal farmers Producer

Company Limited have 1167 members At-Badolia Po-Bhaolagadia, Block-Khunta, of mayurbhanj district, Odisha.

SFPC registered on e-NAM on 29th October 2022 through Udala main Market Yard under the Udala RMC. Within few days after the registration on e-NAM, they had started to sell on e-NAM from the Month of January, 2023. Shimilipal farmers Producer Company Limited traded 4-5 types of commodities through e-NAM like Bitter-gourd, Tomato, Brinjal, pumpkin & Watermelon.

Shimilipal farmers Producer Company Limited has sold about 54885 quintals of Bitter-gourd worth Rs.881.14 lakhs on e- NAM platform till September 2024.



Registered through e-NAM Mandi Udalai at Regulated Market Committee Udalai Office Campus, Udalai, Mayurbhanj



Picture of Media publications on trading of agricultural produce through e-NAM Mandi Udalai



Picture of training awareness programs at field level & mandi level



Picture of Trading of multiple vegetables like Watermelon, Pumpkin & Bittergourd through eNAM Mandi Udalai

Before e-NAM members of Shimilipal farmers Producer Company Limited used to sell independently in the local market. However, post e-NAM when they started selling through e-NAM they realized that, their produce is fetching more price compared to local markets over the same period of time. They are very happy with the services of the e-NAM.

When the team of e-NAM contacted the CEO, Project coordinator of Shimilipal farmers Producer Company Limited about the feedback on trading on e-NAM they both have mentioned that the FPO/FPC

witnessed better price realization on e- NAM as compare physical markets at the same period of time, they expressed their happiness and assured that they will continue to trade on e-NAM. They also expressed their sincere thanks to Udalai Market Yard under Udalai RMC and e-NAM team for facilitating in on boarding and trading of their produce on e-NAM

Name of CEO: Mr. Kailash Chandra Kisku

Name of Project Coordinator: Mr. Subrat Kumar Rout

Contact Number: 7894111051

Contact Number: 7853034889

## **13.5 Agri Marketing Reforms:**

Agriculture marketing is a state subject. However, in order to develop an ecosystem for an accessible and competitive markets with participation of private sector and also to encourage post-harvest management and value chain infrastructure, Marketing Division has been pursuing with the states to adopt the reforms based on Model Act, "The --- State/ UT Agricultural Produce and Livestock Marketing (Promotion & Facilitation) Act, 2017", popularly called model APLM Act. The spirit of the model APLM Act, 2017 is to provide choices to the farmers to sell their produce through the marketing channels offering the better bid in transparent manner for their produce. To create healthy competition among the states towards adoption of reforms and also to promote uniformity across the states, Marketing Division has introduced a system of Reform Indexing.

As per the Reform Indexing table, states of Andhra Pradesh, Karnataka, Telangana and Uttar Pradesh (4 states) have been placed in 'Excellent' category, securing 80 and above marks out of 100 marks. States of Arunachal Pradesh, Assam, Chhattisgarh, Goa, H.P, Gujarat, Jharkhand, Madhya Pradesh,

Maharashtra, Manipur, Meghalaya, Nagaland, Rajasthan, Sikkim, Tamil Nadu, Tripura and West Bengal (17 States) have been placed in 'Good' category, securing marks from 60 to 79. States of Odisha, Haryana, Chandigarh (UT), Punjab and Uttarakhand (5 States/UT) have been placed in the average category, securing marks from 50 to 59. While Mizoram, NCT of Delhi (UT) and Puducherry (UT) have been placed in 'Poor' category, securing less than 50 marks.

## **13.6 Central Sector Scheme for Formation and Promotion of 10,000 Farmer Producer Organizations (FPOs)**

Central sector scheme for formation & Promotion of 10,000 FPOs across the country has been launched and in operation since 2020-21. There are all together 14 implementing agencies (IAs) under the scheme. So far 9,268 FPOs have been registered in 34 States/UTs.

### **Status Update:**

#### **A. Registration Data**

9,268 FPOs have been registered under 10,000 FPOs scheme till 31st December 2024

S.No.	Implementing Agencies (IAs)	Allocations to AI	No. of FPOs registered
1	<b>CAU Manipur</b>	60	60
2	<b>FDRVC (MoRD-NRLM)</b>	800	793
3	<b>GNFSU</b>	97	97
4	<b>NABARD</b>	1,694	1,693
5	<b>NAFED</b>	1,191	1,144
6	<b>NCDC</b>	1,863	1,232
7	<b>NDDB</b>	126	125
8	<b>NERAMAC</b>	220	220
9	<b>PAMCL</b>	25	25
10	<b>SFAC</b>	3,711	3,666
11	<b>SFAC -TN</b>	50	50
12	<b>TRIFED</b>	13	13
13	<b>UPDASP</b>	50	50
14	<b>WDD Karnataka</b>	100	100
	<b>Grand Total</b>	<b>10,000</b>	<b>9,268</b>

## B. Equity Grant Status

Rs 254.5 Crore has been distributed to 4,761 FPOs as a matching equity grant

S. No.	Implementing Agency	No. of FPOs received equity grant	Amount of equity grant released to FPOs (Rs. Crores)
1	<b>CAU Manipur</b>	-	-
2	<b>FDRVC (MoRD-NRLM)</b>	248	17.7
3	<b>GNFSU</b>	2	0.1
4	<b>NABARD</b>	1,106	57.9
5	<b>NAFED</b>	517	22.3
6	<b>NCDC</b>	564	30.2
7	<b>NDBB</b>	29	1.2
8	<b>NERAMAC</b>	194	5.0
9	<b>PAMCL</b>	20	1.0
10	<b>SFAC</b>	1,884	103.1
12	<b>SFAC-TN</b>	49	3.9
13	<b>TRIFED</b>	11	0.3
14	<b>UPDASP</b>	37	1.4
15	<b>WDD Karnataka</b>	100	10.4
<b>Grand Total</b>		<b>4,76</b>	<b>254.5</b>

## C. Credit Guarantee Fund

Please find the Status of Credit Guarantee Scheme Operations under FPO Financing as shared by NABSanrakshan Trustee Private Limited.

#	Particulars	Total (till December 2024)	10,000 FPO Scheme
1	FPOs Covered	1,895	607
2	Credit Guarantees issued	2,539	686
3	Farmers benefited	17,90,198	3,11,802
4	<b>Sanctioned Loan (in ₹ Cr.)</b>	539.7	78.6
5	Guarantee Cover (in ₹ Cr.)	453.0	66.5

As per data submitted by NABSanrakshan

## D. Learning Management System (LMS) for Farmers Training

10Kfpo LMS portal (<https://10kfpo.lms.gov.in/>) has been designed to build the capacity and knowledge of all the stakeholders (FPOs/CBBOs/IAs/Farmers) under the 10,000 FPOs scheme. The LMS portal has

onboarded 837 modules ranging from the FPO promotion related topics, crop-specific trainings, value addition topics and DPRs for convergence with other schemes. Currently, there are 102,854 registered users on the LMS portal.

## E. FPO Mela (SFAC)

A total of 10 FPO Exhibitions have been organized by SFAC in the FY 2024-25, where 299 FPOs represented their products and achieved a B2C sales of over 1.24 crores. These melas were organized

across multiple venues across the country and more melas are expected to be organized in the current financial year. A detail list of the exhibitions organized is put in here:

S. no.	Mela	No of FPOs participants	Total Sale (Retail+B2B) (INR in lakhs)	Footfall	No of awareness sessions/ trainings	FPOs onboarded on ONDC with products
1	Delhi Jul 24	55	10.01	>2500	4	55
2	Ambala Jul 24	40	3.59	>2200	7	38
3	Sangrur Aug 24	35	6.47	>6500	6	29
4	Ranchi Aug 24	44	29.98	>3100	4	15
5	Vijayawada Aug 24	46	49.90	>3500	5	33
6	Bhuvneshwar Sep 24	43	22.66	>1500	5	37
7	Kolkata Oct 24	36	1.53	>150	6	36
8	Haridwar Oct 24	41	9.14	>4300	5	41
9	Bilaspur Nov 24	38	20.33	>4000	4	38
10	Indore Dec 24	40	9.05	>6000	5	37
11	Ahmedabad Dec 24	43	3.35	>2000	5	31
	<b>TOTAL</b>	<b>461</b>	<b>166.01</b>	<b>&gt;35,750</b>	<b>56</b>	<b>390</b>



**F. Status of women in the FPOs formed under the scheme**

- i. There are 10.24 lakh women farmers in the total 27.15 lakh shareholders in the FPOs formed under the scheme.
- ii. There are currently 49,667 FPO BoD members in which 15,560 are females.
- iii. 1,459 FPOs registered under the scheme have more than 50% women members.\*
- iv. 1022 FPOs registered under the scheme have more than 75% women members.\*
- v. 905 FPOs registered under the scheme have more than 90% women members.\*

*\*The data is as reported on MIS dated 31st December 2024, only FPOs with at-least 100 farmer entries are considered*

**G. Tripartite MoU between the Ministry of Agriculture & Farmers Welfare & Bharat Financial Inclusion Limited (BFIL) AND IndusInd Bank Limited (IBL)**

Department of Agriculture & Farmers Welfare (DA&FW) has signed a tripartite MoU with Bharat Financial Inclusion Limited (BFIL) AND IndusInd Bank Limited (IBL), to provide hand-holding support to FPOs formed & promoted under 10,000 FPOs scheme, through technical resources & development of IT enabled ecosystem & specific management information system (MIS) which in turn will benefit the FPOs.

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## **Chapter 14**

# **AGRICULTURE TRADE POLICY, PROMOTION AND LOGISTICS DEVELOPMENT**

### **14.1 Overview**

Agriculture Trade Policy Division of this Department is entrusted with the responsibility of making policy recommendations on export, import and formulation of strategy for boosting international trade in Agri commodities. It is the nodal Division of the Department for coordinating/formulating responses to World Trade Organization's (WTO) Agreement on Agriculture (AoA), matters relating to Preferential Trade Agreements (PTAs)/Free Trade Agreements (FTAs) and modification in export/import policy of agricultural commodities (coordinating with the Department of Commerce (DoC)), matters relating to the modification in the Custom duties and Goods and Services Taxes (GST) on agricultural commodities (coordinating with the Department of Revenue (DoR)).

### **14.2 India's Agriculture Trade**

#### **14.2.1 Agri-Export:**

Export of agricultural commodities have helped producers take advantage of a wider international market, which, in turn, has incentivized their domestic production. Crops exported in large quantities viz. rice, sugar, and spices have witnessed significant increase in area coverage and growth rate of production. In the year 2023-24, India has emerged as a significant Agri-exporter in crops like Rice basmati, buffalo meat, spices, cotton (raw

including waste), fresh fruits and misc processed items etc.

As per available WTO's Trade Statistical Review (2023), the share of India's agricultural exports and imports in the world agriculture trade in 2023 were 2.2% and 1.7%, respectively. India's rank was 14th among the global Agri exporters.

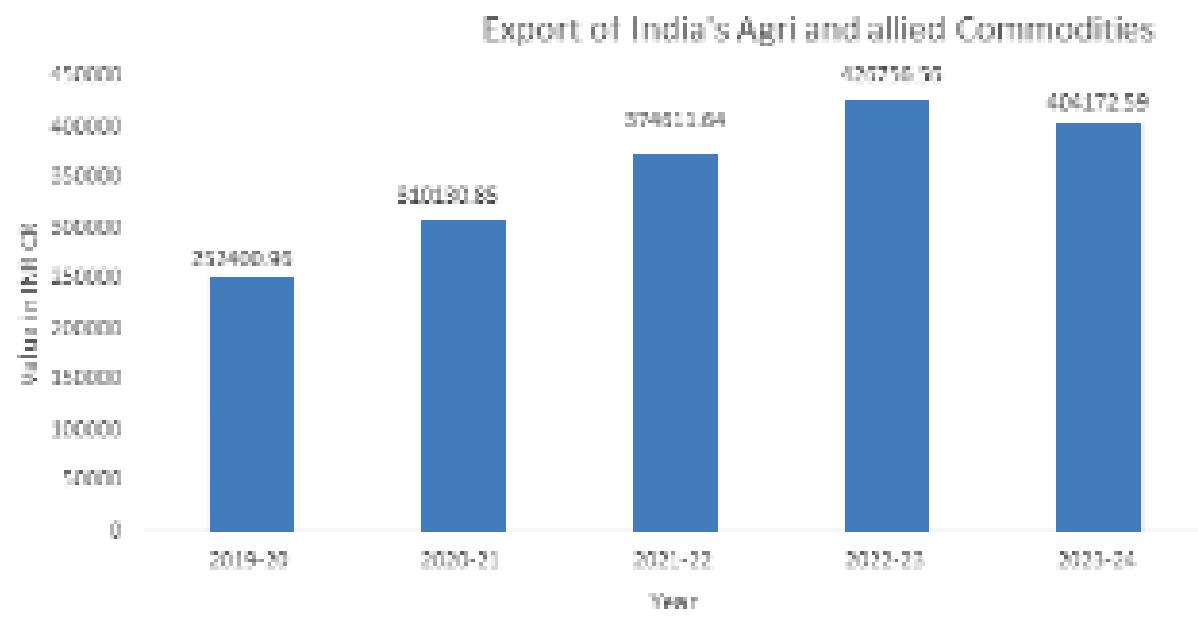
The share of agricultural exports in India's total merchandise exports has decreased from 11.78% in 2022-23, to 11.17% in 2023-24.

As compared to previous year (2022-23), the Agri and Allied exports in the year 2023-24 has decreased by 5.29% to Rs. 4,04,172.83 crore. The decline in Agri and Allied exports during 2023-24 was primarily on account of decreased exports of commodities like Wheat (96%), Sugar (49%), Rice (other than Basmati)(26%).

However Cotton Raw Including waste (48.75%), Poultry Products (41.47%), Fresh Fruits (36.16%), Tobacco Unmanufactured (32.01%), Processed Vegetables (31.98%) and Rice-basmati (25.60%) witnessed high growth in the year 2023-24 as compared to the previous year.

Major destinations of exports for India's Agri and Allied commodities were USA, China, UAE, Bangladesh, Vietnam, Iraq, Malaysia and Indonesia.

The export of Agri and allied sector during last 5 years is as below:



Source: Department of Commerce, Government of India.

The table 1 below presents India's top 10 agricultural export commodities (by value) for the years 2019-20 to 2023-24:

**Table 1: India's Exports of Top-10 Agricultural Commodities**

[Value in Rs. Crores, Quantity in '000' Tonnes]

S. No	Commodity	2019-20		2020-21		2021-22		2022-23		2023-24		2024-25 (Upto Nov)	
		Value	Qty	Value	Qty								
1	MARINE PRODUCTS	1329.0	47618.1	1167.8	44175.8	1398.0	57910.4	1754.2	64902.2	1819.6	61043.7	1148.50	41503.22
2	RICE -BASMOTI	4454.8	31026.3	4630.2	29847.7	3943.7	26390.2	4561.2	38525.4	5242.2	48389.2	3645.16	31488.64
3	RICE (OTHER THAN BASMOTI)	5056.3	14400.3	13149.2	35557.0	17289.0	45725.4	17792.1	51096.7	11116.7	37804.5	7398.53	29635.52
4	SPICES	1193.4	25642.0	1607.1	29529.4	1427.7	29039.3	1312.3	30419.0	1415.2	35174.0	943.72	23358.88
5	BUFFALO MEAT	1152.3	22661.1	1085.6	23459.9	1175.3	24612.7	1175.5	25639.9	1295.6	31007.0	788.87	21197.29
6	SUGAR	5798.5	13981.6	7517.9	20668.6	10457.1	34344.7	11755.6	46310.9	4360.6	23390.2	2222.16	11279.31
7	OIL MEALS	2655.8	5861.4	4366.6	11688.6	2925.7	7695.3	4183.6	12955.1	4272.9	14191.6	2420.15	7332.55
8	MISC PROCESSED ITEMS	0.0	4586.8	0.0	6402.8	0.0	8714.7	0.0	11432.3	0.0	13686.3	0.0	9567.42
9	COFFEE	257.0	5236.8	245.2	5339.6	333.1	7613.6	316.1	9190.9	297.9	10644.8	207.73	9603.94
10	FRESH FRUITS	834.8	5496.4	973.2	5668.7	1166.4	6565.8	1096.1	6974.5	1438.5	9496.2	826.62	4588.49
	<b>TOTAL AGRI &amp; ALLIED EXPORTS</b>		252400.96		310130.85		374611.64		426756.56		404172.59		272547.9

Source: Department of Commerce, Government of India.

## 14.2.2 Agri-Imports:

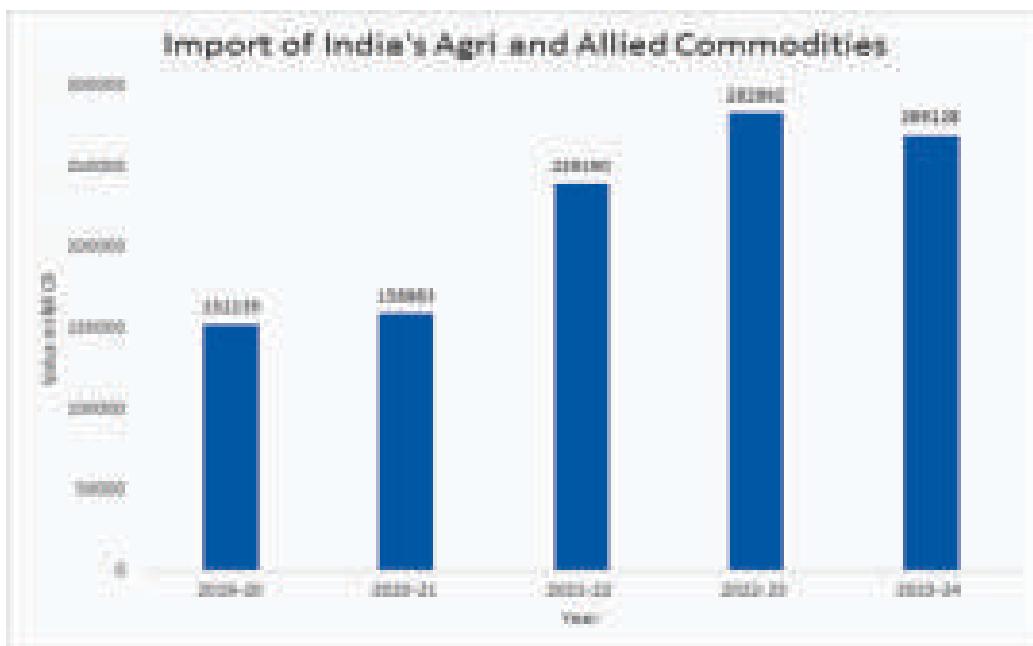
As compared to the previous year (2022-23), the Agri and Allied imports in the year 2023-24 decreased by 4.87% to Rs. 2,69,127.52 crore. Decrease in value of Agri and Allied imports during 2022-23 was primarily because of decrease in imports of Vegetable oils (26%) and Cotton raw including waste (57%).

However, Imports of Pulses (96.9%), Sugar (592.30%), Alcoholic beverages (72.32%), Fresh

Fruits (13.56%), Other Oil seeds (48.76%), Spices (12.68%) increased more significantly.

Major sources of import of India's Agri and Allied commodities are Indonesia, Brazil, Malaysia, Argentina, United States of America, Russia, Myanmar, Australia, Canada, Romania, Thailand, Singapore, Afghanistan, Vietnam, Tanzania, Ukraine, Togo and United Arab Emirates.

The import of agri-allied sector during last 5 years is as below:



Source: Department of Commerce, Government of India.

India's top 10 imported agricultural commodities in terms of value for the year 2019-20 to 2023-24 are given in the Table 2 below:

**Table 2: India's Imports of Top-10 Agricultural Commodities**

[Value in Rs. Crores, Quantity in '000 Tonnes]

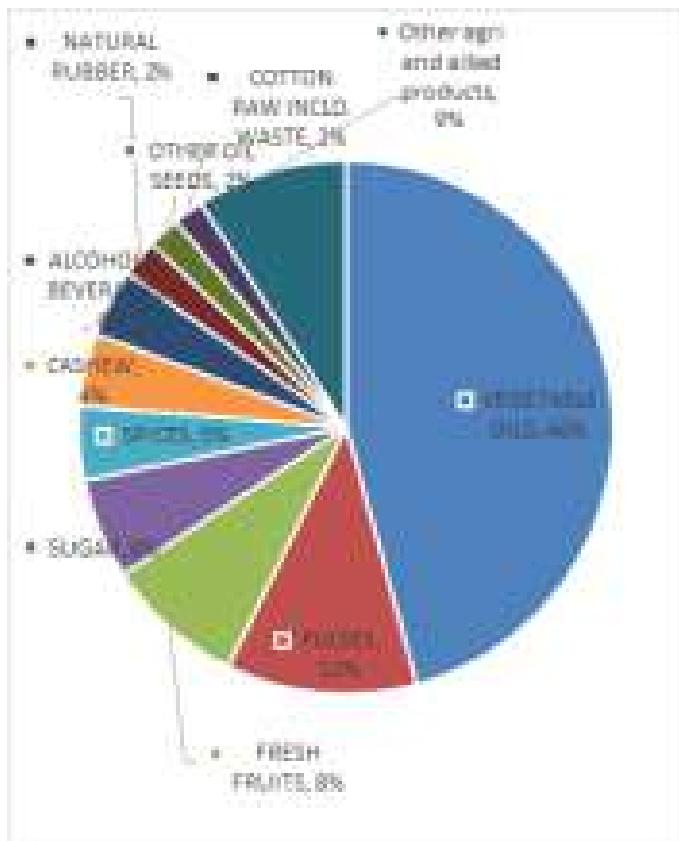
S. No	Commodity	2019-20		2020-21		2021-22		2022-23		2023-24		2024-25 (Upto NOV)	
		Qty	Value	Qty	Value	Qty	Value	Qty	Value	Qty	Value	Qty	Value
1	VEGETABLE OILS	14722	68558	13540	82123	14278	141532	15745	167270	15520	123079	1207	10222
2	PULSES	2898	10221	2466	11938	2700	16628	2496	15781	4739	31072	4149.	27441.
3	FRESH FRUITS	994	14137	1212	15765	1552	18342	1550	19958	1789	22664	1165.	16092.
4	SUGAR	1118	2473	1964	4720	360	1263	572	2378	3293	16462	1869.	8004.89

S. No	Commodity	2019-20		2020-21		2021-22		2022-23		2023-24		2024-25 (Upto NOV)	
		Qty	Value	Qty	Value								
5	SPICES	321	10187	344	8071	364	9685	386	10695	384	12051	270.43	8710.71
6	CASHEW	941	9026	834	7491	939	9338	1332	14370	1255	11828	883.90	9896.61
7	ALCOHOLIC BEVERAGES	577	4644	646	4037	564	5182	331	6393	543	11017	475.48	6022.50
8	NATURAL RUBBER	457	4927	410	4620	546	7703	529	7514	493	6118	427.27	6798.78
9	OTHER OIL SEEDS	411	1528	507	2165	701	4308	574	3542	1039	5269	207.47	978.59
10	COTTON RAW INCLD. WASTE	744	9371	231	2861	224	4169	452	11506	252	4947	370.75	6507.55
	TOTAL AGRI & ALLIED IMPORTS		152134.6		158863.4		239189.5		282892.1		269127.5		214216.17

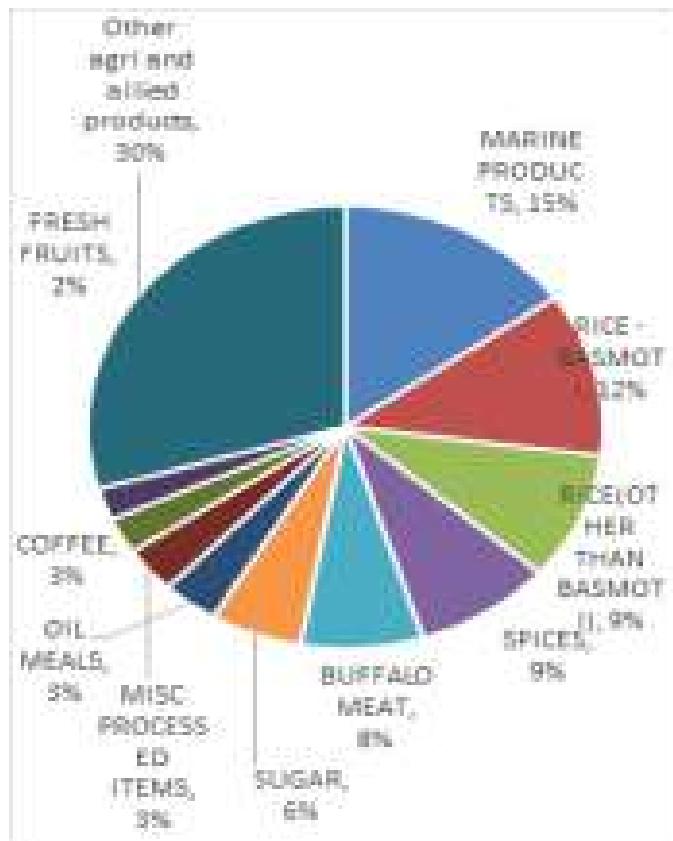
Source: Department of Commerce, Government of India

\*In terms of value, the share of top 10 exported and imported agricultural commodities during 2023-24. Agriculture sector posted positive balance of payment like earlier years. The import was dominated by single commodity namely vegetable oil.

#### Import share in 2023-24 (Top-10 Items)



#### Export share in 2023-24 (Top-10 Items)



Source: Department of Commerce, Government of India

## **14.3. EXIM Policy of Agricultural Commodities:**

### **14.3.1 EXPORT:**

- At present, export of most of the agricultural commodities (excluding allied products) is free i.e. without any restriction. Only export of Seeds is under restriction and Mustard Oil is permitted for export only in branded consumer packs of up to 5 kgs with a Minimum Export Price (MEP) of USD 900/MT.
- The export of wheat is prohibited.

### **14.3.2 IMPORT:**

- In the agriculture sector, imports of Moong potato and some seeds of vegetables/ spices/ cereals/ oilseeds are under restriction category i.e. import is allowed of these items with prior permission and other commodities (excluding allied products) are free for import i.e. import is allowed without any prior permission.

#### **Details of restriction:**

- To protect the interest of domestic growers/farmers and their livelihood from cheap import of commodities and to take care of consumer interest, Government of India notified some import restrictions in consultation with Department of Agriculture & Farmers Welfare, Department of Commerce, Department of Consumer Affairs, Department of Food & Public Distribution and Department of Revenue.

- Minimum Import Price (MIP) has been imposed on import of the following items to check their cheap imports.
- MIP of Rs 500/kg on Pepper (w.e.f. 06th December, 2017)
- MIP of Rs 680/kg on Cashew Kernel, Broken (w.e.f. 12th June, 2019)
- MIP of Rs 720/kg on Cashew Kernel, Whole (w.e.f. 12th June, 2019)
- MIP of Rs 150/kg on Desiccated Coconut (w.e.f. 08th January, 2020)
- MIP of Rs 351/kg on Arecanut (w.e.f. 14th February, 2023)
- MIP of Rs 50/kg on Apples (w.e.f. 08th May, 2023)
  - » Free Import for Tur /Pigeon Peas and Urad was extended up to 31st March 2025. However, import of moong has been kept in Restricted category.
  - » Government of India vide Notification dated 5th July, 2024 allowed import of Potatoes (HS code 0701 90 00) from Bhutan without license up to 30th June, 2027.
  - » Department of Revenue has revised the Basic Customs Duty rates on some agri items (like yellow peas, chana, edible oil etc.) and export duty of onion and rice.
  - » The import duty on edible oil changed with effect from 13th September, 2024 as per following rates:

<b>HS Codes</b>	<b>Description of Goods</b>	<b>Import Duty</b>
15111000	Crude Palm	20% BCD + 5% (AIDC)
15071000	Crude soya bean	20% BCD + 5% (AIDC)
15121110	Crude sunflower	20% BCD + 5% (AIDC)
151190	Refined palm	32.5% (BCD)
15079010	Refined soya bean oil	32.5% (BCD)
15121910	Refined sunflower	32.5% (BCD)

#### **14.4. Goods and Services Tax**

GST envisages a single tax on supply of goods and services or both, by amalgamating all the central indirect taxes (excise duty, countervailing duty and service tax) and state indirect taxes (VAT, luxury tax, entry tax, octroi, etc.).

GST rates on most of the raw agricultural items are at 0% (zero per cent). Apart from this, most of the agricultural activities and services are also exempted from imposition of GST. However, for primary processed agriculture items, GST rate is 5% and for secondary/tertiary processed products, the GST rate is 12%. On some farm machinery/component and fertilizers, the GST rate is in the range of 12-18%.

Considering the representations/inputs from various stakeholders/ firms/ associations/ farmers etc., this Division has been taking up GST related issues with the GST council, Department of Revenue, Ministry of Finance from time to time.

#### **14.5. Trade Agreement:**

##### **14.5.1 FTA/CECA/CEPA/CECPA**

Free Trade Agreements/Preferential Trade Agreements/Comprehensive Economic Cooperation Agreements/Comprehensive Economic Partnership Agreements/ Comprehensive Economic Cooperation & Partnership Agreements provide opportunities for exports with the trading partners at preferential duties. India has signed agreements with number of regional trading blocs/ countries namely, South Asia Free Trade Area (SAFTA), Asia Pacific Trade Agreement (APTA), Association of South East Asian Nations (ASEAN), Afghanistan, MERCOSUR (trade bloc of countries viz. Argentina, Brazil, Paraguay and Uruguay), Japan, South Korea, Malaysia, Singapore, Thailand, Bhutan, Nepal, Chile, Sri Lanka, Mauritius, UAE and Australia (ECTA). The recently concluded Trade agreement is European Free Trade Association (EFTA).

The trade agreement negotiations with European Union, Peru, Gulf Cooperation Council (GCC), Canada, UK, South Korea, Sri Lanka, Australia, and

Oman are also in various stages of discussion.

#### **14.6 WTO Meetings/Notifications:**

**14.6.1 WTO Meeting:** The Committee on Agriculture oversees the implementation of the Agreement on Agriculture. Its key responsibility is to monitor WTO members' compliance to their commitments/obligations. The committee, composed of all WTO members, usually meets three or four times a year. Issues related to India's Pulses Policy, short-term loan, input subsidies and Minimum Support Price (MSP) were responded to in coordination with Department of Commerce.

**14.6.2 WTO Notifications:** As part of India's commitments to the WTO, India needs to notify any new or modified domestic agricultural support measures applied by India during a year and this needs to be notified to the WTO on an annual basis in the form of Domestic Support-1 and Domestic Support-2 Notifications. In this regard, DA&FW has provided requisite inputs to Department of Commerce for preparation and filing of India's DS notification to WTO. The filed/submitted notifications are available online and can be accessed at the WTO website <http://agims.wto.org/>.

**14.6.3 Trade Policy Reviews under WTO:** WTO conducts Trade Policy Review of its members at regular intervals with a view to reviewing the member countries' trade policies and practices under multilateral trade disciplines to make an assessment of compliance with country obligations. The review is an extensive exercise requiring inter-ministerial coordination and detailed preparation. The submission of the report is followed by detailed question answer sessions which require compilation of huge trade related documents/data. DA&FW is required to furnish relevant inputs/information to Department of Commerce for compilation and forwarding to the WTO Secretariat as a part of India's Trade Policy Review (TPR) at WTO.

#### **14.7 Audit Para**

No audit para/observation is pending in Agriculture Trade Policy Division of this Department.

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# Chapter 15

## RASHTRIYA KRISHI VIKAS YOJANA (RKVY)

### 15.1 Overview

Rashtriya Krishi Vikas Yojana (RKVY) was launched as a flagship scheme of the Department of Agriculture & Farmers' Welfare (DA&FW) in 2007-2008 to incentivize States to draw up comprehensive agriculture development plans, taking into account agro-climatic conditions, natural resources and technology for ensuring more inclusive and integrated development of agriculture and allied sectors. The scheme was implemented as a State Plan Scheme till the end of the financial year 2013-14 and is being implemented as a CSS (State Plan) scheme thereafter. In accordance with the directions of the Ministry of Finance, the funding pattern of the scheme from 2015-16 onwards has been altered from 100% funding by the Central Government to in the ratio of 60:40 between the Centre and States and 90:10 for North-Eastern and Himalayan States. However, funding pattern to UTs continued to be as 100% by the Central Government.

The Scheme has been revamped as the Rashtriya Krishi Vikas Yojana - Remunerative Approaches for Agriculture and Allied Sector Rejuvenation (RKVY-RAFTAAR) for implementation from 2017-18 with a major focus on pre & post-harvest infrastructure, besides promoting agri-entrepreneurship, innovations & value addition with the approval of the Union Cabinet on 01.11.2017. A State Level Sanctioning Committee (SLSC) constituted under the chairmanship of the Chief Secretary of the concerned State/UT is empowered to approve projects under the scheme. The State Agriculture Department is the nodal Department for implementation of the scheme in the State. The scheme is available for the various activities of agriculture & allied sector such as crop development, horticulture, agricultural mechanization, marketing, pre & post-harvest management, integrated pest management, organic farming, research, extension etc.

As per recommendation of Expenditure Finance Committee, RKVY has been re-structured from 2022-23 onwards merging some schemes of Department of Agriculture & Farmers Welfare which includes Soil Health & Fertility (SHF), Rainfed Area Development (RAD), Paramparagat Krishi Vikas Yojana (PKVY), Per Drop More Crop (PDMC), Agriculture Mechanization (including Promotion of Agricultural Mechanization and Management of Crop Residue (CRM), Agro Forestry, Crop Diversification Programme and Detailed Project Report (DPR). Restructured RKVY has 3 components viz. Annual Action Plan (AAP), Detailed Project Report (DPR) and Administration, Monitoring and Evaluation including startup. The Cabinet in its meeting held on 3rd Oct 2024 has approved continuation of PM-RKVY during the term of 15th Finance Commission with an outlay of Rs. 57,074.72 crores.

### 15.2. Objectives of PM- RKVY (DPR component)

The objectives of the scheme are:

- i. To strengthen the efforts of farmers through creation of pre & post-harvest agricultural infrastructure that increases access to quality inputs, storage, market facilities etc and enables farmers to make informed choice.
- ii. To provide autonomy, flexibility to States to plan and execute schemes as per local/farmers' needs.
- iii. To promote value chain addition linked production models for increase in the farmer's income as well as encourage production/productivity
- iv. To mitigate the risk of farmers with focus on additional income generation activities - integrated farming, mushroom cultivation, bee keeping, aromatic plant cultivation, floriculture etc.

- v. To empower youth through skill development, innovation and agri-entrepreneurship based agribusiness models.

### **15.3 Funding pattern under PM-RKVV:**

The cost norms specified in various Central Government Schemes of Department of Agriculture, & Farmers Welfare (DA&FW), and other Ministries are applicable for the activities/components to be supported under DPR based component of PM - RKVV.

### **15.4. District and State Agricultural Plans:**

PM- RKVV guidelines recognize the need for convergence and integration of the various programmes implemented at district / State level through District Agriculture Plans (DAPs) and State Agriculture Plans (SAPs). Revised operational guidelines of PM- RKVV also mandate each State to prepare a State Agriculture Infrastructure Development Programme (SAIDP) in a similar manner to that of DAPs and SAP for identifying a shelf of projects for RKVV.

### **15.5. Income/Production and Target/Achievement**

Under PM- RKVV, fund is provided to the States/UTs as grant in aid. Projects under the scheme are approved and implemented by the States in various agriculture and allied sectors as per their priorities and available resources to meet the needs of farmers for the holistic development of this sector. The state-wise allocation and release of funds during 2023-24 and 2024-25 is enclosed at Annexure- 15(a). State wise number of projects approved by States during 2023-24 and 2024-25 is enclosed at Annexure-15(b). List of important projects implemented by the States under the scheme is enclosed at Annexure-15(c).

### **15.6 Innovation & Agri-Entrepreneurship programme:**

A new programme called "Innovation and Agri-Entrepreneurship Development" has been launched under Rashtriya Krishi Vikas Yojana in 2018-19 with the objective to promote innovation and agripreneurship by providing financial support and

nurturing the incubation ecosystem. Start-ups pertaining to agriculture and allied sectors are being encouraged in order to contribute directly and indirectly in enhancing the income of farmers by providing opportunities to them and to provide employment to youth. In this connection, five (5) Knowledge Partners (KPs) and twenty-four (24) Agribusiness Incubators (R-ABIs) have been appointed by this Department to advise on smooth and efficient execution of this programme in various States across the country.

More than 5000 entrepreneurs/agripreneurs have been trained during 2019-20 to 2023-24 under Agri-entrepreneurship programme. Out of these trained entrepreneurs, 1749 start-ups operating in various areas of agriculture & allied sectors have been given financial support. A sum of Rs. 124.96 crore has been released in installments to the respective KPs and RABIs for funding to these start-ups.

A Management Information System (MIS) has been developed for monitoring the progress of implementation of Agri-Entrepreneurship Programme of RKVV by KPs and R-ABIs. The link of portal is <https://agristarup.gov.in/>

### **15.7. Success Stories**

Some of the success stories reported by the States under PM- RKVV scheme and Agri business Incubators under Agri-Entrepreneurship Programme are given as under:

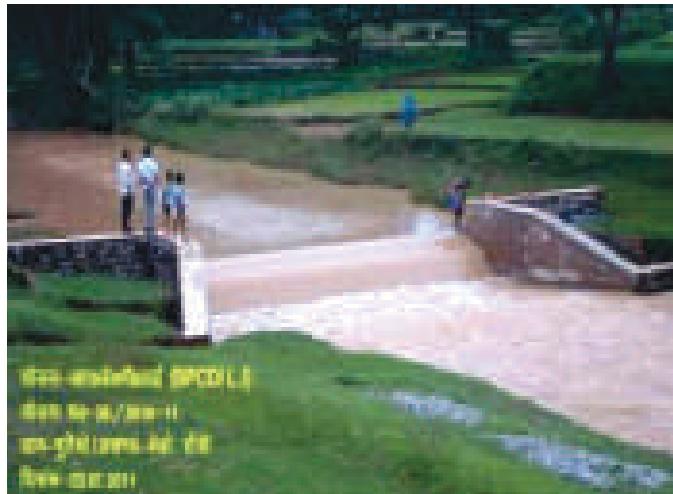
#### **RKVV success story:**

- i) **Title: Checkdams in Jharkhand**

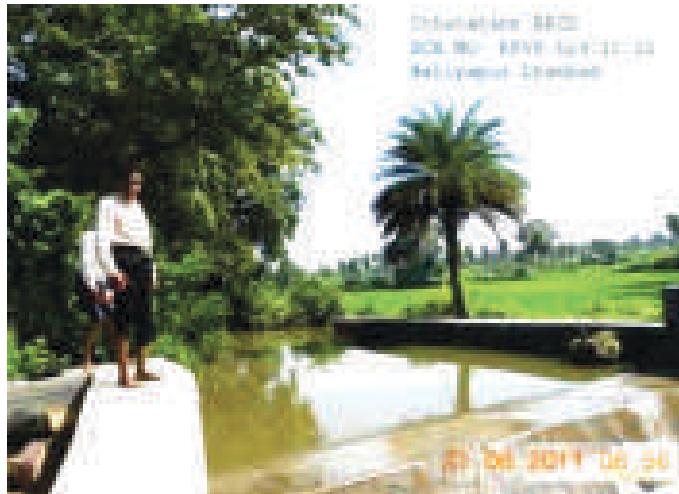
**Category:** irrigation

**Background:** Despite sufficient rainfall, a small portion of the total net sown area is under irrigation in Jharkhand. Non-availability of timely and adequate water for irrigation is a serious constraint in achieving higher productivity and stability of farming. Rain water harvesting and water use efficiency are critical for increasing production and productivity. The water holding capacity of soil in the State is low due to the porous nature of the soil and undulating topography.

**Intervention:** The most effective method of rainwater harvesting in Jharkhand is to collect runoff in streams (nalias) through the construction of small check dams to enhance water conservation as well as control soil erosion. Farmers in the region are small & marginal and high cost of investment in soil & irrigation development is beyond their reach. Participatory Community Irrigation Management (PCIM) through Water Users Associations (Pani Panchayats) is encouraged to maximize the benefit from the available water. For better water utilization in the targeted areas, irrigation water is supplied through underground conduits to minimize transmission loss and a Rotational Water Supply System has been adopted



**Outcome:** Assured irrigation in the Kharif, Rabi etc made available for cultivable land in each cluster. Now farmers are in a position to raise crops without interruption in areas where check dams have been constructed. Earlier, farmers used to grow paddy and maize only during the Kharif. In Rabi season agriculture was almost negligible and only Rabi vegetables were grown with very low production. After the construction of check dams, paddy cultivation ensured increased production. Rabi and summer cultivation also came into regular practice. This intervention is expected to bring approx. 37000 ha area under irrigation



## ii) Title: Solar Energy in establishment of post-harvest technology unit for primary processing & value addition in Tamil Nadu

**Category:** Postharvest

**Background:** Coconut is one of the major crops cultivated in Kanyakumari District. Oil extraction from dried coconut i.e. Copra is common in this district. Traditional open sun drying is the method followed with the objective of reducing the moisture content of the Coconut kernel. In this method, farmers spread coconuts on mats, cement floors, roof tops, road sides or in the fields for drying. During this process, the internal temperature of the coconuts rises without regulation, which destroys colour, vitamins and flavor. It is contaminated by insects, birds and windborne problems like dust,

dirt etc., which ultimately degrades the quality of the Copra. The duration for drying Coconut kernels into Copra is more in this method.

**Intervention:** Solar energy is one of the most promising renewable energy sources. Solar driers are one of the options to overcome the problems encountered in open sun drying. Drying using Polycarbonate sheet covered greenhouse type solar drier is the method of controlled sun drying to enhance the quality of dried products. Agricultural Engineering Department provides Polycarbonate sheet covered greenhouse type Solar drying units with 40 percent subsidy assistance for drying various agricultural produces viz., Oil seeds like Copra, Groundnut etc. Also, Agricultural Engineering Department provides 40% subsidy assistance for the purchase of Post-Harvest

Technology Management (PHTM) machinery like Oil Extracting Machine, Coconut Dehusker,

**Outcome:** Drying time has decreased by about 50% when drying the produces is done in Solar drier. Coconut Kernels dried in Solar drier is retaining its natural quality and flavor. It has increased drying efficiency and also reduced microbial content and other pests. Coconut kernels are also protected from flies, pest, dust and rain. The colour, taste, flavor,

quality and texture of copra are superior to the open sun dried copra. So the chemical substances such as sulphur which causes health hazards need not be used. The income and the standard of living of the farmer have increased. As the farmers are using the Solar drier for drying the Copra and extracting oil with the new wooden oil extractor, this is adding value to the produce and marketing the product.



#### **Success story of agri-startup under Agri-Entrepreneurship Programme:**

##### **iii) Title: Traceability mechanism for certified organic food Market.**

**Category:** Food Processing

Bright Crops Agro Products is Guwahati based agri-startup setup in 2018, operates in the market under the brand name Organics Food Market. The startup has initiated steps to establish a traceability mechanism for certified organic food products, establishing clear linkages between stakeholders

through farm-to-fork monitoring. This ensures the implementation of appropriate pre-harvest and post-harvest practices, processing, and quality and food safety measures. Based on QR code technology, the packets carry unique codes that customers can scan with any smartphone to access a traceability map, including the names and addresses of farmers they can connect with. The start-up has listed their products in Amazon and they are successfully delivering the products within 3 days across the Country.



**5000+ Farmers  
Benefitted**

**85 Products; B2B  
Partnership with  
Raddison Group,  
Pintola, Nature Land  
Organics etc**

**270 L Revenue  
Generated**

**iv) Title: Crafting eco-friendly and sustainable fashion from lotus silk.**

**Category:** Sustainable Agriculture

Sanajing Sana Thambal is Manipur based agri-startup founded by Bijayashanti in 2019, inspired by her undergraduate studies in botany and fascination with aquatic plants of Loktak Lake. The startup specializes in crafting eco-friendly and sustainable fashion from lotus silk, a skill Bijayashanti mastered through online resources due to the lack of formal training in India. Sanajing Sana Thambal is committed to environmental

sustainability, using zero-emission production technology aligned with Sustainable Development Goals (SDGs). Their product line includes mufflers, scarves, shawls, masks, face towels, handkerchiefs, neckties, waistcoats, and yoga mats, all handwoven from lotus silk. The startup has gained a Pan-Indian customer base and averages 30 to 40 orders per month, with an annual turnover of approximately 10 lakhs. Bijayashanti's efforts have directly impacted the lives of 30 weavers and indirectly supported seven lotus farmers. She also mentors women in Manipur in extracting yarn from lotus stems.



**25+  
Farmers  
Benefitted**

**6 products launched,  
30 Women are  
Trained on Lotus Fibre  
Extraction, 5 States  
are Covered**

**12 L  
Revenue  
Generated**

### 15.8 Audit Para

No audit para pertaining to RKVY Division is pending.

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# Chapter 16

## DROUGHT MANAGEMENT

### Overview

**16.1** In accordance with the Government of India (Allocation of Business) Rules, Department of Agriculture and Farmers Welfare (DA&FW) is mandated to coordinate relief measures necessitated by drought, hailstorm, pest attack and cold wave/ frost. Spatial distribution and quantum of rainfall during South West Monsoon (June-September) mainly determines the incidence of drought in the country, as South West Monsoon (SWM) accounts for more than 70% of annual rainfall. DA&FW closely monitors progress of SWM in the country, in coordination with India Meteorological Department (IMD), Ministry of Earth Sciences, and keeps a watch over deficient/large deficient rainfall conditions.

**16.2** The State Governments initiate necessary relief measures in the wake of natural calamities from the State Disaster Response Fund (SDRF), which is readily available with them. Contribution to SDRF is made by the Central and the State Governments in the ratio of 3:1 for 18 General Category States namely, Andhra Pradesh, Bihar, Chhattisgarh, Goa, Gujarat, Haryana, Jharkhand, Karnataka, Kerala, Madhya Pradesh, Maharashtra, Odisha, Punjab, Rajasthan, Tamil Nadu, Telangana, Uttar Pradesh and West Bengal and in the ratio of 9:1 for 10 Special Category States namely, North Eastern States of Arunachal Pradesh, Assam, Manipur, Meghalaya, Mizoram, Nagaland, Sikkim and Tripura and hilly States of Himachal Pradesh and Uttarakhand. The Government of India supplements the efforts of the State Governments by providing requisite financial and logistic support in the wake of natural calamities. Additional financial assistance over and above SDRF is considered from the National Disaster Response Fund (NDRF) for natural calamities of severe nature, as per the established procedure and extant items and norms for assistance from SDRF/NDRF. Allocation under SDRF is made on the basis of recommendations of

the Finance Commission and allocation under SDRF is for the State Governments only.

**16.3** On receipt of Memorandum from the State Government, an Inter-Ministerial Central Team (IMCT) is constituted. IMCT visits the State to assess the loss/damage to crops etc. and recommends appropriate financial assistance from NDRF. During 2024-25, the State Government of Manipur has submitted Memorandum seeking financial assistance from NDRF for Hailstorm in the State during March to May, 2024. During 2024-25, the State Government of Andhra Pradesh has submitted Memorandum seeking financial assistance from NDRF for drought in the State during Kharif 2024. Inter-Ministerial Central Teams (IMCTs) have been constituted to visit the State for assessing loss/damage to crops etc. and recommend appropriate financial assistance from NDRF.

**16.4** DA&FW has reviewed and updated the Crisis Management Plan (CMP) for Drought during the current year i.e. 2024. The Plan defines the roles and responsibilities of various agencies involved in crisis management, including media management during drought. CMP, 2024 was circulated to all the States/Union Territories for preparation of State Crisis Management Plan.

**16.5** Central Research Institute for Dryland Agriculture (CRIDA), under Indian Council of Agricultural Research (ICAR), has developed detailed district-wise contingency plans to provide a broad advisory to farmers. These contingency plans prescribe alternate strategies in the event of climate variability by factoring in crops/livestock/aquaculture practices/pattern, soil characteristics, infrastructural facilities, etc. These plans have been developed based on certain simulated models for different weather conditions like occurrence of flood, drought, cyclone, cold wave/frost, etc. CRIDA has prepared Contingency Plans for 650 districts of the country.

**16.6** A unified geo-portal for monitoring and management of drought has been developed by the Department. The portal hosts all drought related indicators- weather, soil moisture, remote-based

crop conditions, water storage etc., on a single digital platform for use by the States. It enables easy, timely and objective assessment of drought situation over any district or region.

# Chapter 17

## INTERNATIONAL COOPERATION

### 17.1 Overview

**Mandate and Nature of Work:** The mandate of the International Cooperation Division is to foster mutually beneficial partnerships with other countries of the world in bilateral as well as multilateral formats. Bilateral Agreements, Memorandum of Understanding (MoUs), Protocols, and Work Plans with countries of strategic interest are signed and implemented for furthering cooperation in the field of agriculture and allied sectors in coordination with the Ministry of External Affairs, other concerned ministries, departments and the Indian Missions abroad. The International Cooperation Division of DA&FW also handles the work related to coordination and collaboration with the Food & Agriculture Organization (FAO) and World Food Programme (WFP) of the United Nations, being the Nodal Department in India.

**The Office of Minister (Agriculture), Embassy of India, Rome:** The Indian Ambassador to Italy is the permanent representative of India to the FAO, IFAD, and WFP to maintain liaison and coordination with these three Rome-based Agencies (RBAs). Keeping in view the specialized nature and the increasing volume of interactions with the UN agencies and their associated bodies, an agriculture wing headed by an officer of the rank of Joint Secretary to the Government of India with the designation of Minister (Agriculture), EoI, Rome has been set up as a subordinate office under the administrative control of the DA&FW. The Minister (Agriculture), EoI, Rome has been designated as India's Alternate Permanent Representative (APR) to the three Rome Based Agencies. The Minister (Agriculture), EoI, Rome represents India's interests, particularly in the field of agriculture and allied sectors at the meetings of the three Rome-based UN Agencies.

### 17.2 Bilateral Cooperation

**MoU/MoC/Agreements/Work Plans:** The Department of Agriculture and Farmers Welfare has signed 75 MoUs/MoCs/Agreements with 69

countries in agriculture and allied sectors. As a follow-up to the MoUs/Agreements signed by this Department, Joint Working Group (JWG) meetings with Iran, Netherlands, Japan and Saudi Arabia were held in 2024.

**Signing of New MOUS:-** In 2024, MoUs with Ukraine and Guyana were signed for cooperation in agriculture and allied sectors. These MoUs were signed during the visits of the Hon'ble Prime Minister of India to host countries. Additionally, proposals for MoUs with Angola and Nepal have been approved by the Cabinet.

#### Bilateral cooperation with Israel –

Under the Action Plan with Israel, the core activity has been establishing Centre of Excellence for transfer of technology and know-how in diverse areas, viz., Post-Harvest Management, Irrigation and Fertigation, Plant Protection, Introduction of New Varieties, Pollination etc. 42 CoEs have been approved and 34 CoEs have been operational. Approximately Rs. 94 crore of revenue has been generated in these centres since inception with more than 4.9 lakh farmers and more than 2,200 field officers of participating states have been provided training in these Centres.

#### Indo-Israel Villages of Excellence (IIVOE)-

The IIVOE aims to create large-scale value chain ecosystems using Israeli technologies and methodologies from the Indo-Israel CoEs. The IIVOE programme will focus on Modern Agriculture Infrastructure, Capacity Building and Market Linkage. The IIVOE programme covers 190 villages across 12 states, with over 11,000 farmers adopting Israeli technology

#### Joint programs in technology exchange and capacity building with Germany:

- Joint Declaration of Intent (JDI) on Seed Development: Signed on April 11, 2013, with India and Germany, concluded on March 31,

# Department of Agriculture & Farmers Welfare

2024. Activities included master trainer programs, auditing seed testing labs, and study visits.

- A Joint Declaration of Intent (JDI) for a project on "Technical Dialogue on the Development of the Agricultural Market" was signed in November 2019 and extended until 4th August 2025.
- National Institute of Agricultural Extension Management (MANAGE) under this Ministry has signed an MoU with DEULA Nienburg in October 2019.
- A Joint Declaration of Intent (JDI) on the Indo-German Lighthouse" Agroecology and Sustainable Management of Natural Resources" was signed on 2nd May 2022.
- A Letter of Intent (LoI) between SLUSI and GIZ India, signed on May 2024. The period of collaboration is one year until April 2025.

## Centre of Excellences (CoEs) in Horticulture with Netherlands

- Prime Ministers of India and Netherlands during the India-The Netherlands Virtual Summit held in April, 2021 agreed to explore

the possibilities of 25 Centre of Excellence (CoEs) by 2025 in Agriculture /Horticulture-related sectors.

- So far, nine (9) CoEs have been sanctioned. Out of these, 7 CoEs are operational and helped in production of about 14 million quality planting material generating about Rs. 8 crore revenue. More than 25000 farmers have been trained and nearly 25 expert visits have been organised in these centres. These expert visits have facilitated taking the collaboration further in horticulture sector.
- 24 additional CoEs have also been identified after consultation with the State Horticulture Missions and with continued mutual cooperation.

## Important Bilateral Meetings:

Under the chairmanship of Hon'ble Minister of Agriculture & Farmers Welfare and Hon'ble Minister of State for Agriculture & Farmers Welfare, important bilateral meetings were held with Malaysia, New Zealand, Brazil, Chile, Japan, UAE, USA, Germany, UK, Spain.





Under the chairmanship of the Secretary, Department of Agriculture & Farmers Welfare (DA&FW), important bilateral meetings were held with representatives from the USA, Argentina, Italy,

Australia, Netherlands, New Zealand, Moldova, and Estonia. Additionally, meetings were also conducted with international organizations such as the World Bank, JICA, UNDP, WFP, FAO and CGIAR.





## 17.3 Cooperation with International Organizations:

**17.3.1 Food and Agriculture Organization (FAO):**  
Secretary, DA&FW, visited Rome in October 2024 to participate in the FAO's Hand-in-Hand Initiative Investment Forum and the UN Decade of Family Farming Forum. During the visit, he met with Mr. Thabo Mofosi, the Kingdom of Lesotho, Mr. Anping

Ye, Director, South-South & Triangular Cooperation (SSTC) Division in FAO, Mr. Qu Dongyu, Director General of the FAO, Mr. Cindy McCain, WFP Executive Director, Mr. Yousef Juhail, Permanent Representative of Kuwait to the UN Rome-based agencies, Mr. Alisher Shukurov, Deputy Minister of Agriculture of the Republic of Uzbekistan.





### 17.3.2 World Food Programme (WFP):

Secretary, DA&FW, held a meeting with Mr. John Aylieff, WFP Regional Director for Asia and the Pacific, in March 2024, and with Ms. Valerie Guarnieri, WFP Assistant Executive Director for Programme Operations, in August 2024, in Krishi

Bhawan, New Delhi. Additionally, the Secretary chaired the UN WFP Country Programme Advisory Committee (CPAC) meeting in September 2024, and the Outcome Standing Committee 2 on "Nutrition and Food Security" in November 2024, in Krishi Bhawan, New Delhi.



## Department of Agriculture & Farmers Welfare

**17.3.3 Other International Organizations:** In addition to the FAO, WFP and IFAD, the Department of Agriculture & Farmers' Welfare represents India in the following International Organizations (IOs):

1. Asia and Pacific Plant Protection Commission (APPPC)
2. Trust Fund of FAO for Desert Locust in Eastern Region.
3. Trust Fund for International Desert Locust.
4. Organization for Economic Cooperation & Development (OECD).
5. International Coconut Community (ICC) [formerly known as Asia and Pacific Coconut Community (APCC)].

### Group of Twenty (G20)



### 17.4 Strategic Groups :

India is a member of multilateral groupings such as G-20, BRICS (Brazil, Russia, India, China, South Africa, Iran, Egypt, Ethiopia, and the United Arab Emirates); IBSA (India, Brazil, and South Africa); SCO (Shanghai Cooperation Organization); SAARC (South Asian Association for Regional Cooperation); BIMSTEC (Bay of Bengal Initiative for Multi-Sectoral Economic & Technical Co-operation) etc. The Department of Agriculture and Farmers' Welfare represents India in all events related to agriculture and allied sectors.

**17.4.1 BRICS (Brazil, Russia, India, China, South Africa, Iran, Egypt, Ethiopia and the United Arab Emirates):****17.4.2 Externally Aided Projects**

Several externally aided projects in the agriculture sector are being implemented in different parts of India with funding from the World Bank,

International Fund for Agricultural Development (IFAD), JICA, GEF, Asian Development Bank (ADB), etc. A list of the projects is given in Annexure III.



Looking ahead, the International Co-operation Division of the Ministry of Agriculture and Farmers Welfare remains dedicated to a collaborative, sustainable, and technology-driven approach,

ensuring India's active participation in global agricultural development and food security initiatives.

## Annexure I

### Major projects currently under implementation in States with FAO's cooperation:

Sr No	Symbol	Project Title	Start Date	End Date	Total Budget	Project Location
1	TCP/IND /3901	Building capacity of policy makers to mobilize investment for resilient and low emission agri-foods in India under Article 6 of the UNFCCC Paris Agreement & Voluntary Carbon Markets	15-Sep-22	31-Aug-25	\$232,000	PAN India
2	TCP/IND /3902	TCPF: Support for improved monitoring of sustainable agriculture	10-Jan-23	31-Dec-24	\$100,000	PAN India
3	TCP/IND /3903	Enhancing livestock keepers' incomes through certification for milk and dairy products to increase market access in selected sites	3-Mar-23	31-Jul-25	\$169,000	Uttar Pradesh and Rajasthan
4	TCP/IND /3904	TCPF: Support to developing protocols for quality planting material and certification of nurseries for timber and non-timber agroforestry species	4-May-23	31-Jul-25	\$100,000	PAN India

Sr No	Symbol	Project Title	Start Date	End Date	Total Budget	Project Location
5	TCP/IND /3905	Support for quality seed of local landraces/farmers' varieties (LRs/FVs) through community-managed seed systems (CMSS) in Odisha and other rainfed areas	1-Dec-23	30-Nov-25	\$213,000	Odisha
6	TCP/IND /3906	Establishing pathways to integrate nutritional and therapeutic potential of non-bovine milk	1-Jan-24	31-Dec-25	\$216,000	Uttar Pradesh and Rajasthan
7	TCP/IND /4001	TCPF: Strengthening nutrition-sensitive agriculture and food systems in India by piloting and rolling out the FAO 'ENACT' course on nutrition education to academic institutions	1-Feb-24	31-Aug-25	\$100,000	PAN India
8	GCP/IND /183/GFF	Green -Agriculture: Transforming Indian agriculture for global environmental benefits and the conservation of critical biodiversity and forest landscapes (FSP)	1-Apr-19	31-Mar-26	\$33,558,716	Mizoram, Rajasthan, Uttarakhand, Odisha, Madhya Pradesh
9	GCP/IND /184/GFF	Transforming Rice-Wheat Food Systems in India (FSP)	1-Apr-23	30-Jun-28	\$20,366,973	Punjab, Haryana, Odisha, Chhattisgarh
10	GCP /IND/18 9/GCR	Agriculture Sector Readiness for enhanced climate finance at sub-national level in India (GCF RP)	2-Aug-23	1-Jan-26	\$921,659	Odisha, Chhattisgarh, Madhya Pradesh and Punjab
11	GCP /IND/11 228P/GFF	Transforming Andhra Pradesh aquaculture to a sustainable, reduced footprint and climate resilient food system (PPG)	14-Feb-24	9-Aug-25	\$300,000	Andhra Pradesh
12	UNJP/IN D/201/UN	Enhancing resilience to climate change of migrant & vulnerable households in the coastal areas India	1-Sep-23	31-Aug-26	\$1,800,000	Odisha, Telengana

## Department of Agriculture & Farmers Welfare

Sr No	Symbol	Project Title	Start Date	End Date	Total Budget	Project Location
13	OSRO/IN D/203/U SA	Global Health Security (GHS) Project - Immediate technical assistance for animal health systems to address emerging and priority zoonotic diseases and health threats in India	1-Oct-23	30-Sep-27	\$1,200,000	PAN India
14	GCP/IND /202/PAF	Health Security for Pandemic Preparedness and Operationalizing One Health	16-Jul-24	31-Dec-26	\$4,673,000	PAN India

### Annexure II

#### Projects with WFP cooperation:

No.	Name of project	Expected Outcome	Area of Implementation
1.	Support efficient and effective delivery of India's food-based social protection (initiatives like Annapurni (Grain ATM) and Flospan)	<ul style="list-style-type: none"> <li>• Supply Chain Optimisation</li> <li>• SMART warehouse</li> <li>• Learning Management System (LMS)</li> </ul>	Annapurni in 16 locations in Haryana (1), Odisha (1), Uttar Pradesh (3), Uttarakhand (8), Madhya Pradesh (1) and Meghalaya (1); supply chain optimization in 29 out of 31 states; Flospan at 3 locations in Himachal Pradesh (1), Uttarakhand (1) and Rajasthan (1); LMS in all states
2	Strengthening Climate Adaptation, Resilient Food Systems and DRR	<ul style="list-style-type: none"> <li>• Strengthening the capacities and leveraging on India's expertise in DRR/Emergency Preparedness and Response for food and nutrition security</li> <li>• Strengthening Resilience of Small holder farmers through resilient food systems and climate adaptation</li> <li>• Support state governments to promote climate resilient livelihoods by empowering small holder women farmers</li> <li>• Support learning exchanges through South-South &amp; Triangular Cooperation (SSTC) pathways in field of DRR/DRM, Climate and Resilient Food Systems</li> </ul>	<p>Odisha, Andhra Pradesh, Tamil Nadu, Assam, Maharashtra, Karnataka, Rajasthan, Madhya Pradesh, and Uttar Pradesh.</p> <p>Drought Mitigation Planning is expected to be supported in 12 states namely Andhra Pradesh, Bihar, Gujarat, Jharkhand, Karnataka, Madhya Pradesh, Maharashtra, Odisha, Rajasthan, Tamil Nadu, Telangana, Uttar Pradesh</p>
3	Capacity strengthening, technical assistance and innovative solutions to women's self-help groups	<ul style="list-style-type: none"> <li>• Enhancement in women's economic empowerment and thereby sustainable food security in the community</li> </ul>	Odisha, Delhi-NCR. Planned- Haryana, Rajasthan, Assam

<b>No.</b>	<b>Name of project</b>	<b>Expected Outcome</b>	<b>Area of Implementation</b>
4	Support the beneficiaries of the Government's food -based social protection systems to have increase consumption of diverse nutritious and fortified foods	<ul style="list-style-type: none"> <li>• Overall objective of addressing anaemia and micronutrient deficiencies</li> <li>• Prevention of malnutrition among young children</li> <li>• Setting up of kitchen gardens, capacity building of cooks, and demonstrating the operational feasibility of integrating fortified wheat flour</li> <li>• Social behaviour change</li> </ul>	<ul style="list-style-type: none"> <li>• Uttar Pradesh, Uttarakhand, Bihar, Chhattisgarh, Odisha, Haryana, Kerala and Rajasthan</li> </ul>
5	Research, Assessment and Monitoring (RAM) and Evaluation Unit	<ul style="list-style-type: none"> <li>• Supporting Proof of Concept through Evaluation</li> <li>• Increasing the Knowledge Base Around Food Security and Nutrition</li> <li>• Strengthening National and State Monitoring and Evaluation Capacity</li> <li>• Engaging Stakeholders Around Data and Evidence on SDG 2 Monitoring</li> </ul>	<ul style="list-style-type: none"> <li>• Engagement with Development Monitoring and Evaluation Office (DMEO), NITI Aayog for strengthening M&amp;E capacity and pan -India evaluation of NFSA</li> <li>• State level engagements in Rajasthan, Odisha and Uttar Pradesh</li> </ul>

**Annexure III**

	<b>World Bank Projects being implemented by the State governments</b>
1	Assam Agribusiness and Rural Transformation Project
2	Chhattisgarh Inclusive Rural and Accelerated Agriculture Growth Project
3	Himachal Pradesh Horticulture Development Project
4	Project for Source Sustainability and Climate Resilient Rain-fed Agriculture in Himachal Pradesh
5	Uttarakhand Climate Responsive Rain-fed Farming Project
6	State of Maharashtra's Agribusiness and Rural Transformation Project

	<b>Japan International Cooperation Agency (JICA)</b>
1	Himachal Pradesh Crop Diversification Promotion Project (Phase-2)
2	Uttarakhand Integrated Horticulture Development Project
3	Project for Promoting Sustainable Horticulture in Haryana (I)

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## Chapter 18

### INTEGRATED SCHEME ON AGRICULTURE CENSUS & STATISTICS

#### **18.1 Overview**

Agriculture Census is conducted in the country at five-year intervals. It aims at collecting information related to structural characteristics of operational holdings in the country. Periodic Census is the main source of information on number, area and other basic characteristics of operational holdings such as land use, cropping pattern, irrigation, tenancy status, input use etc. So far, ten Agriculture Census have been conducted since 1970-71 and the current Agriculture Census with reference year 2021-22 is 11th in the series.

The constituent activities of the Agriculture Census Programme are carried out in three distinct Phases which are statistically linked together. The Agriculture Census data is collected following a Census-cum-Sample Survey approach, after completion of the reference year. During Phase-I of the Census, data on primary characteristics of operational holdings, like number of holdings and area operated by different size class (marginal, small, semi-medium, medium and large), social groups (SC, ST, Others), gender (male/female), types of holding (individual, joint and institutional), etc. are collected. The second Phase of the Census collects data on detailed characteristics of operational holdings such as land use, irrigation status, cropping pattern etc.

Phase-III of Agriculture Census, (referred as Input Survey) is conducted as a follow up survey to the Agriculture Census (reference year as next Agriculture year to that of the Agriculture Census) to collect data on input use pattern of operational holdings in the country. Time series data generated through the Agriculture Census provides valuable information on structural changes that take place over time in agriculture sector. The results of Agriculture Census are published in the form of reports and are placed on the website of the Department (<https://agcensus.da.gov.in>) for public use.

#### **18.2 Main activities undertaken during 2024-25:**

Details of main activities undertaken during the year 2024-25 are given as under:

- All States/UTs has completed the data collection work for Phase-I of Agriculture Census 2021-22 using hand-held devices like Smartphone/ Tablet/ Laptop/ Personal Computer.
- Meetings/Virtual meetings with States/UTs were organized from time to time under the Chairmanship of Deputy Director General & Agriculture Census Commissioner.
- DA&FW reviews the data collection work time to time as well as discuss the data quality issue of Phase-I with all States/UTs.
- The preparation/finalization of provisional report of Phase-I data of Agriculture Census 2021-22 is in advance stage.
- Trainings have been completed in all States/UTs in respect of Phase-II and Phase-III (Input Survey 2022-23) of Agriculture Census 2021-22.
- Most of States/UTs have started the data collection work for Phase-II and are at advanced stage. For Phase-III (Input Survey 2022-23) of Agriculture Census 2021-22, some of the states have initiated the collection of data.

#### **18.3 Land Use Statistics**

Land Use Statistics erstwhile Special Data Dissemination Standards (SDDS) is involved in collection and compilation of data relating to nine-fold classification of land, irrigated area (source-wise and crop-wise) and total area under crops for States and UTs. The compiled statistics is brought out in the publications 'Land Use Statistics' and 'Agricultural Statistics at a Glance'. The compiled data on Land Use Statistics (District wise and State-wise) from 1998-99 onwards are available on the website. The Unit also coordinate the matter of MoSPI regarding SDG and SAS.

#### 18.4 Agriculture Wages

The Agricultural wages is also involved in collection, compilation and dissemination of data on prevailing average daily wages of agricultural labourers and non-agricultural labourers. Data on the average daily wages is collected from village/district level of currently 22 States for the following categories for different operations:

- Field Labour: Ploughing, Sowing, Weeding, Reaping & Harvesting
- Other Agricultural Labour: Includes average wages of different operations like digging well, cleaning silt from waterways, watering, carrying load, embankment, spraying pesticides, jute fiber extraction, cotton picking, herdsman & Others etc.
- Non agricultural Occupations: Carpenter, Blacksmith & Mason.
- Tractor Driver

Data for these occupations are collected by the State Governments and supplied to Economics, Statistics & Evaluation Division, Ministry of Agriculture & Farmers Welfare on monthly basis. On the basis of furnished data, ESE Division publishes an annual publication: 'Agricultural Wages in India'. This Unit also furnishes the latest prevailing average daily wage rate for publishing in the monthly journal: 'Agricultural Situation in India'.

The annual publication provides information on wage levels for agricultural activities in States across different seasons both for men and women. This rich database facilitates inter-state and intra-state comparison in wage cost variation across different centers spread across 22 States that would help in evidence based policy formulation and further research activities.

#### 18.5 Furnishing Information on Action Taken Note as per format of Department of Expenditure in Appendix-II:

S.No.	Year	No. of Para/PA reports on which ATNs have been submitted to PAC after vetting by Audit	Details of the Para/PA reports on which ATNs are pending		
			No. of ATNs not sent by the Ministry even for the first time	No. of ATNs sent but return with observations and audit is awaiting their resubmission by the Ministry	No. of ATNs which have been finally vetted by audit but have not been submitted by the Ministry to PAC
<b>So far as Agriculture Census is concerned nothing is pending</b>					

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# Chapter 19

## SUB-MISSION ON AGRICULTURAL EXTENSION (SMAE)

### 19.1 Overview

The Sub Mission on Agricultural Extension (SMAE) under Krishonnati Yojana is being implemented with the objective of restructuring and strengthening the agricultural extension machinery with a judicious mix of extensive physical outreach of personnel, enhancement in quality through domain experts & regular capacity building, interactive methods of information dissemination, Public Private Partnership, pervasive & innovative use of Information & Communication Technology (ICT)/Mass Media, Federation of groups and convergence of extension related efforts under various Schemes and programmes of Government of India and the State Governments. The SMAE aims to appropriately strengthen, expand and upscale existing Extension Schemes. The ongoing Extension Schemes include the Central Sector and Centrally Sponsored Schemes being implemented by the Extension Division/Directorate of Extension. Even in the case of Central Sector Schemes which have been subsumed within the Mission, a greater role has been envisaged for the States through their active involvement in planning, implementation and monitoring.

### 19.2. Objectives and Achievements of Major Schemes

#### 19.2.1 Support to State Extension Programmes for Extension Reforms Scheme (ATMA Scheme):

The Scheme 'Support to State Extension Programmes for Extension Reforms (ATMA)' implemented since 2005 has now been included as a Centrally Sponsored component of the Sub-Mission on Agricultural Extension (SMAE) under Green Revolution – Krishonnati Yojana. It is now under implementation in 739 districts of 28 States & 5 UTs of the country. The Scheme promotes a decentralized farmer-driven and farmer-accountable extension system through an institutional arrangement for technology

dissemination in the form of an Agricultural Technology Management Agency (ATMA) at the district level. Under the Scheme, Grants-in-Aid is released to States with the objective to support State Governments' efforts of revitalising the extension system and making available the latest agricultural technologies in different thematic areas to increase agricultural production through extension activities viz. Farmers Training, Demonstrations, Exposure Visits, Kisan Mela, Mobilization of Farmers Groups and Setting up of Farm Schools. Through these activities, latest agriculture technologies are disseminated to farmers of the country.

In order to promote key reforms under the Scheme, ATMA Cafeteria 2018 continues to support activities in line with the following policy parameters:

- Multi-agency extension strategies: At least 10% of allocation on recurring activities at district level is to be used through non-governmental sector viz. NGOs, Farmers' Organization (Fos), Panchayati Raj Institutions (PRIs), para-extension workers, agripreneurs, input suppliers, corporate sector, etc.
- Farming system approach: The activities specified in the cafeteria are broad enough to promote extension delivery consistent with the farming systems approach and extension needs emerging through Strategic Research and Extension Plan (SREP).
- Farmer centric extension services: The cafeteria provides for group-based extension and it has a necessary allocations for activities related to organizing and supporting farmer groups. To supplement these efforts, a provision for rewards and incentives to the best-organized farmer groups has also been provided.
- Convergence: The Strategic Research and Extension Plan (SREP) and State Extension Work Plan (SEWP) would also be mechanisms

- for ensuring the convergence of all activities for extension. At present, resources for extension activities are being provided under different schemes of Centre/State Governments. It is mandated that the SEWP, submitted by the State Governments for funding under the scheme shall explicitly specify the activities to be supported from within the resources of other ongoing schemes as well as from this scheme.
- Mainstreaming gender concerns: It is mandated that at least 30% of resources on programmes and activities are utilized for women farmers and women extension functionaries.

#### **Implementation Status:**

- Institutional arrangements viz. Inter-Departmental Working Group (IDWG)/ in 28 States and 5 UTs, ATMA Core Committees – Governing Board (GB) & ATMA Managing Committee in 739 Districts; Block Technology Team (BTT) in 6092 Blocks & Block Farmer Advisory Committees (BFACs) reconstituted in 5025 Blocks; District FACs have been constituted in 537 districts and State Level FACs in 20 States.
- SEWPs of 28 States/5 UTs have been prepared and approved based on District Agriculture Action Plans of 739 ATMA districts. NCT of Delhi has not submitted State Extension Work Plan (SEWP) for 2024-25. Since the inception of the Scheme in 2005-06 up to 19th January, 2025, an amount of Rs. 8045.95 crore has been released to States/UTs under the scheme. During 2024-25, against the B.E. of Rs.601.50 crores, an amount of Rs.375.98 crore has been released to the States up to 19th January, 2025 for implementation of the Scheme.

#### **Physical performance of the Scheme since its inception in 2005-06 (April 2005 to 19th January, 2025) is as below:**

- Over 6,51,18,302 farmers including 1,74,91,876 farm women (26.86%) have participated in farmer oriented activities like Exposure Visits, Trainings, Demonstrations and Kisan Melas.

- Over 4,12,176 Commodity based Farmer Interest Groups (CIGs)/ FIGs have so far been mobilized under the Scheme.
- Over 2,21,830 Farm Schools have been organized on the fields of outstanding farmers.

#### **Progress of implementation during 2024-25 (up to 19th January, 2025):**

- 15,05,456 farmers including 4,25,020 farm women (28.23%) have been reportedly participated in farmer oriented activities like exposure visits, trainings, demonstrations & Kisan Melas.
- 9010 CIGs/ FIGs organized.
- 8282 Farm Schools organized.
- 12,486 specialists & functionaries have been reported as deployed under ATMA up to 19th January, 2025.

#### **19.2.2 Mass Media Support to Agricultural Extension:**

This Scheme is utilizing countrywide infrastructure and networks of All India Radio and Doordarshan and focusing the dissemination of latest farm practices through Radio and Television networks. The Prasar Bharati, a 'National Public Service Broadcaster' is implementing this Scheme. The objective of the Scheme is to enhance and boost the Agriculture Extension system in the present scenario. At present the farmers need technology, investment, better quality inputs, real time information and most of all the latest know-how for sustaining commercial and cost effective sustainable agriculture. A major shift in the methodology of delivering knowledge to the farm has taken place. Radio and TV have the advantage of reaching a wide audience at a very low cost.

**Telecast of Krishi Darshan Programmes on Doordarshan:** Under this Scheme, a 30 minute programme is being telecast 05 days a week till July 2023 and 03 days a week from August 2023 through 01 National, 18 Regional Kendras of Doordarshan. Similarly, 96 Rural FM Radio Stations of all India Radio are being utilized to broadcast 30 minutes of programme namely, Kisan Vani (6 days a week) till

## **Department of Agriculture & Farmers Welfare**

July 2023 and 03 days a week from August 2023 and 03 programmes namely – Krishi Darshan (30 minutes), Hello Kisan (60 minutes till July 2023 and 30 minutes from August 2023) and Choupal Charcha (30 minutes) (5 days a week till July 2023 and 03 days a week from August 2023) on DD Kisan – 24 hour dedicated Channel for agriculture and farming community. A programme 'Kisan Ki Baat', on the lines of Kisanvani is being broadcast from news on AIR (Erstwhile FM Gold channel) Delhi, since September 2018.

**Broadcast of Kisan Vani Programme on All India Radio:** Under this component, 96 FM/AM stations of All India Radio are broadcasting 30-minute programmes six days a week till July 2023 and three days a week from August 2023 from 6.30-7.00 PM. Each station is broadcasting separate programme in respective dialects/languages.

**Telecast/ Broadcast of spots/ jingles advisories under 'Free Commercial Time (FCT)' on AIR and DD:** In addition to above regular programmes, the Free Commercial Time (FCT) available under Krishi Darshan and Kisanvani programme is being utilized for dissemination of Advisories on Rabi / Kharif season, Jingles on Cooperatives, spots on Kisan Call Centers, Judicious use of fertilizers, safe use of Pesticides, Machinery and Technology, Farm School, NFSM, Kisan Credit Card and Agri -Clinic and Agri -Business Centers (ACABC), the package of practices available to the farmers under National Food Security Mission (NFSM), and other important flagship programmes like Pradhan Mantri Krishi Sichai Yajana, Crop Insurance Scheme, Pradhan Mantri Fasal Bima Yojana, PM- Kisan Samman Nidhi, National Agriculture Market, Soil Health Card, Bee Keeping, Parampragat Krishi Vikas Yojana and Organic Farming etc and contingency plan developed by State Governments and emergent issues like Drought, Flood etc.

**Focused Publicity & Awareness Campaign through other media platforms:** Besides the above, the 'Focused Publicity & Awareness Campaign' which would cut across all the Divisions of the Ministry was launched on July 5, 2010, to create awareness about the assistance available under various schemes of

the Department of Agriculture & Farmers Welfare. This campaign continued in an aesthetic, professional and politically neutral manner. Video Spots and Audio spots are being broadcast/telecast through AIR, DD and Private TV Channels. The above spots are being broadcast/telecast through AIR/DD and private national and regional TV channels during news and entertainment programmes. In addition to this, the Ministry is using various multimedia platforms i.e. railway panels/ stations, bus panels, exhibitions through the Directorate of Field Publicity, web-based digital platforms, hoardings etc. for media campaigns on the above flagship programmes.

**Technical Support to DD Kisan Channel:** DD Kisan, a 24-hour agriculture-based channel caters for the requirements of the farming community inclusive of research updates, extension advisories, market rates and weather updates and is also utilized extensively under the Scheme for dissemination of information.

**Support to Community Radio Stations (CRS):** To promote agriculture extension through mass media at the community level, the Ministry of Agriculture & Farmers Welfare is also providing support for the setting up of Community Radio Stations (CRS), which would make a major contribution to agricultural extension by utilizing the reach of radio transmitter and disseminating information and knowledge, produced locally and having relevance for a specific area in local dialects/languages. As of date, 8 CRS are operational in KVks and NGOs under this Scheme and broadcasting agriculture programmes.

**Print Media/Social Media:** Awareness is also created through print advertisements in leading newspapers across the country. Besides, social media platforms viz. Facebook, twitter, youtube etc. are also being utilized. The national and regional newspapers are being utilized based on their circulation figures.

### **Physical and Financial Progress:**

During 2024-25 (up to December, 2024), 2457 programmes were telecasted on DD and 11349 broadcasted through All India Radio. During the year

2024-25, out of Rs.191.50 crore (BE), an amount of Rs. 103.00 Cr. has been incurred in Print, Electronic and Social Media up to 30.09.2024 under Central Sector Scheme 'Mass Media Support to Agriculture Extension'.

### **19.2.3 Establishment of the Agri-Clinics And Agri-Business Centres (AC&ABC):**

The AC&ABC Scheme is under implementation since April 2002. The Scheme aims at creating gainful self-employment opportunities to unemployed agricultural graduates, agricultural diploma holders, and intermediate in agriculture apart from science graduates with post-graduation in agriculture-related courses for supporting agriculture development and supplementing the efforts of public extension. The National Institute of Agricultural Extension Management (MANAGE) is the implementing agency for training components under the scheme through a network of identified Nodal Training Institutes (NTIs) in various states. National Bank for Agriculture and Rural Development (NABARD) is implementing a subsidy component under the scheme on the behalf of Government of India and is monitoring credit support to Agri-Clinics and Agri-Business Centres through Commercial Banks. The credit-linked back-ended subsidy @ 36% of the Total Financial Outlay (TFO) capital cost of the project funded through a bank loan is available under the scheme. This subsidy is 44% in respect of candidates belonging to SC/ST, Women and all categories of candidates from North-Eastern and Hill States. Now, the benefits of MUDRA Scheme loans also are made available to the entrepreneurs establishing agri-ventures under the scheme.

The scheme has been on-boarded with DBT Bharat Mission on 18-04-2017 and Aadhaar particulars have been made mandatory for getting benefits under the scheme. The online process for the training programme was rolled out on 01-01-2018 through the module [www.acabcmis.gov.in](http://www.acabcmis.gov.in). Subsidy disbursement details are also captured online since 01.01.2019. The benefits of the Mudra Loan Scheme have been extended for ACABC Ventures. Provision of Extension service to farmers by these

agripreneurs has been made a mandatory component of the Scheme. AC&ABC programme has been onboarded on the PRAYAS portal, DIKSHA portal and Jan Samarth portal and integrated with Krishi MApper. Details of the Scheme may be seen at [www.agricclinics.net](http://www.agricclinics.net).

So far, 90870 candidates have been trained and 40363 agri-ventures have been established in the country during the period of implementation of the Scheme up to December 2024. Out of the ventures established since inception, 3851 have been subsidized as on December 2024. During the year 2024-25, starting from April, 1123 candidates have been trained, 476 agri-ventures have been established and 154 ventures were subsidized up to December 2024.

### **19.2.4 Kisan Call Centers (KCC):**

The KCC Scheme was launched on 21st January 2004 to provide answers to farmers' queries on agriculture and allied sectors through toll-free telephone lines. A countrywide common eleven-digit number '1800-180-1551' has been allocated for KCC. The replies to the queries of the farming community are being given in 22 official languages. KCCs are operational from 17 locations in the country covering all the States and UTs. Calls are attended from 6.00 AM to 10.00 PM on all 7 days of a week.

To make farmers aware of this facility, audio and video spots on Kisan Call Centres have been broadcasts/telecast through All India Radio, Doordarshan and other TV channels. A Kisan Knowledge Management System (KKMS) has been created at the backend to capture details of the farmers calling KCCs. Modified Call Escalation Matrix has also been put in place. If the queries are not answered by FTA, it is escalated to the concerned Officer for replying to the query through the KKMS interface within the given time frame.

The restructured Kisan Call Centre programme has many good numbers of unique features viz. all-in-one PCs; 100% call recording; call barging; voice mail service; customized IVRS; call conferencing through the experts; feedback at the end of each call;

playing state-specific advisories during call wait time and SMS to caller farmers giving a gist of answers given by the KCC Farm Tele Advisor, CCTVs and Biometric attendance system at each KCC location, PRI lines with capacity to handle requisite number of incoming and outgoing lines, call holding time less than 30 seconds. The farmer calling KCC can also register to receive SMSs from experts on the subject area. Integration with Kisan Sarathi of ICAR and advanced communication technologies and social media (including smart phone based apps like WhatsApp, Telegram, Chatbot, video calling, two-way video clips, two way audio clips, two way SMS, Artificial Intelligence (AI), Machine learning (ML) etc.) with KCC is under progress. With these modernized facilities at each KCC location, there has been encouraging response from farmers.

Since inception of the scheme till December, 2024; over 665.70 lakh calls have been registered in the KCCs. During the current year, around 24.44 lakh calls have been received upto December, 2024.

## **19.2.5 Human Resource Development (HRD) support:**

DA&FW has strengthened a network of training institutions in the country by supporting the National Institute of Agricultural Extension Management (MANAGE) at Hyderabad; four Regional Extension Education Institutes (EEIs) at the regional level and the State Agricultural Management & Extension Training Institutes (SAMETIs) at the State level.

National Institute of Agricultural Extension Management (MANAGE) is providing training support to senior and middle level functionaries of the State Governments. It is also providing necessary support to the states in implementation of Extension Reforms (ATMA) Scheme. Against 422 training courses planned for 2024-25, MANAGE has conducted 333 training programs (Up to 19th January, 2025) in which 27257 participant have been participated during current year. Against BE of Rs. 18.25 crore, an amount of Rs. 9.25 crore has been released till 19th January, 2025. The implementation of self-financing professional courses viz. two-year Post Graduate Program in

Agri-Business Management, one-year 'Post Graduate Diploma in Agricultural Extension Management' in distance learning mode and one year Diploma in Agricultural Extension Services for Input Dealers (DAESI) by MANAGE (organized on weekends/weekly holidays) are being continued during the year 2024-25.

**Extension Education Institutes (EEIs):** Four Extension Education Institutes namely, Nilokheri (Haryana), Hyderabad (Telangana), Anand (Gujarat) and Jorhat/Guwahati (Assam) are functioning at the Regional Level. The objectives of EEIs are to improve the skills and professional competence of middle level extension field functionaries of agriculture and allied departments of the State/UTs in the areas of (a) Extension Education; (b) Extension Methodology; (c) Information and Communication Technology; (d) Training Methodology; (e) Communication; (f) Market led Extension; etc. During 2024-25, a total of 230 training programmes have been planned, out of which the EEIs have conducted 134 training programmes with 4317 participants during 2024-25. Against the budget grant of Rs. 16.40 crore, an amount of Rs. 9.15 crore has been released to the EEIs during 2024-25 till 31st December, 2024.

**Diploma in Agricultural Extension Services for Input Dealers (DAESI):** DAESI is of one year (expanded to 48 weeks) regular course launched in October, 2015 with an objective to impart education in agriculture and other allied areas to the Input Dealers so that they can establish linkage to their business with extension services, besides discharging regulatory responsibilities enjoined on them. This programme was earlier implemented through MANAGE @Rs.20,000 per candidate in self-financial mode in Andhra Pradesh, Maharashtra, Tamil Nadu, Odisha, Jharkhand & West Bengal. It has been decided to implement DAESI programme across the country through SAMETIs with involving Agribusiness Companies, ATMAs, KVKS, Agril. Colleges & NGOs. So far, 96150 input dealers have been trained upto December, 2024. During 2024-25, 174 batches of DAESI programme have been conducted and 6960 input dealers trained till 31st December, 2024.

### **19.2.6 National Gender Resource Centre in Agriculture (NGRCA):**

The National Gender Resource Centre in Agriculture (NGRCA) of the Department of Agriculture & Farmers Welfare established in Extension Division is supported under the component of 'Extension Support to Central Institutes/ Directorate of Extension' of 'Sub-Mission on Agricultural Extension'. The NGRCA acts as a focal point for convergence of all gender related activities and issues in agriculture and allied sectors within and outside DA&FW; addressing gender dimension to agriculture policies and programmes; rendering advocacy/ advisory services to the States/UTs to internalize gender specific interventions for bringing the farm women in the mainstream of agriculture development. Being a Nodal Agency for Women in Agriculture in DA&FW, Ministry of Agriculture & Farmers Welfare; the Centre is actively involved in the revision of guidelines of various beneficiary oriented schemes/programmes of DA&FW to ensure allocation of resources and flow of benefits to the women farmers in proportion to their participation in agricultural activities.

Major activities undertaken by NGRCA:

Mahila Kisan Diwas-2024:- The National Gender Resource Centre in Agriculture (NGRCA), Directorate of Extension (DOE), Department of Agriculture & Farmers Welfare in collaboration with the Extension Education Institute , Guwahati celebrated 'Mahila Kisan Diwas' or 'International Rural Women Day' on 15th October, 2024 at the Extension Education Institute , Guwahati on the theme 'Role of Women Entrepreneurs in Transforming Agriculture' . Officials from the Ministry of Agriculture & Farmers Welfare and various institutions participated in the said event. A book titled Inspiring Journeys of Women in Agriculture compiled and edited by NGRCA; DOE and a short video film on the Gender Mainstreaming efforts in the agriculture was also launched by dignitaries with the purpose of cross learning and replication of the stories narrated, offering valuable resources and information to the women farmers. The event also featured an exhibition and women farmers and entrepreneurs exhibited their products

in the stalls. The senior and middle level extension functionaries, women farmers and agri-entrepreneurs and resource persons from various States/Institutes/Start-ups/training institutes participated in the event. Also, the events including trainings and felicitation of women farmers and agripreneurs were organized across the country on the occasion of Mahila Kisan Diwas by the States/UTs and institutions working under the aegis of the Department of Agriculture & Farmers Welfare.

### **19.2.7 Pre-Seasonal DA&FW-ICAR Interfaces:**

The Extension Division of DA&FW has been organizing Pre-Seasonal Interfaces before Kharif & Rabi every year involving Technical Division of Department of Agriculture & Farmers Welfare (DA&FW) and Indian Council of Agricultural Research (ICAR). The effort is aimed at understanding the key issues - both from Research and Development perspective in agriculture and allied sectors and evolving joint strategies to address those issues in the ensuing Kharif/ Rabi season. The issues so emerged warranting actions by States are then flagged in the National Conference on Agriculture for Kharif / Rabi and are discussed with the States for its execution at field level.

The Pre-Kharif 2024 and Pre-Rabi 2024 DA&FW-ICAR Interface was organized on 24th April, 2024 and 24th September, 2024 and the group recommendations of the said interface were shared with the Senior Officers of the Agriculture Department of States / Uts.

### **PROGRAMMES OF NORTH-EASTERN STATES:**

The status of implementation of Schemes in the North Eastern Region is as follows:

S. No.	Name of the State	No. of ATMA Registered
1.	Arunachal Pradesh	25
2.	Assam	33
3.	Manipur	09
4.	Mizoram	08
5.	Meghalaya	11
6.	Nagaland	15
7.	Sikkim	06
8.	Tripura	08
	<b>Total:</b>	<b>115</b>

## Department of Agriculture & Farmers Welfare

During the current financial year 2024-25, Budget Estimate of Rs. 68.50 crore was earmarked for North Eastern States for implementing the Scheme whereas an amount of Rs. 42.30 crore has been released to North Eastern States – Arunachal Pradesh (Rs. 5.50 crore), Assam (Rs. 7.50 crore), Manipur (Rs. 2.50 crore), Meghalaya (Rs. 6.53 crore), Mizoram (Rs. 5.25 crore), Nagaland (Rs. 8.25 crore), Tripura (Rs. 4.38 crore) and Sikkim (Rs. 2.38 crore) till 19th January, 2025.

**Establishment of Agri-Clinics and Agri-Business Centres (AC&ABC):** Candidate from North-Eastern States are entitled for an additional benefit of 44% subsidy on the Total Financial Outlay (TFO) as against to 36% for general category candidates. Details of candidates trained and venture established from since the inception to till December, 2024 is given below:

S. No.	State	Candidates Trained	Ventures Established
		Since Inception	Since Inception
1.	Arunachal Pradesh	48	03
2.	Assam	844	281
3.	Manipur	522	135
4.	Meghalaya	37	04
5.	Mizoram	52	00
6.	Nagaland	187	22
7.	Sikkim	09	01
8.	Tripura	06	02
	Total	1705	448

**Kisan Call Centers (KCCs):** The KCC located at Guwahati caters to the needs of Arunachal Pradesh, Assam, Manipur and Nagaland; and KCC located at Agartala caters to the needs of Tripura, Mizoram and Meghalaya. For Sikkim, the KCC is located at Kolkata (West Bengal). Queries are replied in different languages depending upon the area from where the query is received. Since the beginning of Scheme, the calls registered from various states of North-Eastern Region upto December, 2024 are Arunachal Pradesh (14,527), Assam (4,37,729), Manipur (37,791), Meghalaya (25,028), Mizoram (15,242), Nagaland (892), Sikkim (25,888) and Tripura (63,483). The calls registered from these states during current year up to December, 2024 are Arunachal Pradesh (949), Assam (13,433), Manipur (933), Meghalaya (3,545), Mizoram (2,999), Nagaland (631), Sikkim (1,754) & Tripura (2,924).

**Extension Education Institute (EEI):** EEI set up at Jorhat/Guwahati (Assam) in 1987 has been providing training support at the regional level to

the middle level field functionaries of in 8 States of North Eastern Region and West Bengal. Since 2004-2005, 516 courses have been organized with 46,355 participants trained till December, 2024. During 2024-25, a total of 32 training programmes have been planned with 640 participants, out of which the EEI Jorhat/Guwahati (Assam), (NER) have conducted 7 training programmes with 199 participants during 2024-25. Against the budget grant of Rs.4.40 crore, an amount of Rs. 2.65 crore has been released to the EEIs EEI Jorhat/Guwahati (Assam), (NER) during 2024-25 till 31st December, 2024.

**Mass Media Scheme in NE Region:** The programmes under the Scheme are being disseminated throughout the country including NE region benefiting the farmers of the area. In the NE Region, the programmes are being disseminated in regional languages & local dialects through Six FM station and One Regional Kendras.

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# Chapter 20

## SUB-MISSION ON SEED AND PLANTING MATERIAL (SMSPI)

### 20.1 OVERVIEW

The mandate of Seeds Division is to promote production and multiplication of quality seeds of all crops so that the required quantities of seeds can be made available in time to farmers in the country. Functions/ responsibilities include-

- Formulation and implementation of policy and programmes on quality seed production.
- To recommend proposals for import and export of seeds and planting material.
- To supplement the efforts of States/ Union Territories in production and distribution of certified/ quality seeds.
- To deal with matters relating to Intellectual Property Rights in Agriculture, Biodiversity, International Treaty on Plant Genetic Resources for Food and Agriculture, UPOV Convention, Import/ Export of seeds.
- Matters relating to Central PSU - National Seeds Corporation
- Matters relating to Protection of Plant Varieties & Farmers' Rights (PPV&FR) Authority - an autonomous organization and National Seeds Research & Training Centre (NSRTC), Varanasi, Uttar Pradesh- a subordinate office.
- Matters relating to International Rice Research Institute (IRRI) South Asia Regional Centre (ISARC), Varanasi, Uttar Pradesh.

### 20.2 Major Schemes – Objectives

1. Sub-Mission on Seed and Planting Material (SMSPI): The objective is to develop/strengthen the seed sector and to enhance production and multiplication of high yielding certified/quality seeds of all agricultural crops and making it available to farmers at affordable prices and also place an effective system for protection of plant varieties, rights of farmers and plant breeders to encourage development of new varieties of plants. The existing components of the SMSPI scheme areas under:-

S. No.	Intervention
i.	Strengthening for seed quality control
ii.	Seed Village Programme
iii.	National Seed Reserve
iv.	Assistance for boosting seed production in private sector
v.	Creation of Seed Infrastructure facilities
vi.	Transport subsidy on movement of seeds to North Eastern states including Sikkim, J&K, Himachal Pradesh, Uttarakhand and hill areas of West Bengal

#### (i) Strengthening of Seed Quality Control Organizations (State Seed Certification Agencies and State Seed Testing Laboratories etc): -

The responsibility of execution of various provisions of the Seeds Act, 1966, the Seeds Rules, 1968 and the Seeds (Control) Order, 1983 is vested with State Department of Agriculture. The Seed Inspectors who have been appointed under the Act can inspect the premises of seed selling, marketing, processing and seeds storage to draw the samples for seeds testing to ensure seeds standards as per the Indian Minimum Seed Certification Standards, 2013. Accordingly, Seed Inspector may initiate appropriate action /legal proceedings against the offenders selling sub-standard seeds as per the provisions of the Seeds Act/Rules and Seed (Control) Order. These Seed Inspectors are also authorized to stop the sale of sub-standard seeds and to seize the stocks. Seed Inspectors have also been provided with powers of enforcement under the Environment (Protection) Act, 1986 to regulate the quality of Genetically Modified (GM) crops and also control /curb the sale of unapproved GM event of other Seeds.

#### (ii) Seed Village Programme: -

In order to upgrade the quality of farmer saved seeds which is about 60-65% of the total seeds used for the crop production programme, the following interventions are made:

- 50% assistance for seeds of cereal crops and 60% for oilseeds, pulses, fodder and green

manure crops is provided for distribution of foundation/certified seeds required for one-acre area performer.

- Financial assistance is also provided for farmers training for the group of 50-150 farmers each group, Seed treating/dressing drums for 20kg and 40 kg capacity, Seed storage bins.

**(iii) National Seed Reserve:-** In order to meet the requirement of seeds of short and medium duration crop varieties during natural calamities and unforeseen conditions, the National Seed Reserve (NSR) a component of Sub-Mission on Seeds & Planting Material is being implemented by 22 implementing agencies in the country namely National Seeds Corporation, State Seed Corporations and State Department of Agriculture, Jharkhand, Tamil Nadu, Himachal Pradesh and Jammu & Kashmir.

Under the scheme, financial assistance is provided to the implementing agencies for revolving funds (Cost of Seeds), maintenance cost to maintain certified and foundation seeds of short and medium duration crop varieties and price differential for left over stock of seeds. If a contingency situation occurs, the implementing agencies make available seeds to farmers for re-sowing purpose at a reasonable cost.

**(iv) Boosting Seed Production in Private Sector:**

Under this component, assistance is provided for creation of infrastructure facilities relating to seed cleaning, grading, processing, seed treating, packaging and storage units as well as for seed testing facilities including R&D. National Seed Corporation is the nodal agency for implementation and monitoring of the component.

**(v) Creation of Seed Infrastructure (Public sector 100 % GOI Share)**

In order to establish/ strengthen infrastructure facilities for production and distribution of quality seeds, financial assistance for creating facilities of seed cleaning, grading, processing, packing and seed storage is provided/ available to the states and public sector implementing agencies.

**(vi) Transport subsidy on movement of seeds to North Eastern states including Sikkim, J&K, Himachal Pradesh, Uttarakhand and hill areas of West Bengal:**

In order to make timely availability of certified/quality seeds at affordable price to the farmers of hilly/remote areas of North-Eastern and other States, this scheme is in operation.

- 100% difference between road and rail transportation charge is being reimbursed to implementing State/agencies for movement of seeds produced from outside the State to the identified State Capital/Distt. Headquarter, and;
- Actual cost is also provided for movement of seeds transported within the State from State Capital/Distt Headquarter to sale outlets/sale counters is being reimbursed.

## 2. Seed Traceability

- The Ministry of Agriculture & Farmer's Welfare has launched the SATHI (Seed Authentication, Traceability & Holistic Inventory) portal and mobile App, a Centralized Online System for seed traceability, authentication and inventory designed to deal with challenges of seed production, quality seed identification and seed certification.
- 23 States have done complete operation of multiple seasons on the SATHI portal, while remaining states are in the process to join from next season.
- The Phase-II of SATHI Portal-Seed Supply Chain Management (Inventory) is in progress. The trial run has successfully conducted in some States (Uttarakhand, Maharashtra, Punjab, Chhattisgarh, Rajasthan and Karnataka).
- The Phase-II of SATHI portal is now operational in the State of Maharashtra upto Seed dealers' level.

## 20.3 Organisations under the Seed Division

### (i) Protection of Plant Varieties and Farmers' Rights Authority (PPV&FRA):-

The Department provides administrative support to the Statutory Organization Protection of Plant Varieties and Farmers' Rights Authority functioning in the Ministry Rights Authority Protection of as per the provisions of the Protection of Plant Varieties and Farmers' Rights (PPV&FR) Act in 2001 (53 of 2001). The Authority was set up in 2005.

The Authority has the status of a Civil Court with the Chair and Registrars having judicial powers whose orders can be challenged only in the High Courts.

#### 1. Objectives of the PPV&FR Authority

- To establish effective system for plant varieties, rights of farmers and plant breeders and to encourage the development of new varieties of plants
- To recognize and protect the rights of the farmers in respect of their contribution made at any time in conserving improving and making available plant genetic resources for development of new plant varieties
- To protect plant breeders rights to stimulate investment for research and development both in the public and private sector for the development of new plant varieties to ensure availability of high quality seeds and planting material to the farmers.

#### 2. Registry Branches of the PPV& FR Authority

The Head Office of PPV&FRA at New Delhi along with the five branch offices at at Pune (Maharashtra), Shivamogga (Karnataka), Palampur (Himachal Pradesh), Ranchi (Jharkhand) and Guwahati (Assam).

#### 3. Activities of the PPV&FR Authority:-

The Authority provides a system for IP protection on the plant varieties to the plant breeders, the rights of farmers either as cultivators of the varieties or plant breeders and to encourage the development of new varieties of plants. Any variety that essentially fulfills the criteria of distinctiveness, uniformity and

stability (DUS) and novelty (in the case of new variety) is eligible for registration under the provisions of PPV&FR Act, 2001.

#### 4. DUS Test Centers

DUS test centres are established in different agro climatic zones in the country under the National Agricultural Research System (NARS). Each variety has to be evaluated for its (Distinctiveness (D)), (uniformity (U)) and stability (S)). Morphological descriptor sets of characters as they vary crop-species-wise is notified for the species in National Gazette of India with full guidelines published in Plant Variety Journal. So far, over the thirteen years of its existence, 197 crop species have been notified with guidelines printed on Plant Variety Journal as well as on website of the PPVFR. The total number of DUS Test Centre are around 150.

#### 5. Plant Variety Journal of India

As provided in the PPV&FR Act (2001), the Authority publishes its official journal "Plant Varieties Journal of India" (PVJI) as a monthly publication. This journal is equal to an Official Gazette under the PPV&FR Regulations, 2006.

#### 6. Varieties Registrable in India

- New Variety
- Extant Variety
- Notified under Seeds Act, 1966
- Farmer's Variety
- Variety of Common Knowledge
- Essentially Derived Variety

#### 7. National Register of Plant Varieties

National Register of Plant Varieties has been kept at the head office of the Registry, containing the names of all the registered plant varieties with the names and addresses of their respective breeders, the rights of such breeders in respect of the registered varieties, the particulars of the denomination of each registered variety, its seed or other propagating material along with specification of salient features thereof and such other matters as may be prescribed.

## 8. National Gene Bank

Authority has established National Gene Bank to store the seed material including parental lines submitted by the breeders of the registered varieties. The seed lot is stored under low temperature conditions at 50 C for the entire registration period. The seed stored in the National Gene Bank will be used for dispute settlement or when an exigency arises for invoking compulsory licensing provision. Such a seed deposition in the National Gene Bank would dissuade market malpractices or violations as the sample in custody can be drawn to verify the facts.

## 9. Farmers Rights and Breeders Rights in India

Recognizing the role played by farmers in maintaining seed, selecting for variants in the traditional variety they have been cultivating in the past decades or sharing the seed with other farmers of India play the role of growers of the variety as well as plant breeders by tradition, The PPVFRA (2001) as a large departure from plant variety protection systems in other countries, enables a farmer in the same manner as a plant breeder to breed and register the variety keeping value of novelty, distinctiveness, uniformity and stability of the new variety.

### Farmers' rights:

- Right to breed new variety like any other plant breeder
- Right to register farmers varieties either as a community (in case of land races) or individually (in case of traditional variety or selection in a tradition variety)
- Right to conserve plant varieties as land races or wild relatives of economic plant species as well as their improvement through selection and be entitled for recognition or reward from the Gene Fund
- Entitled to save, use, sow, re-sow, exchange, share or sell his farm produce including seed of a variety protected under the Act. Farmer cannot sell branded seed of a protected variety
- Right to seek compensation in the event a registered variety fails to return expected

performance after following the prescribed package of practices

**Plant Breeders' Rights:** Entitled to produce, sell, market, distribute, import or export the variety.

### (ii) National Seed Research and Training Centre (NSRTC), Varanasi:

The National Seed Research and Training Centre (NSRTC) Varanasi, Uttar Pradesh has been functioning since October, 2005 and has been notified as Central Seed Testing and Referral Laboratory (CSTL) with effect from 01.04.2007. The objective of CSTL, NSRTC is to maintain uniformity in seed testing to ensure supply of quality seeds at National level. It also acts as Referral Laboratory under Court of Law for seed related issues. NSRTC is a premier institute for capacity building in relation to maintaining Seed Quality Assurance by offering HRD activities round the year. The CSTL working under ambit of NSRTC is member laboratory of International Seed Testing Association (ISTA) since 2007.

### (iii) National Seeds Corporation Limited

National Seeds Corporation Limited is a Schedule -B Central Public Sector Enterprise under the administrative control of the Department of Agriculture and Farmers Welfare. It enjoys Mini Ratna (Category-1) status with ISO 9001: 2015 certification.

The Company is producing all kinds of seeds, i.e., Test Stock, Breeder seed, Foundation Seed, and Certified Seed. In addition to this, NSC is also producing the sapling of fruit crops, flower seeds, and saplings of ornamental plants and forestry. The seed is being produced in the Company's own farms and through seed growers. NSC is also providing fish seeds to the farmers. Focus is to increase the production of seeds of oilseeds, pulses, fodder, and vegetable crops.

### (iv) International Rice Research Institute (IRRI), South Asia Regional Center (ISARC): IRRI South Asia Regional Centre (ISARC), Varanasi, India

Aligned with IRRI's mission, Government of India directives, and the needs of stakeholders, the IRRI South Asia Regional Centre (ISARC) is committed to

eradicating poverty and hunger, promoting sustainable rice-based agri-food systems that adapt to climate change, and ensuring food and nutrition security for a growing population—all while minimizing stress on the environment. ISARC accomplishes this through its three units: the Centre of Excellence in Rice Value Addition (CERVA), the Centre of Excellence in Sustainable Agriculture

(CESA), and the Centre of Education, Innovation and Research for Development (CEIRD). These units focus on fostering collaborations with system stakeholders, conducting innovative research, translating lab discoveries to practical applications, facilitating accessible learning platforms, and implementing capacity-building programs.

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# Chapter 21

## SUB MISSION ON AGRICULTURAL MECHANIZATION (SMAM)

### 21.1 Overview

Agricultural Mechanization is one of the key driver for sustainable development of agriculture sector. Mechanization helps in increasing production, productivity & house hold income by better & efficient management of the inputs like seeds, fertilizers, water, labour etc. It also helps to enhance the productivity of inputs, reduce losses, reduce operational time and drudgery associated various farm operations. Agricultural Mechanization also helps in value addition and improving the quality farm produce for better market price.

Mechanization has been well received in India. In those States where agricultural mechanization has made good progress, its benefits are being shared by all farmers irrespective of the size of their operational holdings. However, the farm mechanization in India, notwithstanding inherent advantage, could able to achieve a meager growth rate in last few decades. Degree of farm mechanization is expressed as a ratio of mechanical power to cultivable unit area which stands at about 2.49 kW/ha (2018-19). However, still there is disparity in its spread in various parts of the country and it is also compared lower to developed countries. For achieving optimum farm productivity, the farm power availability needs to be increased to atleast 4.0 kW/ha by 2030.

### 21.2 Government Initiatives

Sub Mission on Agricultural Mechanization (SMAM): Ministry of Agriculture & Farmers Welfare is already promoting agricultural mechanization through various schemes and programmes. However, in order to lay a special emphasis on farm mechanization and to bring more inclusiveness, a dedicated scheme 'Sub-Mission on Agricultural Mechanization (SMAM)' has been started from 2014-15. SMAM is now being implemented under the umbrella of Centrally Sponsored Scheme of Rashtriya Krishi Vikas Yojana (RKVY) and it has been

decided that all the mechanization components under various schemes will now be implemented under SMAM.

#### **SMAM objectives:**

- Increasing the reach of farm mechanization to small and marginal farmers and to the regions where availability of farm power is low;
- Promoting 'Custom Hiring Centers' to offset the adverse economies of scale arising due to small landholding and high cost of individual ownership;
- Creating awareness among stakeholders through demonstration and capacity building activities and differentiated Information, Education and Communication strategies;
- Ensuring performance testing and certification at designated testing centers located all over the country.

#### **SMAM have the following major components:**

**(i) Custom Hiring Centres (CHCs) and Crop specific farm machinery and equipment for Custom Hiring:** aims at creating infrastructure for making available machines and equipments to the farmers on rental basis. Financial assistance @ 40% of the project cost is provided to Rural Entrepreneurs (Rural youth and farmer as an entrepreneur), Cooperative Societies of farmers, Farmer Producer Organizations (FPOs) and Panchayats. The maximum project cost of CHCs can be up to Rs. 250 lakhs.

**(ii) Establishment of Farm Machinery Banks:** Provides financial assistance @ 80% to Cooperative Societies, FPOs and Panchayats to set up Farm Machinery Banks of project cost up to Rs. 30 lakhs in identified villages in low mechanized States. For the North-Eastern States, the rate of financial assistance is @95% of the project cost for the projects up to Rs. 30 Lakhs.

**(iii) Financial assistance for purchase of agricultural machines:** financial assistance for purchase of agricultural machines and equipments by the farmers on individual ownership basis is provided to the small and marginal farmers, Scheduled Caste/Scheduled Tribe farmers, Women farmers and North Eastern Region Farmers @50% of the cost of machine with applicable ceiling limits. For other farmers the rate of financial assistance is @40% of the cost. There is special provision for North Eastern States under which financial assistance @ 100% of the cost of machines costing up to Rs. 1.25 lakhs/machine is provided as subsidy.

### **21.3 Financial assistance for Kisan Drone Promotion:**

**(a) Demonstration of Drone technologies in farmers' fields:** financial assistance @ 100% of the cost of agriculture drone up to a maximum of Rs. 10 lakhs per drone is provided as grant for purchase of drones by the Farm Machinery Training & Testing Institutes (FMTTIs), ICAR institutes, Krishi Vigyan Kendras (KVKs), State Agriculture Universities (SAUs), State and other Central Government Agricultural Institutions/Departments and PSUs of Government of India engaged in agricultural activities. The Farmers Producers Organizations (FPOs) are provided grants up to 75% of the cost of agriculture drone for its demonstrations on the farmers' fields.

A contingency expenditure of Rs.6000 per hectare is provided to implementing agencies that do not want to purchase drones but will hire drones for demonstrations from Custom Hiring Centres, Hi-tech Hubs, Drone Manufacturers and Start-Ups. The contingent expenditure to implementing agencies that purchases drones for drone demonstrations is limited to Rs.3000 per hectare.

**(b) Providing agricultural services through drone application:** In order to make available drone services to farmers on rental basis, the financial assistance @ 40% of the basic cost of drone and its attachments up to a maximum of Rs. 4.00 lakhs is provided for purchase of drones by Custom

Hiring Centers under Cooperative Society of Farmers, FPOs and Rural entrepreneurs. Agriculture graduates establishing Custom Hiring Centers are eligible to receive financial assistance @ 50% of the cost of drone up to a maximum of Rs.5.00 lakhs per drone.

**(c) Financial assistance for purchase of drones by farmers on individual ownership basis:** Small and Marginal Farmers, SC/ST Farmers, Women Farmers and the Farmers of the North Eastern States are provided financial assistance @ 50% of the cost of drone up to a maximum of Rs. 5.00 lakhs. The other farmers are provided financial assistance @ 40% of the cost of drone up to a maximum of Rs. 4.00 lakhs.

### **(d) Other Initiatives for Kisan drone Promotion:**

(i) Standard Operating Procedure (SOP) for the use of Kisan Drones for use in the application of pesticides for crop protection and for spraying soil and crop nutrients in agriculture, forestry on cropped areas etc. are released. Crop specific Standard Operating procedure for 10 crops for the application of pesticides with drones is released. Preparation of Crop Specific "Standard Operating Procedure (SOPs)" for the application of various forms of soil and plant nutrients in Agriculture through drones are underway and a Committee of the expert members from SAUs, ICAR and Concerned Divisions/Departments of this Ministry has already been constituted.

(ii) The Northern Region Farm Machinery Training and Testing Institute (NRFMTTI), Hisar (Haryana) has been approved by DGCA as Remote Pilot Training Organization (RPTO) for training of Drone Pilots. The institution is partnering with WOW Go Green LLP, A 1715, Green Field Colony, Faridabad, Haryana for this centre in Public Private Partnership model.

(iii) The funds provided to the States and various institutions and ICAR for Kisan drone promotion is indicated in **Table 2**



Demonstration of Kisan Drone

## (e) NAMO DRONE DIDI SCHEME:

The Government has also recently approved a Central Sector Scheme 'NAMO DRONE DIDI' for providing drones to the Women Self Help Groups (SHGs) with an outlay of Rs. 1261 Crores. The scheme aims to provide drones to 15000 selected Women SHGs for providing rental services to farmers for agriculture purpose (application of fertilizers and pesticides). Of the total 15,000 drones, first 500 drones have been procured and distributed to selected SHGs by Lead Fertilizer Companies (LFCs) in 2023-24, using their internal resources. Remaining 14500 drones will be provided under this scheme during 2024-25 and 2025-26. Central Financial Assistance @ 80% of the cost of drone and accessories/ ancillary charges up to a maximum of Rs. 8.0 lakhs will be provided to the women SHGs for purchase of drones. The Cluster Level Federations (CLFs) of SHGs may raise the balance amount (total cost of procurement minus subsidy) as loan under National Agriculture Infra Financing Facility (AIF). Interest subvention @ 3% on the AIF loan will be provided to the CLFs. The scheme will help in infusing advance technology in agriculture for improved efficiency, enhanced crop yield and reduced cost of operation for the benefit of farmers. The scheme will also provide sustainable business and livelihood support to SHGs and they would be able to earn additional income of at least Rs. 1.0 lakhs per annum.

**To supplement the efforts for promotion of agricultural mechanization in the country, the SMAM also have the following sub-components**

### (a) Skill Development in Farm Mechanization:

The Department has established four Farm Machinery Training & Testing Institutes at Budni (MP), Hisar (Haryana), Anantapur (Andhra Pradesh) and Biswanath Chariali (Assam). These institutes are engaged in skill development training programmes in the field of farm mechanization for wide range of beneficiaries that includes Farmers, Rural Youth, Migrant Labourers, Women Farmers, Technicians, Engineering Students, Diploma Students, ITI Student, Apprentice Training Programmes for Graduate Engineers, ITI Certificate holders, in service executives & technical officers from Govt & NGO engaged in the area of Farm machinery and allied Fields and representatives of agricultural machinery manufacturers.

For farmers, lodging is provided free of cost. A stipend of Rs. 200 per day per farmer is provided to meet boarding expenses. To and fro travel is provided on actual basis limited to a total of Rs. 500/- per trainee.

1.	Central Farm Machinery Training & Testing Institute, Tractor Nagar, P.O. Budni-466455, Distt. Sehore (MP)		
	<b>Phone : 07564-234729</b>	<b>E-Mail : fmti-mp@nic.in</b>	<b>Website : <a href="http://fmmtibudni.gov.in/">http://fmmtibudni.gov.in/</a></b>
2.	Northern Region Farm Machinery Training & Testing Institute, Sirsa Road, Hisar (Haryana)-125001		
	<b>Phone : 01662 -276984</b>	<b>E-Mail : fmti-nr@nic.in</b>	<b>Website: <a href="http://nrfmtti.gov.in/">http://nrfmtti.gov.in/</a></b>
3.	Southern Region Farm Machinery Training & Testing Institute Tractor Nagar, P.O. Garladinne - 515731 Distt. Anantpur (Andhra Pradesh)		
	<b>Phone : 08551-286441</b>	<b>E-Mail : fmti-sr@nic.in</b>	<b>Website: <a href="http://srfmtti.dacnet.nic.in/">http://srfmtti.dacnet.nic.in/</a></b>
4.	North Eastern Region Farm Machinery Training & Testing Institute P.O. Biswanath Chariali-784176, Distt. Sonitpur, (Assam)		
	<b>Phone : 03715-222094</b>	<b>E-Mail : fmti-ner@nic.in</b>	<b>Website:<a href="http://nerfmtti.nic.in/">http://nerfmtti.nic.in/</a></b>

**(b) Demonstration of Newly Developed Agricultural/Horticultural Equipment on farmers' fields:** conducted by the FMTTIs, ICAR Institutions, State Governments and other Central Institutes, FPOs etc. The institutes conducting the demonstrations are provided 100 percent grants for purchase of machines/technologies to be demonstrated and also contingent expenditure to conduct demonstrations on the farmers' fields. Total

479 field demonstrations have been conducted by the FMTTIs during the financial year 2021-22. During the year 2022-23, total 374 field demonstrations were conducted. During the year 2023-24, a total 449 demonstrations including demonstrations of kisan drones were conducted. During the year 2024-25 (Upto 31st December, 2024), a total of 405 including demonstration of kisan drones were conducted.



Demonstrations Activities at FMTTIs

## Department of Agriculture & Farmers Welfare

(c) Testing and Evaluation of Farm Machinery & Equipment: The Farm Machinery Training and Testing Institute at Budni is engaged in conducting commercial tests on agricultural tractors, combine harvesters and other agricultural machines as per relevant BIS test codes. CFMTTI is also National designated authority for testing of tractors as per OECD codes in the country and is also one of the authorized Testing agency of MoRTH to test tractors and power tillers under CMV Rules 1989. The FMTTI at Hisar is fully equipped to conduct commercial tests on all type of combine harvesters, plant protection equipments, agricultural implements and other machines as per relevant BIS codes. Hisar institute is also one of the designated testing centers of MoRTH to issue the CMVR certificate for combine harvesters under CMVR 1989. The FMTTI at Garladinne has been specialized

to test power tillers and conduct tests on various agricultural implements & equipments. The FMTTI at Biswanath Chariali (Assam) engaged in conducting commercial tests on bullock drawn implements, manually operated equipment, tractor drawn implements, self-propelled machines and small hand tools which are widely used and available for North Eastern States. During the financial year 2021-22, the four FMTTIs altogether have tested 383 machines of various categories, including tractors, power-tillers, combine harvesters, and other machinery and equipments, till 31st March, 2022 against the target of 320. During the year 2022-23, total 385 machines were tested. During the year 2023-24, total 437 machines were tested. During the year 2024-25, a total of 419 machines were tested (Upto 31st December, 2024).



Drawbar Test of tractor at CFMTTI, Budni



PTO Test of Tractor at CFMTTI, Budni



Combine Harvester Testing at NRFMTTI, Hisar



Drawbar Testing of Power Tiller at SRFMTTI, Anantapur

To cope up with the ever increasing demand of testing of agricultural machines and equipments, DA&FW has designated 39 testing centers till date. These Centers have been established at State Agriculture Universities, Central Agriculture Universities, State Agriculture Departments, ICAR institutions etc.

To promote mechanization and ensure availability of tractors, testing of tractors used for agricultural purpose has been reduced from 9 months to just 75

working days with effect from August 15, 2022. Similarly, the testing time of power tillers has been also reduced from 5 months to 45 working days and consolidated guidelines have been issued with effect from 8th January, 2024. To simplify the process of testing of tractors, promote trust-based governance and to promote Make in India initiative of the Government and further enhance the ease of doing business in the country, the consolidated guidelines have been issued on 28th August, 2023.

#### **21.4 Financial & Physical Progress under SMAM Since 2014-15 till 31st December, 2024**

**Table1: Financial and Physical Achievement under SMAM**

Financial & Physical achievement under SMAM w.e.f APRIL,2014 (As on 31.12.2024)									
year	Allocation of funds			Achievements					
	Funds Allocated	Revised Allocation	Expenditure	Total Trainees Trained	Total Machines Tested at FMTTI & designated Test Centers of DA&FW	Total Agricultural Machinery Distributed	Total Custom Hiring Centres Established	Total Hi-Tech Hubs Established	Total Farm Machinery Banks Established at Farmers Level
<b>(Rupees in Crore)</b>									<b>(In Numbers)</b>
2014-15	208.30	194.87	181.35	13406	1319	69021	663	14	436
2015-16	177.85	153.1	151.74	15160	1429	87545	268	13	218
2016-17	180.00	373	363.63	9423	1346	151164	1458	13	1877
2017-18	577.58	804.1	791.04	9689	1272	269062	1818	39	1942
2018-19	1200.00	930.1	1126.77	11260	1557	384911	3871	106	1481
2019-20	1033.34	1044.57	992.19	10065	1213	201769	2155	60	1964
2020-21	1033.09	1050.34	1026.63	11103	1447	132402	3979	55	5453
2021-22	1080.66	879	844.38	13575	1180	93840	4612	103	3420
2022-23	914.73	914.73	1005.21	15434	1064	133806	4194	72	3670
2023-24	859.45	859.45	915.80	19947	984	300761	2533	119	3131
2024-25 (Upto October, 24)	1300.00		706.36	17454	419	89258	1111	108	584
<b>Total</b>	<b>8565.00</b>	<b>5429.08</b>	<b>8105.1</b>	<b>146511</b>	<b>13230</b>	<b>1913107</b>	<b>26662</b>	<b>702</b>	<b>24176</b>

# Department of Agriculture & Farmers Welfare

**Table2: Funds provided for Kisan Drone Promotion under SMAM**

State/ Implementing Agency	Funds Released Specifically For Drone (Rs. in Lakhs)	Demons tration		Individual Subsidy (No. of Drones)	Strengthening/Esta blishment of CHCs (No. of Drones)
		No. of Drones to be procured	Demonstrations to be conducted (Ha)		
<b>2021-22</b>					
Kerala	225	14	4000		
IGFRI, Jhansi	11.15	1	50		
IIWBR, Karnal	20.6	2	20		
Total	256.75	17	4070		
<b>2022-23</b>					
ICAR	5250	300	75000		
Kerala	116			24	
Madhya Pradesh	1000			200	
Uttar Pradesh	400			92	
Uttarakhand	48.0			2	10
Puducherry	12.5			5	
Arunachal Pr.	10			2	
Andhra Pradesh	5900				1475
Chhattisgarh	200				50
Nagaland	8				2
Bihar	25			5	
Karnataka	113			17	7
Maharashtra	100				25
Manipur	16				04
Total	13198.5	300	75000	347	1563
<b>2023-24</b>					
Tamil Nadu	50			10	
Madhya Pradesh	500			100	
West Bengal	10.50			4	
Uttarakhand	123				22
Uttar Pradesh	2.97			66	
Total	686.47			180	22

**21.5 Activities in the North-Eastern States:** A dedicated FMTTI has been established at Biswanath Chariali in the Sonitpur district of Assam, to cater to the needs of human resource development in the field of agricultural mechanization and also to assess the quality and performance characteristics of different agricultural implements and machines in the region.

During the year 2022-23, a total 1771 trainees were trained at this NERFMTTI at Biswanath Chariali, Assam against the target of 1700 and have tested 31 nos. of agricultural implements and machinery against the annual target of 30. During the year

2023-24, a total of 2194 trainees were trained against the target of 2100. During the year 2024-25, a total of 1948 trainees were trained (Up to 31st December, 2024).

Under SMAM, there is special component for the North Eastern States under which financial assistance @ 100% of the cost of the machine for the machines costing up to Rs. 1.25 lakhs is provided to the farmers for purchase of machines and equipments on individual ownership basis.

Financial assistance for establishment of Farm Machinery Banks are provided @ 95% of the project

cost of machinery and equipment. The maximum project cost can be up to Rs. 30 lakhs per project. During the year 2021-22, cost subsidy of Rs.86.78 crores were released to the NE States under SMAM. During the year 2024-25 till December, 2024, cost subsidy of Rs. 115.65 crores has already been released to the NE States under SMAM.

**21.6 Training of Farmers & Technicians:** To supplement the efforts for promotion of agricultural mechanization in the country, the Department has established four Farm Machinery Training & Testing Institutes at Budni (MP), Hisar (Haryana), Anantapur (Andhra Pradesh) and Biswanath Chariali (Assam). These institutes are engaged in skill development training programmes in the field

of farm mechanization for wide range of beneficiaries that includes Farmers, Rural Youth, Migrant Labourers, Women Farmers, Technicians, Engineering Students, Diploma Students, ITI Student, Apprentice Training Programmes for Graduate Engineers, ITI Certificate holders, in service executives & technical officers from Govt & NGO engaged in the area of Farm machinery and allied Fields and representatives of agricultural machinery manufacturers.

For farmers, lodging is provided free of cost. A stipend of Rs. 200 per day per farmer is provided to meet boarding expenses. To and fro travel is provided on actual basis limited to a total of Rs. 500/- per trainee.

1.	Central Farm Machinery Training & Testing Institute, Tractor Nagar, P.O.Budni -466455, Distt. Sehore (MP)	
	<b>Phone: 07564-234729</b>	<b>E-Mail : fmti-mp@nic.in</b> <b>Website: <a href="http://fmttiбудни.gov.in/">http://fmttiбудни.gov.in/</a></b>
2.	Northern Region Farm Machinery Training & Testing Institute, Sirsa Road, Hisar (Haryana)-125001	
	<b>Phone : 01662 -276984</b>	<b>E-Mail : fmti -nr@nic.in</b> <b>Website: <a href="http://nrfmtti.gov.in/">http://nrfmtti.gov.in/</a></b>
3.	Southern Region Farm Machinery Training & Testing Institute Tractor Nagar, P.O. Garladinne-515731 Distt. Anantpur (Andhra Pradesh)	
	<b>Phone : 08551-286441</b>	<b>E-Mail : fmti-sr@nic.in</b> <b>Website: <a href="http://srfmtti.dacnet.nic.in/">http://srfmtti.dacnet.nic.in/</a></b>
4.	North Eastern Region Farm Machinery Training & Testing Institute P.O. Biswanath Chariali-784176, Distt. Sonitpur, (Assam)	
	<b>Phone : 03715 -222094</b>	<b>E-Mail : fmti -ner@nic.in</b> <b>Website:<a href="http://nerfmtti.nic.in/">http://nerfmtti.nic.in/</a></b>

**21.7 Demonstration of Newly Developed Agricultural/Horticultural Equipment:** conducted by the FMTTIs, ICAR Institutions, State Governments and other Central Institutes, FPOs etc. The institutes conducting the demonstrations are provided 100 percent grants for purchase of machines/technologies to be demonstrated and also contingent expenditure to conduct demonstrations on the farmers' fields. Total 479 field

demonstrations have been conducted by the FMTTIs during the financial year 2021-22. During the year 2022-23, total 374 field demonstrations were conducted. During the year 2023-24, a total 449 demonstrations including demonstrations of kisan drones were conducted. During the year 2024-25 (Upto October, 2024), a total of 314 including demonstration of kisan drones were conducted.



Demonstrations Activities at FMTTIs

**21.8 Gender Friendly Equipment for Women:**  
Under the skill development programmes, a total 7937 women have been trained during the Financial Year 2021-22, whereas, during 2022-23 total 8244 women have been trained up to 31st March, 2023. During the year 2023-24, a total 7177 women have been trained. During the year 2024-25 (upto 31st December, 2024), a total 9242 women have been

trained. A list of about 30 identified gender-friendly tools and equipment developed by the Research and Development Organization for use in different farm operations has already been sent to all states and UTs for popularizing them. State governments have been directed to earmark 30 per cent of total funds allocated under SMAM for women beneficiaries.



As a result of different programmes implemented by the Government of India over the years and equal participation from Private Sector, the farm

mechanization has been increasing steadily over the years which is evident from Year wise sale of tractors and power tillers as indicated in Table 3.

**Table 3: Year wise sale of tractors and power tillers.**

Year	Tractor Sales (Nos.)	Power tiller Sale (Nos.)
2018-19	8,97548	51,523
2019-20	7,85,059	46,476
2020-21	9,88,028	54,175
2021-22	9,07,645	53653
2022-23	9,45,311	55025
2023-24	8,75,754	51066
2024-25 (Upto November, 2024)	6,88,054	40677

**21.9 Testing and Evaluation of Farm Machinery & Equipment:** The Farm Machinery Training and Testing Institute at Budni is engaged in conducting commercial tests on agricultural tractors, combine harvesters and other agricultural machines as per relevant BIS test codes. CFMTTI is also National designated authority for testing of tractors as per OECD codes in the country and is also one of the authorized Testing agency of MoRTH to test tractors and power tillers under CMV Rules 1989. The FMTTI at Hisar is fully equipped to conduct commercial tests on all type of combine harvesters, plant protection equipments, agricultural implements and other machines as per relevant BIS codes. Hisar institute is also one of the designated testing centers of MoRTH to issue the CMVR certificate for combine harvesters under CMVR 1989. The FMTTI at Garladinne has been specialized to test power tillers and conduct tests on various agricultural implements & equipments. The FMTTI at Biswanath Chariali (Assam) engaged in conducting commercial tests on bullock drawn implements, manually operated equipment, tractor drawn implements, self-propelled machines and small hand tools which are widely used and available for North Eastern States. During the financial year 2021-22, the four FMTTIs altogether have tested 383 machines of various categories, including tractors, power-tillers, combine harvesters, and other machinery and equipments, till 31st March, 2022 against the target of 320. During the year 2022-23, total 385 machines were tested. During the

year 2023-24, total 437 machines were tested. During the year 2024-25, a total of 332 machines were tested (Upto October, 2024).

To cope up with the ever increasing demand of testing of agricultural machines and equipments, DAC&FW has designated 39 testing centers till date. These Centers have been established at State Agriculture Universities, Central Agriculture Universities, State Agriculture Departments, ICAR institutions etc.

To promote mechanization and ensure availability of tractors, testing of tractors used for agricultural purpose has been reduced from 9 months to just 75 working days with effect from August 15, 2022. Similarly, the testing time of power tillers has been also reduced from 5 months to 45 working days and consolidated guidelines have been issued with effect from 8th January, 2024. To simplify the process of testing of tractors, promote trust-based governance and to promote Make in India initiative of the Government and further enhance the ease of doing business in the country, the consolidated guidelines have been issued on 28th August, 2023.

**21.10 Custom Hiring Centres (CHCs) and Crop specific farm machinery and equipment for Custom Hiring:** aims at creating infrastructure for making available machines and equipments to the farmers on rental basis. Financial assistance @ 40% of the project cost is provided to Rural Entrepreneurs (Rural youth and farmer as an

entrepreneur), Cooperative Societies of farmers, Farmer Producer Organizations (FPOs) and Panchayats. The maximum project cost of CHCs can be up to Rs. 250 lakhs.

## 21.11 Digital India:

**Digital Platform for Farm Mechanization and Technology:** This centralized portal is an initiative of Digital India & in line with the Government Policies of "Ease of doing business". The portal encompasses an application of Direct Benefit Transfer of farm machinery subsidies, Centralized Farm Machinery Performance Testing Portal for online submission of testing application and monitoring of testing & related activities and FARMS (Farm Machinery Solutions) Mobile App for renting and hiring of agricultural machines and equipments.

**21.12 State Agro Industries Corporations:** The Government of India had advised the State Governments in the year 1964, to set up State Agro Industries Corporations (SAICs) in the public sector to act as catalysts in providing access to industrial inputs to farmers, for their use in agriculture. Thus, 17 SAICs were set up in the joint sector with equity participation of the Government of India and the respective State Governments of Andhra Pradesh, Assam, Bihar, Gujarat, Haryana, Himachal Pradesh, Jammu and Kashmir, Karnataka, Kerala, Madhya Pradesh, Maharashtra, Orissa, Punjab, Rajasthan, Uttar Pradesh, Tamil Nadu and West Bengal during 1965 to 1970. Many of the State Governments have increased their equity participation as a result of which the Government of India, at present, is a minority shareholder. SAICs have since expanded their basic functions by commencing manufacture and marketing of agricultural inputs, implements, machines, after-sales service, promotion and development of agro-based units/industries. The Government of India is implementing a policy of disinvestment of its shares in SAICs with a view to give greater decision making power to the State governments by allowing transfer of its shares to state Governments. At present only 10 SAICs are in function which has Government of India equity.

## 21.13 Crop Residue Management Scheme.

In order to support the efforts of the concerned state governments to address air pollution and to subsidize machinery for management of crop residue, a Scheme on Crop Residue Management in the States of Punjab, Haryana, Uttar Pradesh and NCT of Delhi' was introduced in 2018-19. The scheme focuses on management of crop residue through various in-situ and ex-situ management options.

### Objectives of the Scheme

- (i) Protecting environment from air pollution and preventing loss of nutrients and soil micro-organisms caused by burning of crop residue;
- (ii) Promoting management of crop residue by retention/incorporation into the soil and establishing appropriate supply chain for further utilization through the deployment of appropriate mechanization inputs;
- (iii) Creating awareness among stakeholders through demonstration, capacity building activities and differentiated Information, Education and Communication strategies for effective utilization and management of crop residue

### In-situ Management

- (i) The Scheme promotes the usage of machines such as Super Straw Management Systems, Happy Seeder, Super Seeder, Smart Seeder, Surface Seeder, Zero till seed cum fertilizer drill, Mulcher, Paddy Straw Chopper, Hydraulically Reversible Mould Board plough, Crop reapers and Reaper binders for in-situ management of crop residue.
- (ii) Under the scheme, financial assistance @ 80% of the project cost for the projects costing up to Rs. 15 lakhs is provided for establishment of Custom Hiring Centres (CHCs) of crop residue management machinery by Rural Entrepreneurs, Cooperative Societies of Farmers, Self Help Groups (SHGs), Registered Farmers Societies, Farmer Producer

Organizations (FPOs) and Panchayats to make available machines and equipments on rental basis.

- (iii) Financial assistance @ 50% of the cost of machinery is provided to farmers for procurement of crop residue management machinery on individual ownership basis.

### **Ex-situ Management**

- (i) Subsidy for balers and Hey Rakes @ 50% of the cost for individual farmers and @ 80% under CHCs is provided.
- (ii) With a view to enable efficient ex-situ management of paddy straw, provisions have been made w.e.f. 2023-24 to establish technolo-

commercial pilot projects for paddy straw supply chain under the bilateral agreement of beneficiary/ aggregator (Farmers, Rural entrepreneurs, Cooperative Societies of farmers, Farmers Producer Organizations (FPOs) and Panchayats) and Industries utilizing the paddy straw. Financial assistance @ 65% on the capital cost of machinery costing up to Rs. 1.50 crores is provided by the Government. Industry as primary promoter of the project has to contribute 25% of the project cost and the balance 10% will be the contribution of beneficiary/aggregator. The intervention aims at establishing a robust supply chain of paddy straw for various end user industries in biomass power generation and biofuel sectors.



Inter-Ministerial Committee Meeting for Convergence of Schemes Ex-Situ Management of Paddy Straw held on 16.07.2024 at Chandigarh.



The Zonal Conference Meeting was held on 15.10.2024 at Bhopal with Nodal Officers of the States to review and implementation of the SMAM, CRM & NAMO Drone Didi Schemes.

## Department of Agriculture & Farmers Welfare



The Workshop conducted on 06.09.2024 at Amritsar, Punjab on Crop Residue Management with Nodal Officers of States

Information, Education and Communication for awareness on in-situ crop residue management - financial assistance is provided to the State Governments, KVks, ICAR Institutions, Central Government Institutions, PSUs etc. for the activities to be undertaken towards Information, Education and Communication (IEC). The activities will involve mass awareness campaigns through short and long

films, documentaries, radio and TV programmes, demonstration camps at various levels, capacity-building programmes, advertisements in print media, star campaigning, award for village/ gram Panchayat for achieving zero straw burning, panel discussions on Doordarshan, DD Kisan and other private channels, Demonstration of Bio-decomposer Technology on farmers' fields: etc.

### **FINANCIAL PROGRESS UNDER CROP RESIDUE MANAGEMENT SCHEME: -**

Year	Allocation (Rs. in Crores)		Funds Released (Rs. in Crores)							
	BE	RE	Punjab	Haryana	UP	MP	NCT Delhi	ICAR & Oth	Total	
2018 -19	591.80	591.80	269.38	137.84	148.60	0	0.00	28.51	584.33	
2019 -20	600.00	600.00	273.80	192.06	105.28	0	4.52	18.48	594.14	
2020 -21	600.00	600.00	272.50	170.00	120.20	0	0.00	8.00	570.70	
2021 -22	700.00	700.00	331.94	193.35	159.59	0	0.00	6.02	690.90	
2022 -23	700.00	700.00	278.83	223.46	180.00	0	1.53	14.18	698.00	
2023 -24	600.00	201.99	105.00	90.00	0	0	0	6.99	201.99	
2024 -25 (Upto 31st December, 2024)	600.00		150.00	75.00	50.00	0	0	8.39	283.39	
Total	4391.80	3397.90	1681.45	1081.71	763.67	0	6.05	90.57	3623.45	

**PHYSICAL PROGRESS UNDER CROP RESIDUE MANAGEMENT SCHEME**

State/	Number of Machines delivered to the individual farmers and Custom Hiring Centres							No. of Custom Hiring Centres Established								
	2018-19	2019-20	2020-21	2021-22	2022-23	2023-24	2024-25	Total	2018-19	2019-20	2020-21	2021-22	2022-23	2023-24	2024-25	Total
Punjab	27747	23068	25811	13796	27250	19735	16817	147668	3888	5140	12100	3073	916	300	1181	25917
Haryana	10627	14078	29020	19052	7294	9699	9844	100882	1194	1685	1345	2551	0	0		6775
Uttar Pradesh	23306	7054	13651	14697	5274	4439	2572	74548	2300	1650	1652	1844	594	349	203	9276
NCT of Delhi	0	111	51	85	0	0	0	247	0	0	0	0	0	0		0
MP	0	0	0	0	0	0	0	0	0	0	0	0	0	0		0
Total	61680	44311	68533	47630	39818	33873	29233	323345	7382	8475	15097	7468	1510	649	1384	41968

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## Chapter 22

# SUB-MISSION ON PLANT PROTECTION AND PLANT QUARANTINE (SMPPQ)

### 22.1 Overview

Plant Protection continues to play a significant role in achieving targets of crops production. The major thrust areas of plant protection are promotion of Integrated Pest management, ensuring availability of safe and quality pesticides for sustaining crop production from the ravages of pests and diseases, streamlining the quarantine measures for accelerating the introduction of new high yielding crop varieties, besides eliminating the chances of entry of exotic pests and for human resource development including empowerment of women in plant protection skills. The Plant Protection Division performs regulatory, monitoring, Surveillance and Human Resource Development functions through attached office – Directorate of Plant Protection, quarantine & Storage (DPPQ&S) and autonomous body, National Institute of Plant Health Management (NIPHM) and one Project – Monitoring of Pesticide Residue at the National Level (MPRNL) administered through ICAR-IARI.

#### (A) Directorate of Plant Protection Quarantine & Storage, Faridabad

DIRECTORATE OF PLANT PROTECTION QUARANTINE AND STORAGE, FARIDABAD has mandate to minimize loss to quality and yield of agricultural crops from the ravage of insect pests, diseases, weeds, nematodes, rodents etc. and to shield our bio-security from the incursions and spread of exotic plant pests. The DPPQ&S implements the following activities:-

- i. Plant Quarantine.
- ii. Promotion of Integrated Pest Management.
- iii. Registration of Pesticides through CIB&RC.
- iv. Quality control of Pesticides through CIL & RPLTs.
- v. Desert locust control.

**Plant Quarantine:** The objective of Plant Quarantine primarily is to prevent introduction of exotic pests diseases and weeds which are likely to be introduced through import of agricultural commodities or plant material into India and similarly fulfill obligation of the International Plant Protection Convention (IPPC) carrying out phytosanitary certification to prevent introduction of pests, diseases and weeds in other countries through exports of such materials.

The Plant Quarantine (Regulation of Import into India) Order, 2003 issued under provisions of the Destructive Insects and Pests Act, 1914 (DIP Act) regulates import of plant & plant materials into India. Post entry quarantine inspection is undertaken in case of propagating plant material. Phytosanitary Certificates (PSCs) are issued for export as per International Plant Protection Convention (IPPC), 1951 of the Food and Agricultural Organization (FAO). These functions are being discharged by 72 Plant Quarantine Stations (PQS's) functioning under Directorate of Plant Protection Quarantine & Storage (DPPQ&S) Faridabad at various international airports, seaports and land frontier stations across the country to facilitate international trade of agricultural products.

During the year 2024-25 Pest Risk Analysis (PRA) was conducted for 127 agricultural commodities to determine potential bio-security risk if imported. In which 09 agriculture commodities PRA completed and 118 agriculture commodities PRA are under process. Whereas 05 agriculture commodities granted market access for import and 05 for export have been notified. The detail of PRA is mentioned in details in the Table -1.

**Table-1. Status of PRA and market access 2024-2025 (01.04.24 - 31.12.24)**

Sl. No.	Continent	PRA		Market access	
		Under Process	Completed	Granted (Import)	Gained (Export)
1.	Africa & Eurasia	09	01	01	-
2.	North & South America	40	02	-	04
3.	Asia & Oceania	65	04	04	01
4.	Europe	04	02	-	-
	Total	118	09	05	05

During the period Import Release Order (IROs) were issued for 79589 nos. consignment of plants and plant materials and Phytosanitary Certificates (PSCs) issued for 307154 nos. of consignments of export. Details of import and export of agricultural commodities is mentioned in details in the Table - 2.

**Table 2. Details of Export /Import inspection & Certification**

S.No.	Details	2024-25 (01.04.24-31.12.24)
1.	Import Quantity (Mt)	<b>174.09</b>
2.	Export Quantity (Mt)	<b>284.73</b>
3.	Import Permit Quantity (MT)	<b>31.29</b>
4.	No. of Imported (IRO) consignment	<b>79589</b>
5.	No. of Exported (PSC) consignment	<b>307154</b>
6.	No. of Import Permit (IP)	<b>32</b>
7.	Revenue by Import Inspection (in Crors Rs.)	<b>348.30</b>
8.	Revenue by Export Inspection (in Crors Rs.)	<b>2.10</b>
9.	Revenue by issuance of Import Permits (in Lakhs Rs.)	<b>0.83</b>
	Total Revenue (in Crors Rs.)	<b>351.23</b>

**Table 3. Details of agencies / facilities accredited during 2024-2025 and total till date (01.04.24-31.12.24)**

Sl. No.	Name of the Units	No. of New Registrations	Total Registrations till date
1.	Registered Rice Mill / Processing Units for Export of Rice to USA	14	231
2.	Registered Rice Mill / Processing Units for Export of Rice to China	9	154
3.	Registered Processing Units for Export of Peanut	8	148
4.	Registered Warehouses for Export of Dry Chilli	2	160
5.	Registered Pack Houses for Export of Fresh Fruits & Vegetables to EU	8	129
6.	Registered Pack Houses for Processing of Fruits (Mango) for Export to USA	6	28
7.	Registered Farm Units for Export of Cut Flowers to Australia	-	5

## Department of Agriculture & Farmers Welfare

Sl. No.	Name of the Units	No. of New Registrations	Total Registrations till date
8.	Registered Pack Houses for Export of Pomegranate Fruits to Australia	2	5
9.	Registered Pack Houses for Export of Pomegranate Arils to Australia	-	6
10.	Registered Pack Houses for Export of Pomegranate Arils to USA	-	6
11.	Registered Pack Houses for Export of Pomegranate Fruits to USA	1	5
12.	Registered (HWT) Hot Water Immersion Treatment Facilities as per NSPM-15	3	54
13.	Registered Niger Seed Heat Treatment Facilities as per NSPM-18	-	2
14.	Registered (VHT) Vapour Heat Treatment Facilities as per NSPM-20	2	13
15.	Registered Irradiation Facilities as per NSPM-21	-	4
16.	Registered (PSSA) Phytosanitary Service Agency as per NSPM-23	5	40
17.	Registered MAT Facilities as per NSPM-25	-	3
18.	Methyl Bromide (MBr) under NSPM-12	49	1069
19.	Aluminum Phosphide (ALP) under NSPM-22	50	857
20.	Forced Hot Air Treatment (FHAT) under NSPM-09	54	896

Plant Quarantine stations are played an important role in biosecurity during the inspection of imported commodities from various countries during 2024-25, intercepted 208 Quarantine and 754 Non-Quarantine pests at various PQ stations.

**Integrated Pest Management (IPM) Division:** IPM is an eco-friendly approach, which aims at keeping pests below economic threshold level by employing all available alternate pest control methods and techniques such as cultural, mechanical and biological with greater emphasis on use of bio-pesticides. The use of chemical pesticides is advised as a last resort when pests cross the economic threshold level (ETL). The Central Government has established 47 Central Integrated Pest Management Centres (CIPMCs) and Locust-cum-Central Integrated Pest Management Centres (LCIPMCs) of the Directorate of Plant Protection, Quarantine & Storage (DPPQ&S) in 28 States and 2 UTs. The mandate of these Centres is to monitor insects, pests and diseases for forewarning, conservation of natural enemies in farmers' fields, production and field release of bio-control agents, promotion of eco-friendly IPM inputs like bio-pesticides/plant based

pesticides, Human Resource Development in IPM by imparting training to extension officers and farmers through Farmers Field Schools (FFSs) & IPM programs and to monitor, forewarn and control locust in Scheduled Desert Area (SDA) being International obligation and commitment & to conduct research on locust and grasshoppers.

IPM activities are propagated through Farmers Field Schools (FFSs). This is a form of "learning by doing" concept evolved from the concept that farmers learn optimally from field observations and experimentation. FFSs are organized to empower farmers to take appropriate crop protection measures on their own. These FFSs are conducted both in Kharif and Rabi seasons and each FFS lasts for 14 weeks.

During 2024-25 (Kharif season) a total number of 149 Nos of Farmer Field Schools and 75 Nos of two days Human Resources Development programs were conducted by all CIPMCs & LCIPMCs in which 5215 No's of farmers and 4075 No's of farmers and 278 nos of pesticide dealers & State extension officials were trained about Integrated Pest

Management techniques. 7 nos of five days programmes and 01 number of season long training programme on Apple crop were successfully completed in which 282 nos of AEOs, Pesticide dealers, NGOs, Lead Farmers, Private Entrepreneurs and 40 nos of master trainers were trained respectively.

Apart from conducting FFS, the CIPMCs carry out pest/disease monitoring, production, release and conservation of bio-control agents. During 2024 (up to 31.12.2024), the pest and disease situation was surveyed covering 842.456 thousand hectares area. A total of 2488.093 million bio-control agents were mass produced in laboratories and released against targeted insect-pests in various crops. Augmentation and conservation was taken up in 761.412 thousand hectares.

**"Healthy seed-Healthy produce"-** Seed treatment and Grow Safe Food (GSF) programmes were also taken up under IPM FFSs programmes. Seed treatment is the application of chemical and biological agents on seeds to control primary soil and seed borne infestation of insects and diseases, which are serious threats to crop production. Since 2006, a seed treatment campaign is taken up every year by Department of Agriculture Co-operation and Farmers Welfare (DAC&FW) during Kharif and Rabi seasons involving State Departments of Agriculture and CIPMCs. As on 31.12.2024, 485 nos of Seed Treatment campaigns and 459 nos of safe & judicious use of pesticides awareness programmes were conducted by IPM-cum-locust Division in which 13348 and 13485 nos of farmers participated respectively.

**Participation of Women Farmers in IPM activities:-** 7772 numbers of women farmers were participated in FFS & 2 Day HRD training programmes, Seeds treatment campaigns and safe and judicious use of pesticides programmes conducted by CIPMC's & LCIPMCs during 2024-25 (as on 31.12.2024).

**Prepared SOP on National System for Pest Surveillance and Response Mechanism** which is approved by DA & FW and uploaded on DPPQS website. This SOP will be guide for all stakeholders

for implementing uniform pest surveillance system across the country for pest and disease monitoring for forecasting and timely issuance of advisories for pests/disease management to the farming community.

#### **Monitoring of Pink Bollworm (PBW) in Cotton crop through AI based Pheromone traps in Punjab during Kharif 2024-25**

a) It is collaborative project of ICAR-CICR & DPPQ&S for monitoring of PBW in cotton fields from Bathinda, Mansa and Sri Muktsar Sahib districts of Punjab (@ 6 AI trap units Per districts). 5 Number of conventional pheromone traps to be installed per village by 400 numbers of farmers trained by CIPMC Jalandhar. The combined report on AI pheromone traps will be submitted by ICAR-CICR to DA&FW at the end of season of cotton crop.

b) CIPMC Jalandhar conducted 4 no of training programme and trained 400 nos of cotton growing progressive farmers from Bathinda, Fazilka, Mansa and Sri Muktsar Sahib districts with emphasis on pink boll worm monitoring through pheromone traps. Trained progressive farmers installed 2000 conventional pheromone traps @ 5 traps per villages in 400 cotton growing villages of Bathinda, Fazilka, Mansa and Sri Muktsar Sahib districts of Punjab. Farmers are taking weekly observations of Pink boll worm and analyze the situation of PBW. Currently observations were taken for 8 Nos. of weeks (on 7th, 14th, 21st, 28th August, 4th, 11th, 18th, & 25th September 2024).

#### **National Pest Surveillance System (NPSS)**

National Pest Surveillance System (NPSS) is an initiative of DA&FW to combat the destructive impact of pest and disease attacks on crops. Recently NPSS was launched by Hon'ble Agriculture Minister Sh. Shiv Raj Singh Chauhan on 15th August 2024. It uses latest technologies (Artificial Intelligence and Machine Learning) to enhance pest surveillance, identification and management nationwide. It generates automated advisories tailored to farmers' specific needs for selected pests and crop combinations.

# Department of Agriculture & Farmers Welfare

The Key features of NPSS mobile app includes AI-Based Pest Identification module thus enabling accurate and efficient pest/disease identification (currently important pests/diseases of 61 major crops can be identified) and Surveillance module currently works in 15 major crops. Quantitative surveillance (Scientific based) to be used by scientific staff and need to logged in through credentials for scientific surveillance and Qualitative surveillance to be used for farmer/layman who need not give extensive information & to choose among 3 levels of infestation (i.e, among Severe, Moderate, Low) and login ID & Password are not needed and through Advisory module Subject experts would issue crop/pest/area specific advisory through web portal will be made available to farmers through NPSS mobile app.

On regular basis CIPMC scouts are conducting surveillance and uploading pest/disease/natural enemies photographs in 15 crops (Apple, Banana, Black gram, Brinjal, Chilli, Cotton, Grapes, Maize, Red gram, Pomegranate, Rice, Soybean, Sugarcane, Tomato, Wheat). Further Officer In charges of CIPMCs from their NPSS website Expert login ID on daily basis Observe the pest/disease situation, Issues timely advisories, Track the status of scout IDs, Validate the pest photographs, Observe qualitative pest surveillance data, From time to time submitting data on progress of NPSS as required by IPM cum Locust Division Hqrs, Conducted training programmes to farmers, state officials on NPSS, Maintains correspondence with State nodal officer on NPSS. During regular field activities and training programmes CIPMCs are encouraging farmers, KVKs, SAUs, State Department staff to download and use NPSS and on receival of official request LCIPMCs may create login credentials for scout ID for them.

From 15th August 2024 (Launching) to 15th September 2024, 21,805 Number of pest/diseases/natural enemies photographs were uploaded by all scouts of NPSS and Quantitative survey conducted in 1720 number of villages throughout India. Currently the app is working in 4 languages (English, Hindi, Punjabi and Marathi) and DPPQ&S and Developers are working to make the

app available in 9 regional languages (Telugu, Kannada, Tamil, Malayalam, Odia, Bengali, Assamese, Urdu and Gujarati).

## Progress made in NPSS as on 31.12.2024

- The application is downloaded by 29610 farmers/central & state government functionaries/ ICAR/KVK/SAU.
- 51777 Nos. of pest images were identified by AI identification function of this app.
- 23904 Nos. of quantitative pest surveillance entries were made by scouts of CIPMC's, State Agriculture/Horticulture Departments, ICAR, KVK & progressive farmers
- 59635 Nos. of qualitative pest surveillance entries were made by farmers.
- 145958 pest images were uploaded in NPSS app to build up pest identification module to increase its accuracy.
- NPSS daily activities i.e. pest surveillance data and pest images is monitored by 108 designated NPSS experts which includes 47 experts of CIPMC, 54 experts of State Agriculture /Horticulture Departments, 5 experts of ICAR, 1 expert of KVK and 1 expert from other stakeholders in the state for planning of plant protection activities.
- 7783 users scouts id are created by CIPMC's in all the states for regular pest surveillance and uploading of pest photographs.
- Presently this app is functional in 31 states/UT for pest surveillance activity and 32 states/UT pest photographs uploading in India.
- Till date 7565 villages of 521 districts in India are covered for pest surveillance activity in the NPSS app.
- Till date 8694 villages of 590 districts in India are covered for pest image uploading activity in the NPSS app.

9441 timely and precise pest management advisories were issued by designated NPSS experts of CIPMC & State Agriculture/Horticulture Departments to the respective farmers which includes 866 fields/location where pest crosses ETL (Economic Threshold Level) (from 01.05.2024 to 31.12.2024).

## **One day training programme on "Ensuring Food Safety: Understanding and Managing Pesticide residue in Urban Agriculture and Marketing"**

One-day training program titled "Ensuring Food Safety: Understanding and Managing Pesticide Residue in Urban Agriculture and Marketing" was successfully conducted by the Regional Central Integrated Pest Management Centre (RCIPMC), Guwahati on 8th October 2024. This event was organized in collaboration with the Directorate of Agriculture (Dte. of Agriculture), Government of Assam, the Assam State Agricultural Marketing Board (ASAMB), and the Tea Board of India, N.E Zonal Office, Guwahati. This programme was conducted at the Pamohi Wholesale Fruits and Vegetables Market, Guwahati, situated in the Kamrup Metro district of Assam. 113 participants were trained in this training programme.

One day training program was also conducted by CIPMC Vadodara on 27.11.2024 in which 185 participants are trained.

## **Central Insecticide Board & Registration Committee (CIB & RC)**

The Secretariat of CIB & RC is entrusted with the processing of applications for grant of registration of pesticides, including scrutiny of applications as per the guidelines and issuing of certificates of registration after approval by the Registration Committee and also dealing the cases of inclusion of new insecticides in Schedule to the Act. It processes Pre-registration matters of insecticides, issues import permits for the import of sample quantities of insecticides for research, test and trial purposes.

### **Major achievements of the CIB&RC from 01.04.2024 to 31.12.2024**

#### **Certificate Issued:**

S.No.	Category of Certificate, U/S	Number of Certificates issued
1	9(3)TI	47
2	9(3)FI	25
3	9(3)TIM	16
4	9(3) -F	75
5	9(3)B/F	235
6	9(3b)B/F	15
7	9(3) -E	1092
8	9(4) -TI	142
9	9(4)/ -FI	7
10	9(4) -TIM	287
11	9(4) -F	8082
12	RTT	248
13	Shelf life	0
14	Free sale certificate	234
15	Non -insecticidal use	287
16	Endorsement	2676
17	Insecticides in Schedule (Inclusion)	8
<b>Total</b>		<b>13476</b>

## Central Insecticides Laboratory (CIL):

Pesticides are inherently toxic in nature, they are more likely to affect the health of human beings, particularly in agriculture sector. In India there is a comprehensive legislation known as Insecticides Act, 1968 which regulates the import, manufacture, sale, transport, distribution and use of insecticides with a view to prevent risk to human beings, animals and the matters connected therewith. By virtue of the Section 16 of the said Act, the Central Government has established a Central Insecticides Laboratory with the major objectives of pre and post registration verification of the properties performance and hazards of pesticides and the proposed use claimed by the manufacturers.

**Central Insecticides Laboratory, Faridabad** has the following four divisions:

1. Chemistry Division
2. Bioassay Division
3. Medical Toxicology Division, and
4. Packaging and Processing Division

### Objectives:

- a) To analyze such samples of insecticides sent to it under the Act by any officer or authority and submission of certificates of analysis to the concerned authority
- b) To carry out such investigations as may be necessary for the purpose of ensuring the conditions of Registration of Insecticides;
- c) To determine the efficacy and toxicity of insecticides;
- d) To carry out such other functions as may be entrusted to it by the Central Government or by a State Government with the permission of the Central Government & after consultation with the Central Insecticides Board.

### Types of Samples analyzed in Central Insecticides Laboratory (CIL)

- a) Referred sample: (through Hon'ble courts of Law or Central/ State Governments) collected by Insecticides Inspectors (2nd portion out of 3

portion collected by Inspector during Post-Registration Quality Control) from manufacturer/Importer/Dealer are sent by hand, by post or by courier.

- b) Pre-registration verification sample: Received through CIB & RC for analysis prior to giving registration
- c) Investigational Sample: Received through Hon'ble courts of Law, Central/State Govt. Authorities, Customs, revenue Department etc.

### NABL Accreditation of CIL:

CIL is a NABL accredited Laboratory as per ISO 17025:2017 in the field of biological and chemical testing with validity of certificate till November, 2028. The renewal assessment of Bio-assay and Chemistry division of CIL, as required under ISO 17025:2017 was successfully completed on 27.10.2024.

### The progress reports of various Divisions of CIL are as under:

**A. CHEMISTRY DIVISION:** The targets for CIL are not fixed as the output depends upon the number of pesticide samples received from Hon'ble Courts of Law, various State Agriculture Departments and other government bodies like Directorate of Revenue Intelligence, Customs, etc.

The final output is expressed in the form of total number of samples analysed and not as target as the number of samples received is not pre-determined/fixed. The achievements of Chemistry Division, CIL for the till December 2024 are summarized as below:

**Objectives:** To discharge the Techno-Legal requirements as specified under Rule 5 of Insecticides Rules, 1971. In addition, following activities are also undertaken by Chemistry Division of CIL:

- (a) Technical guidance & support to SPTLs/RPTLs.
- (b) To assist in the formulation of Indian Standards for pesticides and their formulations.

**Achievements:** Analysis of samples for Quality Control under Insecticides Act, 1968 received from Courts of Law/Competent Authorities, PRV and Investigational samples:

Year	Annual Capacity	Achievements/Samples analysed (Includes all three categories of samples: PRV, Referral & Investigational)*	
April 2024-December 2024	1600	Referral samples	816
		PRV samples	373
		Investigational samples	25
		Total	1214

## B. BIOASSAY DIVISION

### Objectives:

- a. To evaluate Bio-Pesticides on quality control parameters for Pre-registration verification such as Bio-efficacy, Phytotoxicity, Translocation, Compatibility and Development of resistance in the targeted crop.
- b. To evaluate Chemical and Biological pesticides for Bio-effectiveness & Phyto-toxicity in Laboratory as well as field conditions for post registration.
- c. Evaluation of Pesticides of Botanical origin.
- d. Development of Bioassay techniques.

### Divisions of Bioassay:

#### Entomology Unit:

- To conduct laboratory and field trials/experiments for evaluating Bio-effectiveness and Phytotoxicity of insecticides.
- In-vitro evaluation of house hold insecticides against housefly, mosquitoes and store grain pests.

- Rearing of laboratory culture of target insect pest for in-vitro experimentation.

#### Pathology Unit:

- Evaluation of Bio-pesticides on quality control parameters for Pre-registration verification.
- Participation in Inter Laboratory Comparison Program (ILCP) under NABL.
- Maintenance of reference cultures of bio-pesticides and plant pathogenic fungi cultures.
- To impart trainings to the state/central officials on quality control of bio-pesticides.

#### Herbicides Unit:

- To conduct laboratory and field trials /experiments for evaluating Bio-effectiveness and Phytotoxicity of Herbicides samples.
- Collection and maintenance of weed seeds in the laboratory.

### Achievements:

Year	Annual Capacity	Achievements/Samples analysed (Includes all three categories of samples: PRV, Referral & Investigational)*	
April 2024-December, 2024	60	Chemical pesticides (5D) Bio-pesticides (5D)	72
	Not Fixed	PRV samples	331
		Total	403

# Department of Agriculture & Farmers Welfare

## C. MEDICAL TOXICOLOGY DIVISION:

The Medical Toxicology Division is created in CIL in order to verify the safety claims made by the manufacturers of pesticides in the field of Toxicity Study which is also approved by EFC. This Division has to generate data and advice to the Government to take suitable course of action. In such cases, there is a need for adopting the risk management strategy in order to reduce the hazards to the human beings and the environment. For this purpose, various objectives were decided to undertake earlier like Acute, Oral/Dermal LD 50 study, Short term studies/ Sub-acute/ sub-chronic toxicity study, Chronic toxicity study, Health monitoring study training to Medical doctors on Diagnosis, Management and Treatment of Pesticide Poisoning.

### Objectives:

1. Toxicity/Safety evaluation/status of pesticides by conducting Acute Oral LD 50 Toxicity Study in albino rats on the pesticides samples received by state governments for post verification.

2. Toxico-vigilance activities regarding pesticides and related health effects by collecting data Current status of Pesticide Poisoning Cases for Safety Evaluation and Status of notification of functionaries for reporting poisoning cases through Zonal Conferences.
3. Training on safe and judicious use of pesticides for users/farmers and distribution of booklets to the farmers published by the Division periodically.
4. Preparation of technical material on pesticide toxicity.
5. Preparation of posters to be placed at various National and International Exhibition.
6. Conduct Institutional Animal Ethics Committee Meeting regularly with the members of the Committee nominated by CPCSEA for doing study on animals.

### Achievements:

Name of study	Annual Capacity	Achievements	Remarks
April 2024 -December 2024	20	11	-

Sent the analysis reports of the samples received from different State Directors of Agriculture.

## D. PACKAGING & PROCESSING DIVISION

### Objectives:

- a. Pre and Post registration verification of the packaging and labeling claims/ requirements made by the manufacturers / registrants.
- b. Verification / analysis of the Packaging &labeling samples received under Rule 5 (C) of the Insecticides Act, 1968 and rules there under in the context of the conditions laid down on the certificate of registration issued under Insecticide Act, 1968.

- c. Technical guidance to the BIS, in formulating, updating and amending the standards of pesticides quality control, safety, storage, transportation and use etc.
- d. Imparting training to the enforcement functionary of states/ UTs on various aspects of pesticides relating to packaging & processing, labeling and other required parameters.
- e. Verification of data on shelf life claims of pesticides and their formulations as per protocol approved by the registration committee and Bureau of Indian Standards (BIS) on quality control & packaging.

**Achievements:**

YEAR	Annual Capacity	Achievements
April 2024-December 2024	150	34

**BRIEF OF ACHIEVEMENTS OF CIL**

Year	Achievements/Samples Received and analysed	
April 2024-December 2024	Chemistry Division	1214
	Bioassay Division	403
	Medical Toxicology Division	11
	Packaging & Processing Division	34
	Total	1662

- CIL is a NABL accredited Laboratory as per ISO 17025:2017 in the field of biological and chemical testing with validity of certificate till November, 2028. The renewal assessment of Bio-assay and Chemistry division of CIL, as required under ISO 17025:2017 was successfully completed on 27.10.2024.
- ISO 17025-2017 Training of officers of CIL has been completed.
- Referred Samples: Legal prosecution is launched by the Central/State Insecticide Inspectors for misbranded samples of pesticides for which test report being furnished by CIL within 30 days.
- PRV samples: Analytical Test report of CIL is one the pre-requisites for grant of Registration of pesticide(s) for use in the country.
- Investigational samples: CIL provide test report based on pesticide samples received from various government bodies like Directorate of Revenue Intelligence, Customs, etc. for taking legal action against revenue evasion by falsified import/export of pesticides under the garb of other chemicals/intermediates.
- Undertaken experimental trials on bioefficacy, phytotoxicity and quality parameters of pesticides at CIL premise.

**Techno-Legal Cell:** The provisions of the Act and Rules are executed by the State Agriculture Authorities. The licence to manufacture, sale, stock, exhibition for sale or distribution of any insecticides

is issued by the licensing officer appointed by the State Governments after payment of the prescribed licence fee. Licenses are granted only after satisfying the availability of necessary plant and machinery, safety devices, first aid-facility, equipped with proper storage accommodation for avoiding any hazards etc in the premises where the insecticides is proposed to be manufactured or sale or distribution.

As per the Insecticide Act, 1968, the quality control of pesticides is primarily a responsibility of the States. Insecticide Inspectors appointed by the Central or State Governments (section 20) have been vested with powers to search premises, seize documents, stop distribution or sale of insecticides and take insecticide samples for analysis (section 21). Such analyses are carried out by Insecticide Analysts appointed by Central or State Governments (section 19). Dispute over analytical test reports are resolved through confirmatory tests in the Central Insecticides Laboratory (CIL) which has been established under section 16 of the Act.

At present, 12316 officers of various State Governments are notified as Insecticide Inspectors to check the quality of pesticides. To ensure availability of quality pesticides, 70 State pesticide testing laboratories (SPTL) are established in 25 States and 2 Union Territories with a total annual capacity to test 77,675 samples.

The Central Government supplements the resources of State/UT Governments in quality control testing of pesticides. At present, 207 Central Government

# Department of Agriculture & Farmers Welfare

officers are notified as Central Insecticide Inspector and there exists one Central Insecticide Laboratory at Faridabad and two Regional Pesticides Testing Laboratories at Chandigarh and Kanpur under the Directorate of Plant Protection, Quarantine & Storage (DPPQ&S) with an annual testing capacity of 4,700 samples.

Offences related to import, manufacture or sale of 'misbranded' insecticides, which include use of deceptive or faulty labels, use of improper packaging, higher toxicity or counterfeiting of the product etc. are punishable with imprisonment up to two years, or with fine between Rs. 10,000 to 75,000, or with both.

**Total Number of samples analyzed at RPTLs is given below in Table I :-**

Sr. No.	Time period 01.04.2024 to 31.12.2024	No of samples received from Central Insecticide Inspector	Samples analyzed at RPTL Kanpur	Samples analyzed at RPTL Chandigarh	Total samples analyzed at both RPTLs	Total samples found Misbranded at both RPTLs
1	2024 -25	552	1934	1676	3610	176

**Details of samples analyzed at State Pesticide Testing Laboratory for Year 2024-25 is given below in Table II :-**

Sr. No.	Time period 01.04.2024 to 31.12.2024	No. of Samples analyzed	Misbranded	Prosecution Lau nched	Accused Convicted
1	2024 -25	24781	660	38	3

**Locust Control and Research:** Locust is a trans-boundary migratory pest. It has the ability to fly hundreds of kilometers collectively in swarms. Found in Africa, the Middle East and Asia, they can inhabit some sixty countries and can cover one-fifth of Earth's land surface. Desert locust plagues can threaten the economic livelihood by destroying crops. Swarms of locusts come to India from spring breeding areas of Africa, Middle East and South West Asia during the monsoon season for summer breeding in Scheduled Desert Area of Rajasthan and Gujarat. The scheme Locust Control and Research is being implemented through an Organisation known as Locust cum Integrated Pest Management Centre (LCIPMC) {earlier known as Locust Warning Organisation (LWO)} established during 1939 and later merged with the Directorate of PPQ&S in 1946. The Locust cum Integrated Pest Management Centre monitors locust development and its activities over

an area of 2.05 lakh sq. km of the Scheduled Desert Area (SDA) mainly in the states of Rajasthan and Gujarat and partly in Haryana. The Scheme is being executed through 14 Offices i.e. 12 LIPMC located at Jaisalmer, Barmer, Jalore, Phalodi, Nagaur, Suratgarh, Churu, Ganga Nagar, Jaipur in Rajasthan and Baroda, Palanpur & Bhuj in Gujarat, Regional Locust cum Integrated Pest Management Centre (RLCIPMC) Field Headquarters at Jodhpur and Locust Division at Central Headquarter Faridabad (Haryana). Besides, there is one Locust cum IPM Research Centre (LCIPMRC) situated at Bikaner.

To strengthen locust monitoring and forecasting and as per the recommendations made during the 28th Session of the FAO Commission in 2014 for Controlling the Desert Locust in South-West Asia (SWAC), an advanced device named eLocust3 and software RAMSES V4 has been made functional in

LWO from January, 2016 with the cooperation of FAO. Satisfactory locust control potential is being maintained in the form of pesticides, plant protection equipment, GPS, eLocust3, eLocust3mpro vehicles and trained manpower.

Regularly survey is being carried out in the scheduled desert area to monitor the presence of locust, ecological conditions and also to determine whether locust population has crossed the economic threshold level [adults more than 10,000 per km. and 5-6 hoppers per bush] that may require control.

Participation in the Indo-Pak Border monthly meetings (June to November) for exchange of locust situation information between two Countries for effectively monitoring the situation ensuring preparedness to tackle the emerging locust threat, if any.

Issuance of Desert Locust Situation Bulletin at fortnightly intervals to inform all the concerned stakeholders about the prevailing locust situation in India.

To maintain desert locust culture for conducting research on bio-efficacy of pesticides and bio-pesticides against desert locust at Locust cum IPM Research Centre Bikaner.

**RLCIPMC (Regional Locust cum IPM Centre, earlier known as Locust Warning Organization)** is responsible to monitor by way of survey and surveillance and control of Desert locust in 2.05 lac sq. km Scheduled Desert Area (SDA) of Rajasthan and Gujarat. RLCIPMC detect the local breeding in Scheduled Desert Areas and incursion of exotic locust swarms into India. It keeps itself abreast with the prevailing locust situation at National and International level through monthly Desert Locust Bulletins of FAO issued by the Desert Locust Information Service (DLIS), AGP Division Rome, Italy. Survey data is collected by the field

functionaries through e locust3m pro from the field which is transmitted from LCIPMC's to RLCIPMC. Where this data is compiled and analyzed to forewarn the probability of locust outbreak and upsurges and also shared with FAO, Rome. The locust situation is appraised on regular basis to the State Governments of Rajasthan, Gujarat, Punjab and Haryana with the advice to gear up their field functionaries to keep a constant vigil on locust situation in their areas and intimate the same to nearest LCIPMC/RLCIPMC offices for taking necessary action at their end. In addition to this IPM activities are performed through FFS.

During 2024-25 (as on 31.12.2024) 134.36 Lakh hectare area is surveyed for desert locust and 18 nos. of fortnightly locust bulletins were issued. 6 numbers of Indo-Pak border Meetings were scheduled during the period but the same were not conducted as there is no response received from Pakistan side.

#### **Programme:**

- Organised four days FAO sponsored National Training Workshop on Desert Locust Sprayer maintenance at RLCIPMC, Jodhpur on 23rd to 26th July, 2024. In the training 15 participants (DCM & MTS) from different LIPMCs were trained.
- Shri H.B. Sethi PPO Jalore and Shri Amit Kumar Meena PPO Jaisalmer deputed to attend 5 days training workshop on the communication skill of Locust Management officers in Cairo (EGYPT) from 13th to 17th October 2024-10-17.
- Dr. Cyril Piou, Locust Forecasting officer DLIS, FAO Hqrs Rome (Italy) visited India during 08/10/2024 to 18/10/2024 and participated in Desert Locust Surveys near the Indo Pak (Bikaner to Barmer via Jaisalmer) Border.

#### **Target and Achievement for the year 2024-25 (till Dec. 2024)**

S. No.	Activities	Annual targets	Achievement (till Dec. 2024)
1.	Locust Surveillance (area in Lac ha.)	<b>150.035</b> (Target till Dec. 2024, 124.955)	134.36

## Department of Agriculture & Farmers Welfare

S. No.	Activities	Annual targets	Achievement (till Dec. 2024)
2.	No. of Locust Bulletins (in Nos)	<b>24</b> (Target till Dec. 2024, 18 No )	18
3.	Indo-Pak Border Meeting (in Nos)	<b>06</b> (Target till Dec. 2024, 6 No.)	00*

\*No response received from Pakistan for Indo-Pak border meeting

FAO developed a monitoring tool eLocust3g, a satellite based tool collection and supplied 55 nos. of eLocust3g devices to DPPQS through FAO representative India. These devices will be used by the trained Govt. Officials in Scheduled Desert Areas of Rajasthan, Gujarat & Haryana Sates of India. Since there is network connectivity problem in Scheduled Desert Areas these devices can be used in such areas

for Desert Locust data reporting as these are satellite based.

### **Contribution in International efforts in Plant Protection**

Participation in the Preparatory Group Meeting for the 33rd Session of the Asia and Pacific Plant Protection Commission (APPPC):



Dr. J. P. Singh, PPA participated in the Preparatory Group Meeting for the 33rd Session of the Asia and Pacific Plant Protection Commission (APPPC) held at Bangkok, Thailand during 3-6 June, 2024. The FAO regional office and APPPC Secretariat, Thailand, Republic of Korea, Philippines, New Zealand, China and India participated in the meeting.

The meeting was conducted to finalise agenda for the 33rd APPPC biennium Session to be held in

China after discussing various topics. The FAO support and financial report, logistics arrangements for the 33rd Session, updates on the acceptance of the amendments of the APPPC agreement, implementation status of the current biennium work plan, work plan for the next biennium (2025-2026) and special topics to be discussed in the 33rd APPPC session were discussed, among others.

**IPM Awareness Programs organized by CIPMCs/LCIPMCs for School Children**



**Awareness programs for NPSS app/ Kisan Goshthis / workshops etc. organized by CIPMCs**



# Department of Agriculture & Farmers Welfare

## National Institute of Plant Health Management (NIPHM)

National Institute of Plant Health Management(NIPHM) is established with the objective of human resource development in plant protection technology, plant quarantine and bio-security with special emphasis on crop oriented Integrated Pest Management approaches. It also, trains personnel in analysis of pesticide formulations and pesticide residues for monitoring the residue levels in the agricultural produce. NIPHM also provides policy support to Central Government In implementation of the Insecticides Act,1968 and the Insecticides Rules, 1971.

It is mandated to function as a nodal agency for exchange of knowledge on plant protection technology, gain over all insight into Plant Protection and Food Security Measures and contribute to Policy making together with understanding operational problems and constraints. NIPHM, is also conducting programme oriented research in the area of Plant Protection, Integrated Pest Management, Pesticide Management, Plant Quarantine and Pesticide delivery systems and residues.

National Institute of Plant Health Management (NIPHM), as part of its mandate has trained a total of 4,487 agricultural officials and farmers in the past 6 months. NIPHM is also conducting research through program oriented projects.

NIPHM has four main divisions through which the mandate of this institute is executed:

- i. Plant Biosecurity Division
- ii. Plant Health Management Division
- iii. Pesticide Management Division
- iv. Plant Health Engineering Division

### PLANT BIOSECURITY DIVISION

Plant Biosecurity division has conducted 40 officer's programmes (public sector, private sector, customized/MEA-ITEC/ collaborative programmes on campus/off campus workshop/conference/webinar). Besides that in partnership with ITEC-MEA, Govt. of India, 02 International programmes on various aspects related to plant biosecurity and

vertebrate pest management were organized and 37 participants were attended the programme. The details of programmes conducted are given below in detail.

#### Educational Programmes:

- **MOOCs on Plant Biosecurity:** Twenty five participants are attending the course in 11th batch.Thirty four participants are enrolled for the current batch.
- **MOOCs on Rodents and Household Pest Management:** Module 1 of 9th batch commenced from May, 2024 and the course is being attended by 60 participants. Thirty Seven participants are enrolled for the current batch.
- **KERALA PGDPM:** 1st Semester contact classes were organized at NIPHM from 22.05.2024 to 28.05.2024.

#### Research projects (Ongoing Research projects):

- i. Commercial scaling up of irradiation protocol as phytosanitary measure for major cut flowers -funded by BARC-Board of Research in Nuclear Sciences (BRNS), Department of Atomic Energy (DAE), GOI.
- ii. Survey and field evaluation of sterile insect technique for the management of Oriental fruit fly, *Bactrocera dorsalis* (Diptera:Tephritidae) infesting economically important fruit crops- funded by BARC-Board of Research in Nuclear Sciences (BRNS), Department of Atomic Energy (DAE), GOI.
- iii. Development of eco-friendly and integrated stored grain pest management techniques for food grain storage in FCI godowns (multi-locations) -FCI.
- iv. Hot Water Immersion Treatment (HWIT) of Chillies at Commercial scale - APEDA.
- v. Evaluation of Animal Out repellent against the wild boar & rodents- Pestomatic Pvt Ltd: Industry project
- vi. Bioefficacy of Deltamethrin 1% + Alphacypermethrin 2% + PBO 6% EC on stored grain pests- M/s Yashnee Agrochemical India Pvt Ltd: Industry project

**Lab Activities:**

- Maintaining/Rearing of stored grain insect cultures viz. Tribolium, Rice weevil, Khapra, Pulse beetle, Cigarette beetle, saw toothed grain beetle and rice moth.
- Fruit fly lure preparation (ME & CUE)
- Maintenance of vermicompost unit

**Other activities:**

- MoU with Development foundation: A meeting was held with Director-Development Foundation on 26th July, 2024 regarding the training of support staff for State Warehousing Corporations (SWCs) and other agencies across India under the chairmanship of DG, NIPHM. MoU was signed.
- The MoU with Barefooter School of Foundation: A meeting was held on 10.09.2024 at NIPHM. The Registrar, Director (PBD, PHM, PMD), Joint Director (PHE), AFAO and ASO (VPM) from NIPHM and Mr Avinash

Salunke (Founder) and Mr Sharad Patil (Co-Founder) from Barefooter School of Foundation, Pune has attended the event.

- Dr. Pyla Jyothi, AD (PS) attended International training Program on Smart farming and Precision Agriculture scheduled during 24th to 28th June, 2024 in Malaysia sponsored by MTCP, Govt. of Malaysia.
- Director, Plant Biosecurity and Scientific Officer, NIPHM attended the two days “Capacity Building Programme on Triangular Cooperation” from 19 to 20 September, 2024 at Research and Information System for Developing Countries, New Delhi. In the training program, Director-PBD briefed about the various activities of NIPHM and strength of NIPHM to collaborate with GIZ and RIS, New Delhi for capacity building programs and various perspectives of triangular cooperation.

***Trainings******Export Promotion of Agriculture/horticulture produce through effective field management of pests***

Plant Quarantine Procedures for Export and Import

# Department of Agriculture & Farmers Welfare



Participants visited PQ Station, Shamshabad



Participants visited NBPGR, Hyderabad

## 1. Training Programs conducted during April to Sept. 2024

S. No	Type of Programmes	Targets	No. of programs conducted	No. of participants attended		
				Male	Female	Total
1.	Officers	12	12	158	78	236
2.	Students (Unscheduled programs for students)	0	4	82	24	106
				<b>Grand Total</b>		<b>342</b>

### 1. ICC-NIPHM

During the period April to September 2024, ICC members have conducted two meeting of 1st Quarter and 2nd Quarter. The committees

discussed about female employee and gender ratio of NIPHM (Male: 120, Female: 73) for safe workplace. There were no complaints during the period.



1st Quarter meeting



2nd Quarter meeting

## Special Training programmes

- **Pesticide Application Techniques and Safety Measures (BAMETI):**

A special 5 days training on “Pesticide Application Techniques and Safety Measures” for the BAMETI officials at the NIPHM campus on from 23rd to 27th September 2024 on payment basis. Eighteen officials (14 male and 4 female) registered and attended the training programme.



### ii) Programmes for Students:

- **Pesticide Application Techniques and Safety Measures:**

“Pesticide Application Techniques and Safety Measures” training conducted for the Agricultural Engineering students from Kerala (St Thomas College of Engg & Technology). A total of 28 students (07 male and 21 female) attended 8 days training programme from 01st to 8th July 2024.

- **Micro irrigation, water shed management and precision farming**

Training programme on “Micro irrigation, watershed management and Precision farming” conducted for the Agricultural Engineering students

from Kellapaji College of Agricultural Engineering and Technology, Tavanur, Kerala. A total of 38 students (6 male and 32 female) attended the 10 days training programme from 2nd to 12th September 2024. The program emphasized on Micro irrigation systems, Concepts of Remote sensing, GIS, Basics of GPS and its applications, Ground water management, Wastewater management, Drones in Agriculture, IoT in agriculture, Geo informatics and sensor based technology in precision farming, Advances in planning water harvesting intervention and irrigation management and also visited ICRISAT, Jain irrigation, WTC, PJTSAU and CRIDA HRF institutes as part of training..



# Department of Agriculture & Farmers Welfare

- ***Exposure visits:***

One batch of 57(21 male and 36 female) agricultural engineering students from College of Agricultural Engineering, Madaksira along with two faculties visited Plant Health Engineering workshop on 13.09.2024 and got acquainted with low cost developed equipment and different types of sprayers and Drones



### iii) Programmes for Farmers:

- ***Pesticide application Techniques and Safety Measures***

Two online farmers training was organized on "Pesticide Application techniques and safety measures" one programme was conducted on 3rd August 2024 with collaboration KVK, Hingoli,

Maharashtra total 28 farmers attended, and second was conducted on 30th August 2024 with collaboration MGM Nanaheb Kadamb College of Agriculture, Gandheli, Maharashtra total 68 farmers attended the programme. Collaborative parties gathered participants and NIPHM speakers took the lectures on Application techniques, nozzles and safety precautions.



### iv) Drone trainings

- ***Basic Remote Pilot Certification:***

This training is part of the Drone Academy who trains and certifies the Drone Pilots for use of drones in various applications. The academy has been certified as RPTO (Remote Pilot Training Organization) in association with an Industry partner (M/s Marut Drones). Total 12 training programme for 95 candidates (85 male and 10 female) attended the 5-day programme, conducted during April to September 2024.



- Agricultural Drone Remote Pilot Certification:**

NIPHM started conducting agricultural chemical spraying training through drones. Two training programmes on agricultural drone pilot certification conducted, trainings were conducted in association certification conducted for FPO members, training was conducted in association with Cornell Sathguru Development Foundation with financial support from NABARD. Two training programmes on Agriculture Drone Remote Pilot Certification conducted. Training conducted from 14th to 25th May 2024 and total 13 male candidates attended the 12-day programme. Second programme from 20th to 31st May 2024 12

candidates (11 male and 1 female) candidates attended the 12-day programme. In addition to general aviation topics like International civil aviation organization, RPAS with in ICAO frame work, Classification of drones, Drone operation zones, ATC procedure and radio telephony and flight radio telephony, etc., Agricultural Standard Operating procedures during chemical spraying, Crop specific SOPs, Nozzles and their functionality, Dos and Don'ts in chemical spraying, safety, care and maintenance of drones and agri sparing system etc. also were dealt in detail. Lab assembly of drones and simulation experiments of drones also were conducted. Exclusive five days of flying also were arranged for the trainees.



## Projects

### Nozzles wear study:

Performance evaluation of sprayers and waste water treatment studies and drone studies were conducted during said period.

### Monitoring of pesticide residues at National Level (Jan - July, 2024)

During the year 2005-06, the Department of Agriculture & Farmers Welfare, Ministry of Agriculture & Farmers Welfare had started a central sector scheme, "Monitoring of Pesticide Residues at

# Department of Agriculture & Farmers Welfare

National Level (MPRNL)" to monitor pesticide residues in food commodities and water, identify crops and regions having preponderance of pesticide residues and promote Good Agricultural Practices among farmers and implementation of Integrated Pest Management (IPM).

The MPRNL project is implemented by the All India Network Project on Pesticide Residues (AINP-PR),

ICAR-IARI, New Delhi and the Network Coordinator, is the In-Charge of the scheme. The scheme policy decisions related to the scheme are taken by the Steering Committee headed by the Joint Secretary (Plant Protection), DA&FW while the decisions related to the technical issues are under the purview of the Technical Committee, headed by the Assistant Director General (Plant Protection), Indian Council of Agriculture Research (ICAR).



## Review of project by DA&FW Officials

Under the scheme, 35 laboratories representing Ministry of Agriculture & Farmers Welfare, Ministry of Health and Family Welfare, Ministry of Chemical and Fertilizer, Ministry of Commerce, Indian Council of Agriculture Research, Council of Scientific and Industrial Research and State Agricultural Universities collect samples of food commodities such as vegetable, fruits, cereals, pulses, spices, herbs, milk, egg, fish/ marine, meat, tea and oilseeds from various Agriculture Produce Marketing Committee (APMC) markets, local markets, farm gate, organic outlets and surface water from intensive agricultural fields from various parts of the country. The samples are tested for pesticide residues by 28 NABL accredited testing labs.

During January to July 2024, under the central sector MPRNL scheme, 35 participating laboratories collected 16,370 samples and tested the samples for the possible presence of pesticide residues. Out of the 16,370 samples collected and analysed, the pesticide residues were detected in 35.7% samples while the residues in 2.6% samples were found

exceeding FSSAI MRL. Residues of off-label pesticides were detected in 26.5% samples.

To ensure the credibility of the data generated by the testing laboratories under MPRNL, only the laboratories accredited by NABL as per ISO 17025 are involved in testing of samples. As part of Quality Assurance activity, the NIPHM, Hyderabad, an ISO 17043 accredited PT provider, regularly conducts Proficiency Testing (PT) programmes.

The project in-charge has established active linkages with FAO/WHO/Joint Meeting on Pesticide Residues. The pesticide residue monitoring data generated by MPRNL on various spices is regularly submitted to FAO/WHO/JMPR for risk assessment and fixation of Codex MRL. During 2009-24, Codex MRLs for 20 pesticide-spice combinations on five different spices (cardamom, coriander, fennel, cumin, pepper (black and white) have been fixed based on the data submitted by India. This would ease trade barriers and facilitate smooth export of spices from India.

The project in-charge is also involved in Electronic Working Group (eWG) of FAO/WHO/ Codex

Committee on Pesticide Residues (CCPR) related to 'Management of unsupported compounds without public health concern scheduled for periodic review', 'National Registration of Pesticides' and 'Establishment of Codex schedules and priority lists of pesticides for evaluation/re-evaluation by JMPR'. The Project In-charge also participated as chair of 'Guidelines for monitoring the purity and stability of reference materials and related stock solutions of pesticides during prolonged storage' agenda in the 55th Session meeting of Codex Committee on

Pesticide Residues (CCPR) held during 3th-8th June, 2024.

The DA&FW allocated funds of Rs. 1600.00 lakh under Grant-in-aid General, which was distributed amongst different participating laboratories for conducting the work related to the MPRNL scheme. The 16th Annual Workshop of MPRNL project was conducted on 8 August, 2024 at NASC, New Delhi under the chairmanship of Sh. Faiz Ahmad Kidwai, Additional Secretary, Plant Protection, DA&FW.



Group photo of 16th Annual Workshop of MPRNL

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## **Chapter 23**

### **GENDER PERSPECTIVE IN AGRICULTURE- 2024-25**

#### **23.1 Overview**

Women play a very important role in agriculture and rural development in our country. Agriculture, the single largest production endeavor in India is contributing substantially to the GDP and is increasingly becoming a female activity. The Economic Survey 2023-24 highlights the significant increase in women's participation in India's labor force, with a focus on rural women and their role in agriculture. The Female labor force participation rate (LFPR) increased from 23.3% in 2017-18 to 37% in 2022-23, with rural women driving the increase. It also notes that the agricultural sector is important for providing livelihoods to about 42.3% of the population. The survey also states that the agriculture sector contributes 18.2% to the country's GDP. The Economic Survey 2023-2024 highlighted economic empowerment of women notes that increased accesses to education and skill development, as well as other initiatives for women's empowerment have elevated the participation of women in the nation's development and progress.

Women play a significant and crucial role in agricultural development including, main crop production, livestock production, horticulture, post-harvesting operations, agro/social forestry, fishing, etc. The increasing percentage of female operational holders during different Agriculture Censuses indicates the participation of more and more women in the operation and management of agricultural holdings in the country.

In the field of agriculture, women farmers are contributing extensively to the development of the sector and play multiple roles from being a producer, cultivators and entrepreneurs. There is empirical evidence that women have a decisive role in ensuring food security and preserving local agro-biodiversity. Rural women are responsible for the

integrated management and use of diverse natural resources to meet daily household needs. The agricultural sector is an essential source of economic growth, employment, poverty reduction, food and nutritional security. Women play a vital role in agriculture and therefore, gender-inclusive growth and development projects in agriculture tend to be effective, socially and economically. Bridging the gender gap in access to productive resources in agriculture boosts agricultural productivity and income.

To fulfill the mission of gender mainstreaming in agriculture & allied sectors, the National Gender Resource Centre in Agriculture (NGRCA) in Extension Division is working as a focal point for convergence of gender related activities and issues within and outside DA&FW; addressing gender dimension to agriculture policies and programmes; rendering advocacy/advisory services to the States/UTs to internalize gender specific interventions. NGRCA aims at forging effective functional linkages with other related departments, agencies and institutions for women empowerment. The Gender Budget has been made a part of the Union Budget of India since 2005 and entails fund allocation towards programmes/schemes dedicated to women. Through this effort, the Government is promoting gender equality with a focus on alleviating the gender gap in all sectors and at all levels of governance. The Department of Agriculture & Farmers Welfare is earmarking funds to be used in schemes and programmes aimed at bridging the gender gap.

#### **23.2 CURRENT INITIATIVES OF THE NATIONAL GENDER RESOURCE CENTRE IN AGRICULTURE (NGRCA):**

The National Gender Resource Centre in Agriculture (NGRCA) of the Department of Agriculture & Farmers Welfare established in Extension Division is

supported under the component of 'Extension Support to Central Institutes/ Directorate of Extension' of 'Sub-Mission on Agricultural Extension'. The NGRCA acts as a focal point for convergence of all gender related activities and issues in agriculture and allied sectors within and outside DA&FW; addressing gender dimension to agriculture policies and programmes; rendering advocacy/ advisory services to the States/UTs to internalize gender specific interventions for bringing the farm women in the mainstream of agriculture development. Being a Nodal Agency for Women in Agriculture in DA&FW, Ministry of Agriculture & Farmers Welfare; the Centre is actively involved in the revision of guidelines of various beneficiary oriented schemes/programmes of DA&FW to ensure allocation of resources and flow of benefits to the women farmers in proportion to their participation in agricultural activities.

#### **Major activities undertaken by NGRCA:**

- The National Gender Resource Centre in Agriculture (NGRCA), Directorate of Extension (DOE), Department of Agriculture & Farmers Welfare in collaboration with the Extension Education Institute , Guwahati celebrated 'Mahila Kisan Diwas' or 'International Rural Women Day' on 15th October, 2024 at the Extension Education Institute , Guwahati on the theme 'Role of Women Entrepreneurs in Transforming Agriculture' . Officials from the Ministry of Agriculture & Farmers Welfare and various institutions participated in the said event. A book titled Inspiring Journeys of Women in Agriculture compiled and edited by NGRCA, DOE and a short video film on the Gender Mainstreaming efforts in the Agriculture was also launched by dignitaries with the purpose of cross learning and replication of the stories narrated, offering valuable resources and information to the women farmers. The event also featured an exhibition and women farmers and entrepreneurs exhibited their products in the stalls. The Senior and middle level extension functionaries, women farmers and agri-entrepreneurs and resource persons from various States/Institutes/Start-ups/training institutes participated in the event. Also, the events including trainings and felicitation of women farmers and agripreneurs were organized across the country on the occasion of Mahila Kisan Diwas by the States/UTs and institutions working under the aegis of the Department of Agriculture & Farmers Welfare.
- The Extension Division of DA&FW has been organizing Pre-Seasonal Interfaces before Kharif & Rabi every year involving Technical Division of Department of Agriculture & Farmers Welfare (DA&FW) and Indian Council of Agricultural Research (ICAR). The effort is aimed at understanding the key issues - both from Research and Development perspective in agriculture and allied sectors and evolving joint strategies to address those issues in the ensuing Kharif/ Rabi season. The issues so emerged warranting actions by States are then flagged in the National Conference on Agriculture for Kharif / Rabi and are discussed with the States for its execution at field level. The Pre-Kharif 2024 and Pre-Rabi 2024 DA&FW-ICAR Interface was organized on 24th April, 2024 and 24th September, 2024 and the group recommendations of the said interface were shared with the Senior Officers of the Agriculture Department of States / UTs.
- Undertaking macro/micro level studies in critical thrust areas including assessing the gender contents and impact of various on-going schemes/programmes of DA&FW& make recommendations, if required, on appropriate improvements in their strategy and design to incorporate gender factor into them.
- Collecting, analyzing the documenting successes of Women farmers and the participatory material developed/innovative strategies followed to address gender concerns in women specific programmes of the Department.
- Generating 'gender disaggregated data' in respect of various schemes& programmes of different divisions of DA&FW.

- Developing Gender Sensitization Module for programme implementers at district, sub-division and cutting-edge level along with organizing model sensitization workshops for the sensitization and capacity building of programme implementers in selected States.
- Looking into the budgetary commitments of various schemes/programmes of DA&FW through Gender Budgeting Cell (GBC) to ensure proportionate flow of funds and benefits to women farmers.
- As a part of convergence strategy, NGRCA is initiating collaborations with Ministries/ Departments/eminent institutions working for women in agriculture.

### **23.3 GENDER MAINSTREAMING EFFORTS OF VARIOUS DIVISIONS OF DA&FW**

The various gender mainstreaming and gender budgeting efforts of various Divisions of DA&FW are given as under:-

#### **A. AGRICULTURE EXTENSION**

##### **Support to State Extension Programs for Extension Reforms (ATMA):**

The Scheme "Support to State Extension Programs for Extension Reforms (ATMA)" implemented since 2005 has now been included as Centrally Sponsored components of the Sub-Mission on Agriculture Extension (SMAE) under Green Revolution - Krishonatti Yojana. It is now under implementation in 739 districts of 28 States & 5 UTs of the country. The Scheme promotes decentralized farmer-driven and farmer accountable extension system through an institutional arrangement for technology dissemination in the form of an Agricultural Technology Management Agency (ATMA) at district level. Under the Scheme grants-in-aid is released to States with an objective to support State Governments efforts of revitalization of the extension system and making available the latest agricultural technologies in different thematic areas to increase agricultural production through extension activities viz; Farmers Training,

Demonstration, Exposure visit, Kisan Mela, Mobilization of Farmers Groups and Setting up of Farm Schools. Through these activities, latest agriculture technologies are disseminated to farmers in the country.

With the purpose of gender mainstreaming in agriculture under ATMA programme, it is mandated that at least 30% of resources on programmes and activities are utilized for women farmers and women extension functionaries.

Under the Scheme, over 6,51,18,302 farmers including 1,74,91,876 farm women (26.86%) have participated in farmer oriented activities like Exposure Visits, Trainings, Demonstrations, Farm Schools and Kisan Melas. Over 4,12,176 commodity based Farmer Interest Groups (CIGs)/FIGs have so far been mobilized under the scheme and over 2,21,830 Farm Schools have been set-up on the fields of outstanding farmers.

With regard to progress of implementation during 2024- 25 (up to January, 2025), 15,05,456 farmers including 4,25,020 farm women (27.11%) have reportedly participated in farmer oriented activities like Exposure Visits, Trainings, Demonstrations & Kisan Melas; 8282 Farm Schools organized; 12486 specialists & functionaries have been reported as deployed under ATMA during 2021-22 (Up to January, 2025) and 42705 Farmer Friends also identified by the states.

##### **Mass Media Support to Agriculture Extension Scheme (MMSAE):**

The Mass Media Support to Agriculture Extension Scheme leverages the extensive infrastructure and networks of All India Radio and Doordarshan to disseminate the latest farming practices through radio and television. Implemented by Prasar Bharati, the National Public Service Broadcaster, the objective of this initiative is to enhance and strengthen the agriculture extension system in the current scenario.

Recognizing that a noticeable number of farmers today are women, the scheme acknowledges their

equal need for access to technology, investment, quality inputs, real-time information, and, most importantly, the latest know-how for sustainable and cost-effective agriculture. Radio and TV are particularly effective in reaching a wide audience at a low cost, making them ideal platforms for agricultural education.

The Krishi Darshan programs on Doordarshan telecast a 30-minute segment three days a week through one national and 18 regional Kendras. Similarly, 96 Rural FM Radio Stations of All India Radio also broadcast the Kisan Vani program three days a week. Other programs, such as Hello Kisan and Choupal Charcha, provide vital information to the farming community.

To broaden its reach, the scheme utilizes traditional electronic and print media as well as social media platforms, including Facebook, YouTube and X. Attention is given to featuring success stories of women farmers in these media to inspire and encourage other women to engage in agriculture. Additionally, the scheme celebrates women farmers on October 15 each year during Mahila Kisan Diwas.

#### **Establishment of Agri-Clinics and Agri-Business Centres (AC&ABC):**

The AC&ABC Scheme is under implementation since April, 2002. The Scheme aims at creating gainful self-employment opportunities to unemployed agricultural graduates, agricultural diploma holders, and intermediate in agriculture apart from science graduates with post-graduation in agriculture related courses for supporting agriculture development and supplementing the efforts of public extension. National Institute of Agricultural Extension Management (MANAGE) is the implementing agency for training component under the Scheme through a network of identified Nodal Training Institutes (NTIs) in various states. National Bank for Agriculture and Rural Development (NABARD) is implementing subsidy component under the Scheme on the behalf of Government of India and is monitoring credit support to Agri-Clinics and Agri-Business Centers through Commercial Banks.

Candidate from Women category are entitled for an additional benefit of 44% subsidy on the Total Financial Outlay (TFO) as against to 36% for General Category Candidates. There is provision for awarding exclusively women agripreneurs under the programme. Also women agripreneurs can co-obligate parents/ husband for availing credit facilities.

So far, 8100 women candidates have been trained and 2833 agri-ventures have been established by them in the country during the period of implementation of the Scheme upto December, 2024. Out of the ventures established since inception, 240 have been subsidized as on December, 2024. During the year 2024-25, starting from April, 2024, 144 candidates have been trained, 59 agri-ventures have been established and 8 ventures were subsidized upto December, 2024.

#### **Extension Education Institutes (EEIs):**

Ministry of Agriculture and Farmers Welfare has established four Extension Education Institutes on regional basis at Nilokheri (Haryana); Hyderabad (Telangana); Anand (Gujarat) and Guwahati/Jorhat (Assam) to cater to the training needs of middle-level field extension functionaries working under agriculture and allied departments of States / UTs of respective regions. The programmatic activities of EEIs include organization of on-campus / off-campus trainings, workshops, conferences etc. in the areas of communication technology, extension methodology training management, Agriculture Knowledge Information System (AKIS) and Information Technology. During 2024-25, the Extension Education Institutes (EEIs) conducted training courses with 88,736 extension functionaries including 2841 women extension functionaries.

#### **Diploma in Agricultural Extension Services for Input Dealers (DAESI):**

DAESI is one year (spread in 48 weeks; 1 day per week) diploma programme for agri-input dealers launched in October 2015. The National Institute of Agricultural Extension Management (MANAGE) is

# Department of Agriculture & Farmers Welfare

implementing DAESI Programme in all States through State Agricultural Management & Extension Training Institutes (SAMETIs), Krishi Vigyan Kendras and State Agricultural Universities. There is a course fee of Rs.20,000/- per candidate, out of which Rs.10,000/- is borne by DA&FW and Rs 10,000/- is to be contributed by input dealer. The GOI provides Rs.4.00 lakh for one batch of DAESI Programme @ Rs.10,000/- per candidate for a batch of 40 input dealers. The objective of DAESI is to impart education to the input dealers to upgrade their knowledge on latest technologies in agriculture and allied sectors, rules and regulations for sale of agri-inputs and transform them into para extension workers for providing better extension services to the farmers. During 2024-25 (upto December 2024), under DAESI programme, training was provided to 1403 input dealers including 137 women candidates.

**Skill Training of Rural Youth (STRY):** The component aims at training rural youths, rural artisans (blacksmiths, carpenter etc. designing / manufacturing farm implements) including farm women across the country. The training under this component would be of 7 days duration for 15 trainees per batch and would focus on specific vocational areas in agriculture & allied sectors. Both public and private / Non-Governmental Institutions

including Vocational Training organizations, Youth Organisations (like Nehru Yuva Kendra) will be actively involved in implementation of this programme. Under STRY, there is a provision of Rs. 42,000/- for one batch of skill training for 15 candidates as per the cost norms of ATMA cafeteria @ Rs. 400/- per farmer per day. During the year 2024-25 (upto October, 2024), a total number of 5504 candidates were trained under STRY. STRY has been subsumed under ATMA from November 2024 onwards.

## B. AGRICULTURE CENSUS

Agriculture Census is conducted at five yearly intervals to collect data on structural Agriculture Census is conducted at five yearly intervals to collect data on structural characteristics of operational holdings in the country. Since 1995-96, gender disaggregated data is being collected in Agriculture Census. The scope of collection of gender disaggregated statistics is restricted to number of operational holdings, corresponding operated area by different size classes of holdings, social group (SC, ST and others) and types of holdings (individual, joint and institutional). Percentage of female operational holdings by size classes as per results of latest Agriculture Census 2015-16 and 2010-11 is given in the following table-

Sr. No.	Size Group	2010 - 11	2015 - 16
1	Marginal (Below 1.00 ha.)	13.63%	14.68%
2	Small (1.00 - 2.00 ha.)	12.15%	13.44%
3	Semi - Medium (2.00 - 4.00 ha.)	10.45%	11.76%
4	Medium (4.00 - 10.00 ha.)	8.49%	9.76%
5	Large (Above 10.00 ha.)	6.78%	7.88%
	All Size Groups	12.78%	13.96%

The increase in percentage of female operational holders during the different Agriculture Censuses indicates participation of more and more women in operation and management of agricultural holdings in the country.

## C. AGRICULTURAL MARKETING

### Agricultural Marketing Infrastructure (AMI):

To develop Agricultural Marketing Infrastructure including storage infrastructure, Ministry of Agriculture & Farmers Welfare is implementing capital investment subsidy sub-scheme "Agricultural Marketing Infrastructure (AMI)" of Integrated Scheme for Agricultural Marketing (ISAM). The erstwhile two schemes viz. (i) GrameenBhandaranYojana (GBY) implemented since 01.04.2001, and (ii) Scheme for Strengthening/Development of Agricultural Marketing Infrastructure, Grading & Standardization (AMIGS) implemented since 20.10.2004 have been subsumed into one scheme known as Agricultural Marketing Infrastructure (AMI) w.e.f. 01.04.2014 and continued/ extended till 31st March, 2026.

AMI sub scheme is a capital investment, open ended, demand driven & back ended capital subsidy scheme, under the AMI sub-scheme, there are two components: (i) Storage Infrastructure, and (ii) Marketing Infrastructure other than storage. The main objective of the scheme is to promote development of agricultural marketing infrastructure including storage infrastructure in the country. The scheme is meant for holistic development of agricultural value chain critically focusing each linkage of post-harvest eligible primary, secondary & tertiary processing.

The Eligible Beneficiaries under the Scheme include Individuals, Group of farmers / growers, FPOs/FPCs registered under respective companies Act/cooperatives societies Act/ societies registration Act (with minimum 50 number of farmer members); Partnership/ Proprietary firms, Companies, Corporations; Non-Government Organization (NGO), Self Help Group (SHG); Cooperatives, Cooperative Marketing Federation; Autonomous Bodies of the Government, Local Bodies, Panchayat, State agencies including State Government Departments and autonomous organization / State owned corporations such as Agricultural Produce Market Committees & Marketing Boards, State Warehousing Corporations, State Civil Supplies Corporations etc.

Since inception of scheme up to 30.06.2024, a total number of 48512 storage infrastructure projects (Godowns), with storage capacity of 93.99 million MT were sanctioned under the scheme and subsidy of Rs. 4734.73 crore has been released and 20,959 other marketing infrastructure projects have also been sanctioned and subsidy of Rs. 2111.94 crore. In order to promote women farmers and entrepreneurs including women Self Help Groups (SHGs), the assistance in the form of subsidy is provided to all the women beneficiaries at a higher rate i.e. @33.33% instead off 25%.

A total of 9567 and 946 Women Beneficiaries are assisted under AMI for Storage and Other than Storage Infrastructure since inception as on 31.05.2024 under the scheme.

### Formation and Promotion of 10k FPOs

The Central Sector Scheme for "Formation and Promotion of 10,000 Farmer Producer Organizations (FPOs)" was launched in the year 2020, to form and promote 10,000 FPOs by 2023-24 towards handholding support to FPOs. Under the scheme, the FPOs are to be developed in produce clusters, wherein agricultural and horticultural produce is grown/ cultivated for leveraging economies of scale and improving market access for members. Formation and promotion of FPOs are to be done through Implementing Agencies (IAs), which further engage Cluster Based Business Organizations (CBBOs) to form & provide professional handholding support to FPOs for 5 years. Under the scheme, there are special provisions in the operational guidelines to empower women farmers such as providing special focus, inter-alia, to include women farmers/women Self Help Groups (SHGs), as members to make FPOs more effective and inclusive; and making provision to prefer women farmers" as its shareholders. Women are an integral part of FPOs and therefore, farmer members both men & women are mobilized during its formation stage through awareness creation.

### Status of women in the FPOs formed under the scheme

- There are 10.25 lakh women farmers in the total 27.15 lakh shareholders in the FPOs formed under the scheme.

# Department of Agriculture & Farmers Welfare

2. There are currently 49,667 FPO BoD members in which 15,560 are females.
3. 1,459 FPOs registered under the scheme have more than 50% women members.\*
4. 1022 FPOs registered under the scheme have more than 75% women members.\*
5. 905 FPOs registered under the scheme have more than 90% women members.\*

\*The data is as reported on MIS dated 1st October 2024, only FPOs with at-least 100 farmer entries are considered

## D. CREDIT

The Department has introduced yield based Pradhan Mantri Fasal Bima Yojana (PMFBY) and weather index based Restructured Weather Based Crop Insurance Scheme (WBCIS) from Kharif 2016 to provide financial support to farmers suffering crop loss/damage arising out of natural calamities, adverse weather incidence and to stabilize the income of farmers etc. Comprehensive risk insurance is provided to the farmers growing notified crops in the notified areas under the scheme from pre-sowing to post-harvest losses.

Pradhan Mantri Fasal Bima Yojana (PMFBY) aims at supporting sustainable income in crop production, especially in adverse climatic conditions by way of providing financial support to farmers suffering crop loss/damage arising out of unforeseen events, stabilizing the income of farmers to ensure their continuance in farming, encouraging farmers to adopt innovative and modern agricultural practices, ensuring credit worthiness of the farmers, crop diversification and enhancing growth and competitiveness of agriculture sector besides protecting the farmers from production risks.

In the scheme, all farmers including women, sharecroppers and tenant farmers growing the notified crops in the notified areas are eligible for coverage as per the laid down terms and conditions as per the scheme guidelines.

## E. CROPS

The National Food Security Mission (NFSM) is being implemented in identified districts of 28 states & 2

Union Territories (UTs) viz. Jammu & Kashmir and Ladakh in the country to increase production of rice, wheat, pulses, coarse cereals and nutri-cereals (Shree Anna) through area expansion and productivity enhancement in a sustainable manner. Under the scheme assistance is being provided to all category of beneficiary farmers including women farmers through state governments for interventions like cluster demonstrations on improved package of practices, demonstrations on cropping system, seed production and distribution of HYVs/hybrids, improved farm machineries/resource conservation machineries/tools, efficient water application tools, plant protection measures, nutrient management/soil ameliorants, processing & post-harvest equipments, cropping system based trainings to the farmers etc. The programme is being implemented on 60:40 sharing basis between GOI and state government in general states and 90:10 sharing basis for North Eastern states, Hilly states, states and 100% (GOI share) for Union Territories. As per the operational guidelines of NFSM, at least 30% allocation of the fund is to be made for women farmers.

## F. FARMERS WELFARE

- **Pradhan Mantri Kisan Samman Nidhi (PM-KISAN):**

The Pradhan Mantri Kisan Samman Nidhi (PM-KISAN) is a Central Sector Scheme being implemented since 1st December, 2018. The Scheme aims at providing financial assistance to landholding farmer families across the country, subject to certain exclusion criteria, to enable them to take care of expenses related to agriculture and allied activities as well as domestic needs. Under the Scheme, an amount of Rs. 6000/- per year is transferred in three 4-monthly installments of Rs.2000/- directly into the bank accounts of the farmers.

Under the PM-KISAN Scheme, the responsibility to identify the beneficiaries and upload their correct and verified data on PM-KISAN portal lies with the respective State/UT Government. Thereafter, these data go through various levels of verification and validation including Aadhaar/PFMS/Income Tax

database. Subsequent to such verification and validation, the benefit of the Scheme is passed on to eligible beneficiaries directly into their bank accounts through DBT.

Under the PM-KISAN Scheme, any landholding farmer irrespective of gender can get the benefit of the Scheme subject to exclusion criteria related with higher income status. The total number of unique eligible paid women beneficiaries under PM-KISAN since inception of Scheme is 3,36,07,796 (as on 14/10/2024).

- **Pradhan Mantri Maan Dhan Yojana (PM-KMY):**

Pradhan Mantri Kisan Maan Dhan Yojna (PMKMY), a Central Sector Scheme is being implemented in order to provide social security net for the Small and Marginal Farmers (SMF) by way of pension, as they have minimal or no savings to sustain their livelihood during their old age and to support them in the event of consequent loss of livelihood. Under this scheme, a minimum fixed pension of Rs. 3,000/- will be provided to the eligible small and marginal farmers, subject to certain exclusion clauses, on attaining the age of 60 years. The Scheme is a voluntary and contributory pension scheme, with entry age of 18 to 40 years. The beneficiary can opt to become member of the Scheme by subscribing to a Pension Fund. The beneficiary would be required to contribute Rs 100/- per month at median entry age of 29 years. The Central Government shall also contribute to the Pension Fund in equal amount. Contribution shall be made to a Pension Fund managed by the Life Insurance Corporation which will be responsible for pension payout.

Under PM-KMY Scheme, any small and marginal farmer having cultivating landholding upto 2 hectares and falling in the age group of 18 to 40 years, can enroll themselves irrespective of gender.

## **G. HORTICULTURE**

### **Mission for Integrated Development of Horticulture (MIDH)**

Mission for Integrated Development of Horticulture (MIDH), a Centrally Sponsored Scheme has been

approved for implementation w.e.f. 2014-15, for holistic growth of the horticulture sector covering fruits, vegetables, root and tuber crops, mushrooms, spices, flowers, aromatic plants, coconut, cashew, cocoa and bamboo. Mission subsumes National Horticulture Mission (NHM), Horticulture Mission for North East and Himalayan States (HMNEH), National Horticulture Board (NHB), Coconut Development Board (CDB) and Central Institute of Horticulture (CIH), Nagaland. While Government of India contributes 60% of total outlay for development programmes in all the States except the States in North East and Himalayas, 40% share is contributed by State Governments. In case of North Eastern States and Himalayan States, GOI contribution is 90%. Similarly, for programmes of National Horticulture Board, Coconut Development Board, Central Institute for Horticulture, Nagaland, UTs and the National Level Agencies, GOI contribution is 100%.

The schemes of Horticulture Division are area/project based and are targeted to benefit farmers especially small and marginal farmers. The MIDH aims at promoting holistic growth of the horticulture sector through area based regionally differentiated strategies and the Annual Plans received from the State Implementing Agencies were finalized for implementation in selected Districts adopting cluster approach for each fruit and vegetable crop. Keeping in mind the overall social objectives that funds have to be targeted for the benefit of Women, the State Horticulture Missions/Implementing Agencies under MIDH has been instructed to target at least 30% of the funds for Women farmers/beneficiaries while giving subsidy as well as for training purposes for development of skills for growing horticulture crops. The flow of funds for Women farmers is being determined on rational basis duly keeping in view the nature of the programme, its area of operation, the proportion of these categories of population in the operational area.

Horticulture Division is making efforts to stipulate in each and every administrative approval to provide for a pro-women allocation of at least 30% and the

# **Department of Agriculture & Farmers Welfare**

implementing agencies has been asked to ensure that the said funds are given to women beneficiaries/entrepreneurs as far as possible.

Further, in the Operational Guidelines of MIDH more incentives are being given to women farmers under the component 'Horticulture Mechanization'.

Since, scheme is being implemented by State Governments; the data regarding women beneficiaries are not available in the Division.

## **Coconut Development Board (CDB):**

Women farmers play an important role in the agriculture sector and development of the rural economy. Coconut is predominantly a small holders' crop. The involvement of women in coconut cultivation and industries associated with coconut processing is significant. According to MIDH guidelines 30% of the allocation is subjected to women. The Board's schemes related to coconut cultivation are being implemented in 22 States and UTs of the country, supplemented by suitable extension and publicity activities. Coconut Development Board has been playing pivotal role and its concerted efforts in enhancing farm level income through productivity improvement and other production improvement measures, product diversification and subsequent demand creations for the new products have resulted a dynamic push to the industry for its sustained growth. The CDB is implementing a Central Sector Scheme 'Technology Mission on Coconut' (TMoC) under which a major portion of the budget is for 'Adoption of technologies for value addition & processing in coconut sector'. A maximum of Rs.50.00 lakh is extended as subsidy towards 25% of the project cost. Whereas, for SC/ST women beneficiaries 33.3% of the project cost is extended as subsidy to a maximum of Rs.50.00 lakh. The Board under TMoC encourages development of new/modifications in existing mechanical devices, tools, equipments, machineries, etc. for reducing drudgery and to make them more women-friendly. Trainings are also imparted under Friends of Coconut Tree, coconut based handicraft making, coconut based convenient foods, neera based value added products, etc. to both men and women. The CDB also imparts training on 'Neera Technician' to

both men and women. Under the Extension Activities, Board has conducted awareness and skill development training programmes. As per the stipulations from the Ministry, benefits are extended to Women, transgenders, PwD, OBCs, SC and ST.

## **National Horticulture Board (NHB)**

The following schemes are being implemented by the NHB:

1. Development of Commercial Horticulture through Production and Post-Harvest Management of Horticulture Crops for a better alternative to increase the income of farmers in which the financial support in the form of back-ended subsidy is provided for setting up units relating to horticulture sector such as production related projects, PHM viz. Pack House, Ripening Chamber, Refer Van, Retail Outlets, Pre-cooling units, Primary processing etc.

2. Capital Investment Subsidy for Construction/ Expansion/ Modernization of Cold Storages and Storages for Horticulture Products", Under this scheme, credit linked back-ended subsidy @35% of the capital cost of the project in general areas and 50% in case of North East, Hilly States & Scheduled areas for Cold storage capacity above 5000 MT and up to 10000 MT is sanctioned for construction/ expansion/ modernization of cold storage and CA store. In case of NE Region, the capacity above 1000 MT is also eligible. Only those projects are considered which are set up in conformity of technical standards for energy efficiency and environmental safety energy and multi chambers.

3. Technology Development and Transfer for Promotion of Horticulture

Under this scheme, the Board is providing grant-in-aid for popularization of identified new technologies/tools/techniques for commercialization and adoption through following sub-components:

- i. Setting up of block / mother plant and root stock nursery (Area above 4 ha).
- ii. Acquisition of technologies including import of planting material.

- iii. Import of new machines and Tools for horticulture.
- iv. Development & Transfer of Technology.
- v. Long Distance Transport Solution
- vi. Product Promotion and Market Development Services- Horti-fairs
- vii. Exposure visit of farmers (Outside State)
- viii. Visit Abroad for Government Officers
- ix. Organization/Participation in Seminar/ symposia/workshop for development of horticulture
- x. Accreditation and Rating of Fruit Plant Nurseries.

As per NHB's approved Guideline, all the above schemes are demand driven and being implemented across the country.

#### **Directorate of Arecanut and Spices Development (DASD):**

The Directorate is ensuring that the MIDH programmes implemented through SAUs and ICAR institutes are prioritizing women beneficiaries such as women farmers, women Self Help Groups, women entrepreneurs etc. in all the development programmes. The implementing agencies have been instructed to target at least 30% of the funds for Women farmers/beneficiaries while giving subsidy as well as for training purposes for development of skills for growing spices / aromatic crops.

#### **Directorate of Cashew nut and Cocoa Development(DCCD):**

Cashew crop has emerged as the most popular commercial horticulture crop in India as it fetches considerable foreign exchange to the Indian exchequer. Nearly one million farmers are engaged in the cultivation of cashew, of which 5 lakh persons work in processing sector involving 95% women workers. Cashew, therefore plays a prominent role in Indian Agrarian economy and provide sizeable employment especially for women. The DCCD has been provided adequate provision for women empowerment in cashew and cocoa sector under HRD programmes under MIDH. A special scheme on

training for women with 100% participation is envisaged to popularize the usage of cashew apple for preparation of value added products which is being imparted to the unemployed women in association with Cashew Research Stations and State Agriculture Universities(SAUs). The duration of the training is one day with 25 people per batch. A provision of Rs. 20,000 per training was provided for conducting the training. During 2024-25, DCCD had organised 06 training programmes in association with various cashew research institutions of various states. A total of 500 unemployed women were benefited under the programme. These training on processing of cashew apple add substantial income to the women beneficiaries and also avoids the nutritional loss.

Apart from this, 30% (750 Nos) participation is also ensured in the one day farmer level training programmes on "Cashew and Cocoa production technologies" envisaged in the action plan of the Directorate , which is conducted with class room training and field visit.

#### **Central Institute of Horticulture (CIH) :**

Central Institute of Horticulture, Medziphema, Nagaland has conducted various training programmes, skill development & certificate courses, demonstrations for women involved in horticulture and agriculture sector for empowerment as well as to respond to the needs of farm women. Various activities have been taken up by the Institute and the broad areas of activities related to extensions are focused on developing resource management by women horticultural labourers, mobilization of rural women through women self help groups, exposure trips and training of farm women and beneficiaries to empower them and make them independent through self employment.

Women beneficiaries are trained under Improved production of Horticultural crops, Post harvest management & Value addition including off farm demonstrations. Also, to empower women SHGs, the Institute established demonstration on Integrated Horticulture Model covering an area of 0.5 ha at farmers' field under Peren district of Nagaland. The

# **Department of Agriculture & Farmers Welfare**

beneficiaries comprise of 60 women. The Institute is providing technical support in the form of trainings, distribution of quality planting materials of litchi var. Muzaffapur, Shahi and Tezpur Seedless.

## **H. INTEGRATED NUTRIENT MANAGEMENT**

Organic Farming is being promoted under the Schemes Paramparagat Krishi Vikas Yojana (PKVY) and Mission Organic Value Chain Development for North Eastern Region (MOVCDNER) and States are advised to earmark 30% of Budget allocations for women beneficiaries/ farmers under Soil Health Card/ Soil Health Management Schemes. States may prefer Women Farmers/ Women Self Help Groups (SHGs) formed under Ministry of Rural development while choosing the organic farming areas.

## **I. MECHANIZATION AND TECHNOLOGY**

To mechanize the marginal and small farmers, and for inclusive growth of farm mechanization sector in the country, a Sub Mission on Agricultural Mechanization (SMAM) is being implemented with the following objectives:

- Increasing the reach of farm mechanization to small and marginal farmers and to the regions where availability of farm power is low;
- Promoting Custom Hiring Centres' to offset the adverse economies of scale arising due to small land holding and high cost of individual ownership;
- Creating hubs for hi-tech & high value farm equipments;
- Creating awareness among stakeholders through demonstration and capacity building activities;
- Ensuring performance testing and certification at designated testing centers located all over the country.

The SMAM provides platform for converging activities for inclusive growth of agricultural mechanization by providing a 'single window' approach for implementation with a special focus on women farmers with the following provisions:

- State Governments have been directed to earmark 30 per cent of total funds allocated under SMAM for women beneficiaries.
- 10% more assistance for women beneficiary to procure Agricultural Machinery, implements and equipment including PHT.
- In order to reduce the drudgery and increasing efficiency in farm operations, number of agricultural implements and hand tools suitable for farm women has been developed by Research & Development organizations under ICAR. The list of gender friendly equipment has been sent to all States/UTs for popularizing them through various schemes of Government.

## **Training and Demonstration of Gender Friendly Equipment for Women:**

The four Farm Machinery Training and Testing Institutes (FMTTIs) at Budni in Madhya Pradesh, Hisar in Haryana, Anantapur in Andhra Pradesh, Biswanath Chariali in Assam are imparting the training to the women farmers on identified 30 gender-friendly tools and equipments through customized Training programmes and field demonstrations as well. The duration of the training varies from 2-5 days for which they are paid to and fro travelling charges as per training norms & Rs 200 per trainee per day towards boarding Charges. Free lodging facility is also available in women hostel within the premises of FMTTIs.

State Governments have been directed to earmark 30 per cent of total funds allocated under SMAM for women beneficiaries.

The women trainees undergone training at 4 Farm Machinery Training and Testing Institutes Budni (MP), Hisar (Haryana), Anantapur (Andhra Pradesh) and Biswanath Chariali (Assam) Under the skill development programmes, a total 7937 women have been trained during the Financial Year 2021-22, whereas, during 2022-23 total 8244 women have been trained. During the year 2023-24 total 10303 women have been trained.

A total number of 9242 Women received training at the 4 FMTTIs during the financial Year 2024-25 (Upto 31.12.2024).

#### **Namo Drone Didi:**

The Government has approved 'Namo Drone Didi' as Central Sector Scheme for providing drones to the Women Self Help Groups (SHGs) with an outlay of Rs. 1261 Crores for the period from 2023-24 to 2025-26. The scheme aims to provide drones to 15000 selected Women SHGs for providing rental services to farmers for agriculture purpose (application of fertilizers and pesticides). Of the total 15,000 drones, first 500 drones have been procured by Lead Fertilizer Companies (LFCs) in 2023-24, using their internal resources and distributed to selected SHGs. Remaining 14500 drones are to be provided under this scheme during 2024-25 and 2025-26.

For promotion of Drone Technology, financial assistance is also extended to beneficiaries like FPOs 75 % cost of Drone up to a maximum Rs. 7.5 Lakh, for individuals Framers like SC, ST, Small, Marginal, Women and NE state Farmers 50 % cost of Drone up to a maximum Rs. 5 Lakh and for other individuals farmers 40 % cost of Drone up to a maximum Rs. 4 Lakh.

#### **J. PLANT PROTECTION (PP):**

##### **Directorate of Plant Protection Quarantine and Storage (DPPQ&S), Faridabad**

The primary aim of this DPPQ&S is to minimize loss to quality and yield of agricultural crops from the ravage of insect pests, diseases, weeds, nematodes, rodents etc. and to shield our bio-security from the incursions and spread of alien species. The sub mission also seeks to facilitate exports of Indian Agricultural commodities to global markets and to promote good agricultural practices, particularly with respect to plant protection strategies and techniques. The Destructive Insect and Pests Act, 1914 and the Insecticides Act, 1968 provide the legal framework for the regulatory function. The Government has established Central Integrated Pest Management Centres (CIPMC) in 28 States and two Union Territory in the country. These Centers impart field oriented training to extension functionaries

and farmers through Farmers' Field Schools (FFSs), 2 days & 5 days Human Resource Development programmes to promote IPM. CIPMC are conducting FFS, 2 days HRD programme, Seed treatment campaign and safe & judicious use of pesticides awareness programmes regularly in which women farmers are actively participating and taking knowledge on various IPM technologies. 3230 numbers of women farmers participated in these programmes conducted by 36 CIPMC's during Kharif season 2023-24 (till date).

#### **K. RAINFED FARMING SYSTEMS (RFS)**

RFS Division is implementing Per Drop More Crop (PDMC) focusing on enhancing water use efficiency at farm level through Micro Irrigation viz. Drip and Sprinkler Irrigation Systems and Rainfed Area Development (RAD) Programme of component of RKVY focusing on promotion of Integrated Farming System.

These both schemes benefits individual farmers including small & marginal farmers. As per Guidelines of both schemes , it must be ensured that at least 50% of the allocation is utilized for small, marginal farmers of which, at-least 30% should be women beneficiaries/farmers.

#### **L. RASHTRIYA KRISHI VIKAS YOJANA (RKVY)**

Rashtriya Krishi Vikas Yojana (RKVY) is a Centrally Sponsored (State Plan) Scheme. The funds are released to the State Governments as Grants-in-Aid on the basis of projects in agriculture & allied sectors approved in the State Level Sanctioning Committee Meeting (SLSC) headed by the Chief Secretary of the concerned State, which is the empowered body on the matter. States have been provided flexibility and autonomy for selection, planning approval and execution of projects/ programmes under the scheme as per their need, priorities and agro-climate requirements.

No gender specific budget is allocated under RKVY. The above scheme envisages that while selecting beneficiaries under any project, adequate coverage of small and marginal farmers, Scheduled Castes, Scheduled Tribes and women and other weaker segments of society is ensured by the State

# Department of Agriculture & Farmers Welfare

Governments so that the benefits of implementation of a particular project or the scheme as a whole accrue to the intended beneficiaries in accordance with policies of the Government.

Department is implementing "Innovation and Agri-Entrepreneurship Development" programme under Rashtriya Krishi Vikas Yojana (RKVY) from 2018-19 with an objective to promote innovation and agripreneurship by providing financial support and nurturing the incubation ecosystem in the country.

So far, 448 women led start-ups working in various field of agriculture & allied sector have been trained and provided financial support through selected Agri Business Incubators under this programme.

## M. SEEDS

Seeds Division, DA&FW is implementing Sub-Mission on Seeds & Planting Materials (SMSM) from the year 2014-15 to promote production and multiplication of quality seeds of agricultural crops, so that the required quantities of seeds could be made available to farmers in the country. The SMSM has now been subsumed under National Food and Nutritional Security Mission from the year 2023-24. The financial assistance/subsidy benefits under the

scheme is available/provided to all the categories of farmers' including women farmers; however no separate fund is earmarked exclusively for the women farmers. The details of the components provide financial assistance the women farmers are as under:

**Seed Village Programme:** Govt. of India is implementing Seed Village Programme to upgrade the quality of farmer's saved seeds. Under this programme, the financial assistance for distribution of foundation/certified seeds at 50% cost of the seeds for cereal crops and 60% for pulses, oilseeds, fodder and green manure crops for production of quality seeds is available for one acre per farmer under Sub-Mission on Seeds & Planting Material (SMSM). The objective of this scheme is to make available improved /high yielding varieties seeds to the farmers in time to achieve self-sufficiency in respect of seeds at village level itself. The details of women farmers benefitted under the components Seed Village Programme and Certified Seed Production through Seed Village during last five years and current year are as under (upto 21.01.2025):

S. No.	Year	No. of total beneficiaries (in lakh)	No. of women farmers benefitted in lakh
1	2019 -20	32.22	5.46
2	2020 -21	36.79	6.11
3	2021 -22	31.88	6.94
4.	2022 -23	29.19	7.15
5.	2023 -24	24.92	6.43
6.	2024 -25	9.03	2.00

## N. National Bamboo Mission:

The restructured National Bamboo Mission (NBM) is operational from the year 2018-19 focuses on the development of complete value chain of bamboo sector to link growers (farmers), primary processors, artisans with industry starting from planting material, plantation, creation of facilities

for collection, aggregation, processing, micro, small & medium enterprises, skill development and brand building initiative in a cluster approach mode. The scheme is being implemented in non-forest Government land and private farmers field to supplement farm income in the States where it has social commercial and economical advantage,

including the bamboo rich States of North Eastern region and in Madhya Pradesh Maharashtra, Chhattisgarh, Odisha, Karnataka, Uttarakhand, Bihar Jharkhand, Andhra Pradesh & Himachal Pradesh, Telangana, Gujarat, Tamil Nadu, Kerala, Uttar Pradesh & Himachal Pradesh and Jammu & Kashmir.

There is no separate allocation under mission for women however; states are advised to earmark 30% of the allocated budget for women beneficiaries/farmers under the NBM.

#### **O. AGRICULTURE INFRASTRUCTURE FUND:**

Agriculture Infrastructure Fund (AIF) scheme was launched in 2020 with an objective to mobilize a medium – long-term debt financing facility for investment in viable projects for postharvest management Infrastructure and community farming assets through incentives and financial support in order to address the existing infrastructure

gaps and mobilize investment in agriculture infrastructure. The scheme envisages provision of

Rs. 1 Lakh Crore by banks and financial institutions as loans with interest subvention (IS) of 3% per annum and credit guarantee coverage under Credit Guarantee Fund Trust for Micro and Small Enterprises (CGTMSE) for loans up to Rs. 2 Crores.

As on 31.12.2024, Rs. 52,885 Crores have been sanctioned for 87,894 projects under AIF, mobilizing an investment of more than Rs. 87,008 crores. Out of these sanctioned projects, around 21.6% projects (18,569 projects with loan of Rs. 11,670 crores) have been sanctioned to female beneficiaries, majority of whom are Agri-Entrepreneurs (57%) and Farmers (40%). The sanctioned projects to female beneficiaries alone have mobilized an investment of Rs 18,461 crores in agriculture sector. Major projects sanctioned under AIF to the female beneficiaries include 6380 primary processing units, 5315 warehouses, 3104 custom hiring centres, 535 sorting & grading units, 313 cold store projects, around 2922 other kinds of post-harvest management projects and community farming assets.

Beneficiary Type	Sanc. Projects (No.)	Sanc. Loan (Rs. Crore)
Agri -Entrepreneur	10,623	9,241
Farmer	7,459	2,149
Start -up	487	280
<b>Grand Total</b>	<b>18,569</b>	<b>11,670</b>

SN	Activity Type	Sanc. Project s (No.)	Sanc. Loan (Rs. Crore)
1	Warehouse	5315	5389
2	Primary processing Center	6380	2623
3	Cold Stores and Cold Chain	313	993
4	Custom Hiring Centre	3104	627
5	Sorting & Grading Unit	535	451
6	Silos	28	250

<b>SN</b>	<b>Activity Type</b>	<b>Sanc. Project s (No.)</b>	<b>Sanc. Loan (Rs. Cr ore)</b>
7	Organic inputs production	93	79
8	Bio stimulant production units	13	51
9	Logistics Facility	79	52
10	Infrastructure for smart and precision agriculture	158	51
11	Composite Project	32	50
12	Packaging units	48	13
13	Ripening Chambers	21	11
14	Assaying units	4	4
15	Supply chain infrastructure for clusters of crops	9	4
16	Others	2391	999
	<b>Grand Total</b>	<b>18,569</b>	<b>11,670</b>

## P. Oilseeds

Government is implementing National Food Security Mission (Oilseeds) in the country from 2018-19 onwards to increase the production and productivity of oilseeds and become self sufficient in edible oil requirement and reduce the dependence on import of edible oils. The scheme is implemented with an objective to augment the availability of vegetable oils and to reduce the import of edible oils by increasing the production and productivity of oilseeds crops viz., Soybean, Groundnut, Rapeseed-Mustard, Sunflower, Castor, Sesame, Safflower, Linseed and Niger.

Under the scheme assistance is being provided to interventions such as purchase of breeder seeds, production of foundation and certified seed, distribution of certified seeds and seed mini kits of latest high yielding varieties. Further transfer of technology through Front Line Demonstrations (FLDs) and Cluster Front Line Demonstrations (CFLDs) are also being provided to the farmers through the Indian Council of Agricultural Research (ICAR). The scheme also provides assistance for input distribution such as Integrated Pest Management (IPM), soil ameliorants, plant

protection chemicals, micro irrigation & supply of farm machinery and implements.

As far as Gender Prospective is concerned, while issuing the administrative approval for implementation of NFSM Oilseeds, Government of India directs the State Government to make 30% budgetary allocation for Women beneficiaries/Farmers and concerned states/implementing agencies shall be responsible for monitoring the allocation of resources for Women beneficiaries.

Apart from this, additional assistance is for implementing following components is also included for the benefit of women farmers and the details are given below.

### 1. Distribution of plant protection equipment:

- Manual Sprayers-Additional 10% assistance to Women farmers to a ceiling of Rs. 750/- per unit.
- Power sprayers (8-12 litres):Additional 10% assistance to Women to a ceiling of Rs. 3100/- per unit
- Power sprayers (12-16 litres):Additional 10% assistance to Women to a ceiling of Rs. 3800/- per unit

- Power sprayers (above 16litres):Additional 10% assistance to Women to a ceiling of Rs. 10,000/- per unit

## **2. Distribution of Farm implements:**

- Manually/Bullock drawn implements- Additional 10% assistance to Women farmers to a ceiling of Rs. 0.10 lakh per unit
- Tractor driven implements: Additional 10% assistance to Women farmers with a ceiling of Rs. 0.75 lakh per unit

### **Oil Palm**

Government of India is implementing centrally sponsored scheme on oilseeds and oil palm development programmes to increase the production of Oilseeds to bring down the dependence of import of edible oil.

The NMEO: Oil Palm is implemented in 15 states during 2022-23 viz., Andhra Pradesh, Assam, Telangana, Chhattisgarh, Gujarat, Karnataka, Odisha, Tamil Nadu, Tripura, Arunachal Pradesh, Manipur, Mizoram, Nagaland, Goa and Kerala.

NMEO: Oil Palm is implemented with three broad interventions, viz., Area Expansion inputs components, Production Inputs and Transfer of Technology. The details of components under these three main interventions are given as under.

- Area Expansion inputs components - assistance for planting material, maintenance/cultivation cost, inputs for intercropping in oil palm fields during gestation period of 4 years, Establishment of Nursery, Replanting of Old Oil Palm Garden
- Production Inputs -Drip-irrigation, bore-well/water harvesting structure, diesel/electric pump set, vermi-compost unit, establishment of new seed garden, machinery & tools, special component for NE/hilly states/ Left Wing (LW) Areas for construction of roads and establishment of new oil palm processing unit.
- Transfer of Technology- Assistance for training of farmers/officers, Custom hiring centre cum harvester group, need based R&D projects on oil

palm including import of germplasm and training infrastructure support to Indian Council of Agricultural Research (ICAR)/State Agriculture Universities (SAUs), flexi funds/ local initiatives.

As far as Gender Prospective is concerned, while issuing the administrative approval for implementation of NMEO-Oil Palm, Government of India directs the State Government to make 30% of budgetary allocation for Women beneficiaries/Farmers and concerned states /implementing agencies shall be responsible for monitoring the allocation of resources for Women beneficiaries.

Apart from this, additional assistance for implementing following components is also included for the benefit of women farmers and the details are given below.

- As per the guidelines Women farmers involved in cultivation of oil Palm will be given priority for providing benefits and support under Mission.
- As per the guidelines state may also support women groups up to 50% of cost and/or up to the amount for Machinery/harvesting tools.

State Government may also set up/ start joint venture/lease out seed gardens to women group under Mission.

### **THE WAY FORWARD:**

Women farmers are backbone of the Indian agriculture and are actively involved in every aspect of the agricultural sector, farming and food production, value chain management to the development and decision making. Involve women in project planning, monitoring and execution stages of development projects through Public Private Partnerships and investments using Gender Action plans; undertaking Gender Analysis; ensuring Gender involvement and consultations; capacity Building and gender mainstreaming skills of the staff involved in project development and implementation; supporting wider activity of women across project lifecycle; support

complementary measures and may be inclusive of income generating opportunities. To provide women with better growth opportunities, they should be provided with better education, skilling and micro-financing opportunities. A multi-sectoral strategy to raise awareness among women about the government's initiatives and mechanisms should be devised. To ensure the engendering development, specified pro-women initiatives and actions at the lowest level of governance, improvement in basic amenities at rural level for reducing their duality of burden and working towards the Women Development to Women Led Development. Women farmers should be re-imagined as architects of agriculture sector's progress and development, rather than being passive recipients of the fruits of development. The ripple effects of Women Led Development are undeniable as an educated and empowered woman will ensure education and empowerment of future generations. Initiatives are

being implemented to address these challenges and promote gender equality in agriculture. Organizations and governments are working to increase women's access to land, credit, and markets, as well as providing training and education opportunities specifically tailored to women in agriculture. By empowering women in agriculture and recognizing their vital role, it is possible to improve their livelihoods, enhance food security, and promote sustainable rural development.

In conclusion, women in agriculture are crucial to global food production and rural development. Their contributions are significant for ensuring food security, reducing poverty, and promoting sustainable agricultural practices. Therefore, recognizing and addressing the challenges they face is necessary to ensure gender equality in the sector and unlock the full potential of women in agriculture.





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# Chapter 24

## DEPARTMENTAL ACCOUNTING ORGANIZATION

### Overview

#### **24.1.1 Accounting Organization of Department Of Agriculture and Farmers Welfare:**

The Secretary is the Chief Accounting Authority in the Department of Agriculture & Farmers Welfare. Secretary discharges his functions with the assistance of Additional Secretary & Financial Adviser (AS & FA) and Chief Controller of Accounts.

**24.1.2** As per Para 1.2.3 of Civil Accounts Manual, the Chief Controller of Accounts for and on behalf of the Chief Accounting Authority is responsible for:-

- a) Arranging all payments through the Pay and Accounts Offices/Principal Accounts Office except where the Drawing and Disbursing Officers are authorized to make certain types of payments.
- b) Compilation and consolidation of accounts of the Ministry/Department and their submission in the prescribed form, to the Controller General of Accounts; preparation of Annual Appropriation Accounts for the Demands for Grants of his Ministry/Department, getting them duly audited and submitting them to the CGA, duly signed by the Chief Accounting Authority.
- c) Arranging internal inspection of payment and accounts records maintained by the various subordinate formations and Pay and Accounts Offices of the Department and inspection of records pertaining to transaction of Government Ministries/ Departments, maintained in Public Sector Banks.

**24.1.3.** The Chief Controller of Accounts, Department of Agriculture & Farmers Welfare performs his duties with the assistance of 2 Controller of Accounts, 1 Assistant Controller of Accounts and 9 Principal Accounts Officers (Admn/Estt; Accounts, Treasury Payments, IAW & IAP) at HQs with the help of 11 Pay & Account Offices of Ministry of Agriculture & Farmers Welfare and

Ministry of Fisheries, Animal Husbandry and Dairying. Zonal Internal Audit Parties headed by Senior Accounts Officers is also stationed at Kochi who works under the control of IAW (HQ). The Department of Accounting Organization set-up in Ministry of Agriculture & Farmers Welfare regarding distribution of work in the Office of Chief Controller of Accounts are given at Exhibit 'A'. The Department of Agriculture & Farmers Welfare has 155 NCDDOs & 20 CDDOs. The Non-Cheque Drawing DDOs submit bills to the Pay and Accounts Offices under pre-check system of payment. The Accounting Information flow chart is given at Exhibit 'B'

#### **24.1.4. Roles and Responsibilities of CCAs as Heads of Accounting Organization in Ministry/Department**

As per para 1.3, Appendix -'1.1' of Civil Accounts Manual, Revised Fourth Edition (2024), the Pr.CCAs/CCAs/CAs(IC) of the Ministries /Departments concerned are the Heads of the Accounting Organization in the respective Ministries/Departments. Their broad functions are prescribed as below-

##### **a. Receipts, Payments and Accounts:**

- i. Ensure establishment of effective and efficient systems with necessary internal controls for accounting of all receipts and payments of the Ministry/Department.
- ii. Supervise payments and receipts through Pay and Accounts Offices and Cheque Drawing and Disbursing Offices (CDDOs) of various Central Civil Ministries/Departments in conformity with prescribed Rules and regulations.
- iii. Supervise timely payment to all eligible claimants (Government servants, vendors/suppliers, grantee and loanee institutions etc.) and ensure that the procurement through GeM are carried out as per codal provisions.

- iv. Ensure efficiency, accuracy and timely submission of monthly and annual accounts to O/o of CGA.
  - v. Ensure timely, accurate, comprehensive, relevant and useful Financial Reporting.
  - vi. Ensure accuracy and timely submission of monthly reports to O/o CGA.
  - vii. Monitor efficient service delivery to the Ministry/Department through the accredited/authorized banks and monitor their system for timely realization of receipts into Government Accounts.
  - viii. Monitor adherence to prescribed accounting standards, rules and principles.
  - ix. Ensure timely submission of Audited Annual Appropriation Accounts duly signed by Chief Accounting Authority of the Ministry/Department to O/o CGA.
  - x. Ensure preparation of annual 'Accounts at a Glance' in r/o their Ministry/Department.
  - xi. Examine the proposal of Ministries/Departments for opening of a Personal Deposit Account or framing accounting procedure in respect of a newly created Fund in the Public Account of India and monitor their smooth operations.
  - xii. Review of payment sanctions (including GST refunds sanction) by Pr.CCA/CCA/CA as per the monetary limit prescribed by O/o CGA from time to time.
  - xiii. Monitor the clearance of balances under Debt, Deposit, Suspense and Remittance (DDSR) heads and take timely corrective actions to clear adverse balances under these heads.
  - xiv. Monitor opening of appropriate heads of account for new schemes/expenditures as per prescribed chart of accounts of the Object heads by the Department of Expenditure and the LMMHA.
  - xv. Monitor timely and accurate authorization of pension and other retirement benefits to retiring Government servants.
  - xvi. Coordinate with GeM Standing Committee on the matters relating to procurement and related payments.
  - xvii. Pr.CCAs/CCAs/CAs(i/c) shall function as nodal officer of the Ministry for PFMS matters.
  - xviii. Follow up with Loanees on repayment of loan and interest.
- In respect of the above responsibilities, the Head of Accounting Organization i.e. Pr.CCAs/CCAs/CAs(i/c) shall function under the direction, superintendence and control of the Controller General of Accounts.
- b. Budget formulation including Outcome Budget:**
- I. Pr.CCAs/CCAs/CAs(i/c) shall be actively associated with the process of Budget formulation. Budget related files shall be submitted to the FA through the Pr.CCAs/CCAs/CAs (i/c). The Budget section should ordinarily function under the control of them.
  - ii. Pr. CCAs/CCAs/CAs (i/c) shall monitor and assist in preparation of budgetary proposals and assist the administrative Ministries /Departments in inter-se programme prioritization/allocation within the budgetary ceilings, based on the analysis of expenditure and profile of each programme /sub - programme.
  - iii. Provide support to the administrative Ministries/Departments in the preparation of Outcome Budgets/Output-Outcome Monitoring Framework (OOMF) in accordance with the 9 time schedule/ guidelines laid down from time to time by the Ministry of Finance/NITI Aayog.
  - iv. Furnish the budget estimates in respect of Public Account transactions to Budget Division and Composite Demands controlled by Budget Division for their inclusion in the Budget.
  - v. Furnish budget estimates for interest on Provident Fund balances of employees and on various deposits in the Public Account including Reserve Funds.

# Department of Agriculture & Farmers Welfare

- vi. Monitor all reports and statements related to Budget documents.
- c. **Estimation of Non-Tax Revenue Receipts:**
  - I. Assist FA in periodical reviews of various non-tax revenue receipts of the Ministries /Departments with the Administrative Divisions and furnish estimates of non-tax Revenue Receipts to Budget Division, DEA.
- d. **Internal Audit/Risk Based Audit:**
  - i. Discharge the duties of Member Secretary of Internal Audit Committee headed by the administrative Secretary to review audit paras of PAC, C&AG and Internal Audit and concomitant compliance/course correction.
  - ii. They are responsible to conduct special audit in Ministries/Departments as per the direction of Chief Accounting Authority or CGA. The Internal Audit Wing working under the control and supervision of the Pr.CCAs/CCAs/CAs would move beyond the existing system of compliance/regulatory audit and would focus on:
    - a. Assessment of adequacy and effectiveness of internal controls in general, and soundness of financial systems and reliability of financial and accounting reports in particular;
    - b. Identification and monitoring of risk factors (including those contained in the Outcome Budget/OOMF Framework);
    - c. Critical assessment of economy, efficiency and effectiveness of service delivery mechanism to ensure value for money; and
    - d. Providing an effective monitoring system to facilitate mid-course corrections.
  - iii. Furnishes financial appraisal of schemes and monitors projects and schemes through regular Internal Audit.
  - iv. Conducts audit of accredited banks, authorised/other banks/CPPCs and Focal Point Bank branches including e-FPBS in respect of Government transactions in organisations where it has been required.
  - v. Shall ensure to prepare the annual Audit Plan and Annual Internal Audit Review.

The above functions shall be carried out as per the guidelines issued by the CGA from time to time.

- e. **Public Financial Management System & IT projects:**
  - i. Act as nodal officers for PFMS and assists FA to ensure that guidelines/ instructions issued on PFMS are followed/ implemented and resolve issues relating to efficient running of PFMS.
  - ii. Monitor the usage of PFMS and its different modules including coordinating with Ministry and PFMS Division of O/o CGA for timely, accurate and useful financial reporting for the purpose of tracking flow of funds to the last level implementing agency/beneficiary and its utilization under Central Sector/Centrally Sponsored/Direct Benefit Transfer schemes of Government of India.
  - iii. Coordinate integration of data bases and processes for establishing a Government Integrated Financial Management Information System (GIFMIS).
  - iv. Render professional expertise in the functioning of the financial management system, from the system point of view and making it more effective.
  - v. Monitor the implementation of security guidelines issued for access control and other related security aspects of PFMS and ensuring data security by regular monitoring of the system.
  - vi. Ensure correct mapping of the accounting basket of Central Sector and Centrally Sponsored Schemes for accurate expenditure reporting.
  - vii. Regular review of reports and information in PFMS and to present it to the Executive for decision making.
  - viii. Monitor all reports and dashboard on regular basis to ensure accuracy of reports relating to performance of the schemes in their respective Ministries.
  - ix. Ensure timely weeding out of dormant registration of Agencies and etc.

**f. Expenditure and Cash Management:**

Coordinate with Ministries/Departments for compliance of Cash Management system guidelines issued by Budget Division, MoF (Monthly Expenditure Plan [MEP]/Quarterly Expenditure Plan (QEP) limits, implementation of TSA system for release of funds to Autonomous bodies in 'Just-in-time".

**g. Disclosure and reporting requirements under FRBM Act.**

Assist in preparation of the disclosure statements required under the FRBM Act in respect of their Ministry/Department for incorporation in the consolidated statement compiled by the Ministry of Finance for the Government as a whole.

**h. Monitoring of Assets and Liabilities:**

Assist Ministries/Departments for maintaining comprehensive record of Assets and Liabilities and monitoring of Government Guarantees.

**I. Interaction between Ministry of Finance and the FAS:**

The Pr.CCAs/CCAS/CAS (IC) shall provide required material and assistance for the quarterly meeting of FAs with Secretary (Expenditure) and other financial inputs as required by FAs from time to time.

**j. General Administration and Coordination:**

- i. Exercise the powers of the Head of the Department for the Accounting Organisation and is responsible for the Administration and Establishment related functions.
- ii. Discharge of responsibilities in terms of the statutory powers to be exercised being the Appointing Authority/Disciplinary Authority.
- iii. Exercise appropriate oversight on the overall quality and maintenance of departmental accounts by their Pay and Accounts Offices/Principal Accounts Offices.

**Note:**

- a. In Ministries/ Departments which are headed by Pr. CCAs, these items of work may be delegated to CCAs/CAs as per their administrative convenience, subject to codal provisions.

b. In addition to the above, Pr.CCAs/CCAS/CAS shall also be responsible for any other works assigned by Chief Accounting Authority/Controller General of Accounts.

c. In addition, Budget section of the ministry should ordinarily function under the control of CCA and CCAs are expected to act as Nodal Officer for PFMS inter alia in resolving issues relating to its smooth function and efficient running in terms of Para 43 and Para 44 of Charter for Financial Adviser issued vide FS & Secretary (Expenditure) D.O. Letter No.23(3)/E.Coord/2018 dated 13/06/2023.

**24.1.5. Banking Arrangements**

State Bank of India is the accredited bank for PAOs and its field offices in the Department of Agriculture & Farmers Welfare. e-Payments processed by the PAOs/CDDOs are settled through CMP, SBI, Hyderabad in favor of the bank account of vendors/beneficiaries. In some cases, Cheques issued by the PAOs/CDDOs are presented to the nominated branch of the accredited bank for payment. The receipts are also remitted to the accredited banks by the respective PAOs/CDDOs apart from Non-Tax-Receipt Portal (NTRP). Any change in accredited bank requires specific approval of Controller General of Accounts, Department of Expenditure, Ministry of Finance.

Principal Accounts Office has 11 (Eleven) Pay & Accounts Offices. 05 PAOs are located in Delhi/NCR, One each in Chennai, Cochin, Kolkata, Nagpur and two in Mumbai. All payments pertaining to the Department/Ministry are made through PAOs/CDDOs attached with respective PAOs. Drawing and Disbursing Officers present their claims/bills to the designated PAOs/CDDOs, who issue releases e-payment after exercising the necessary scrutiny as per provisions contained in Civil Accounts Manual, Receipt and Payment Rules and other orders issued by Govt. from time to time.

**24.1.6. Internal Audit Wing**

Internal Auditing is an independent, objective assurance and consulting activity designed to add value and improve an organization's operations. It

basically aims at helping the organization to accomplish its objectives by bringing a systematic, disciplined approach to evaluate and improve the effectiveness of risk management, control and governance processes. It is also an effective tool for providing objective assurance and advice that adds value, influences change that enhances governance, assists risk management and control processes and improves accountability for results. Internal Audit Committee has been constituted in the Department of Agriculture & Farmers welfare under the Chairmanship of Secretary (Agriculture). There are 155 Auditee Units / DDOs in the Department of Agriculture & Farmers' welfare excluding Autonomous Bodies & other Grantee Institutions.

## **24.1.7. Public Financial Management System (PFMS)**

Public Financial Management System (PFMS) initially started as a Plan Scheme named CPSMS of the erstwhile Planning Commission in 2008-09.

### **I. Employees Information System (EIS) Module:**

This module has been implemented in the Drawing and Disbursing Office of Department of Agriculture & Farmers' Welfare

### **II. EAT Module of PFMS:**

All Autonomous Bodies of Department of Agriculture & Farmers Welfare have been onboarded on Expenditure Advance Transfer (EAT) module of PFMS.

### **III. Online Portal (Bharat kosh) for collection of Non-Tax Revenue**

NTRP Portal in M/o Agriculture & Farmers Welfare is functional from April, 2017. The collection of Non-Tax revenue of the Department of Agriculture & Farmers' Welfare in the Financial Year 2024-25 up to 31.12.2024 is Rs. 641.31 crore which has been collected through Bharat Kosh on NTR e-Portal.

FAQs on NTRP are available at website link <http://cga.nic.in//Page/FAQs.aspx>.

## **24.1.8 New Initiatives by Ministry of Finance and O/o Controller General of Accounts'**

### **A. e-Bill system'**

- a) The Union Minister for Finance & Corporate Affairs Smt. Nirmala Sitharaman launched the e-Bill system for Central Government Ministries on the 46th Civil Accounts Day. New e-Bill system to enable paperless submission and end to end digital processing of bills.
- b) In a phased manner, the new system will make the entire process of submission and backend processing of bills completely paperless and transparent. Thus, it is a major step forward in realizing the vision of "Digital India" and promoting ease of doing business.
- c) The objectives of the system are to:
  - i. Provide convenience to all vendors/suppliers of the government to submit their bills/claims at any time, from anywhere.
  - ii. Eliminate physical interface between suppliers and government officers.
  - iii. Enhance efficiency in processing of bills/claims.
  - iv. Reduce discretion in processing of bills through "First-In-First-Out"(FIFO) method.
- d) Currently, the suppliers of various goods and services to the Government have to submit physical, ink signed copies of their bills to the respective Ministries/Departments/offices of the Government of India. Similarly, the government employees also need to submit hard copies of their claims. At the backend too, the processing of bills is done through a mixed system of physical and digital modes. So, the suppliers/vendors or their representatives need to visit the offices to deliver bills. Moreover, they are able to track the status of processing of their bills.
- e) Under the newly launched e-Bill system, vendors suppliers can upload their bills online

- along with supporting documents from the convenience of their homes/offices at any time through digital signature. For those not having a digital signature, the facility of e-sign using Aadhaar has also been provided. So, the suppliers will no longer be required to visit the offices concerned for this purpose.
- f) At the backend too, the electronic bill received will be processed by the authorities digitally at every stage and finally, the payments will be credited digitally to the bank account of the vendor. The vendor/supplier would be able to track the status of processing of their bills online. Thus, the new system will bring in lot of efficiency and transparency in the system and is a big citizen-centric decision of the Government of India.
  - g) The e-Bill system has been developed by the Public Financial Management System (PFMS) Division in the office of the Controller General of Accounts in the Department of Expenditure, Ministry of Finance. The bills will be processed by First-In-First-Out (FIFO) method.

- h) In addition to promoting ease of doing business and bringing convenience to lakhs of vendors/suppliers, the e-Bill system will be environment friendly, eliminating the need to submit crores of paper bills annually and will thus save tonnes of paper every year. The e-Bill system has an elaborate digital storage facility for retrieval of documents and a robust audit trail.

#### **B. Revised procedure for release of funds under Centrally Sponsored Schemes:**

For better monitoring of availability and utilization of funds released to the States under the Centrally Sponsored Schemes (CSS) and to reduce float. The Department of Expenditure has modified the procedure for release of funds under CSS and Every State Government will designate a Single Nodal Agency (SNA) for implementing each CSS.

#### **Brief on Process Flow for SNA Model:**

- a) Every State Government will designate a Single Nodal Agency (SNA) for implementing each CSS.

The SNA will open a Single Nodal Account for each CSS at the State level in a Scheduled Commercial Bank.

- b) After opening of Single Nodal Account of the scheme and before opening zero balance subsidiary account of IAs or assigning them drawing rights from SNA's account, the IAs at all levels shall return all unspent amounts lying in their accounts to the Single Nodal Account of the SNA.
- c) The SNAs shall ensure that the interest earned from the funds released should be mandatorily remitted to the respective Consolidated Funds on pro-rata basis in terms of Rule 230(8) of GFR, 2017.
- d) Funds available in the bank account of SNA should not be more than 25% of the amount likely to be released (including state share) under a CSS to a State for 2022-23.
- e) SNAs and IAs will mandatorily use the EAT module of PFMS or integrate their systems with the PFMS to ensure that information on PFMS is updated by each IA at least once every day.
- f) In case of CSS having no State share and where as per the scheme guidelines, funds are released by the Central Ministry/Department directly to the districts / blocks / Gram Panchayats/Implementing agencies, the requirement of notifying a single Nodal Agency and opening of a Single Nodal Account at the State level may be waived by the Secretary of the Central Ministry/Department concerned in consultation with the Financial Adviser.
- g) A facility of SNA-Central has been developed by PFMS Division, O/o CGA in pursuance of Department of Expenditure OM F.No 1(13)/PFMS/2021 dated 24.05.2023 for fund release from Government of India directly to implementing agencies, having no state share, under Centrally Sponsored Schemes. Standard operating process (SOP) for implementation of CSNA module has been issued by PFMS Division, O/o CGA vide their OM dated 27.05.2024.

## C. Revised procedure for release of funds under Central Sector Schemes:

In suppression of all previous issued orders, Ministry of Finance, Department of Expenditure has issued an O.M. No. F.No.1(18)/PFMS/FCD/2021 dated 09th March 2022 mentioning Guidelines/Procedure for flow of funds under Central Sector Schemes by designating Central Nodal Agency (CNA) regarding release of funds under the Central Sector Schemes. The procedure effective from 1st April, 2022 by the Ministries/Departments of Government of India for flow of funds under the Central Sector Schemes have been divided in two Models:-

- I. Implementation through Treasury Single Account(TSA) Model I- This model will be applicable in case of Central Sector Schemes having annual outlay of more than Rs. 500 Crores and implemented without involvement of State agencies. It shall be mandatory to implement such schemes through the Treasury Single Account (TSA) Model.
- II. Implementation through Scheduled Commercial Banks(SCB) Model II- This model will be applicable in case of Central Sector Schemes having (A) annual outlay of less than Rs. 500 crores or (B) the schemes are being implemented by agencies of the State Governments exclusively or in addition to the Central Agencies or (C) other schemes not covered in Model-1.

### Brief on Process Flow for Central Sector Schemes:

- a) Identification of Central Sector Schemes for Implementation through Model I or Model-II.
- b) Notification of ABS/CPSEs/Implementing Agencies as Central Nodal Agencies (CNA).
- c) Open Assignment Account with RBI (e-Kuber) for each scheme under Model-I.
- d) Open an Account for each scheme in scheduled commercial banks (SCB) under model II.
- e) Listing & Closure of existing Bank Accounts of CNA & Sas.
- f) Balance in Account must be transferred to Consolidated Fund of India(CFI) under Model I

and Unspent amount of the scheme is returned by all the Sub Agencies (SA's) to the CNA account under Model II.

- g) Interest earned from the funds is remitted to the Consolidated Fund of India (CFI) under Model II.
- h) Mandatorily use of EAT module of PFMS or integration of their systems with the PFMS.

## Structural Changes/Reforms initiated by Ministry of Finance (FY-2023-24)

### 1) Master circular dated 21.05.2024 on the 'CNA Model'

#### A) Model - 1: Implementation through Treasury Single Account (TSA)

This model will be applicable for schemes having Budget Estimate of Rs. 100 crore or more in a Financial Year and which are being implemented through only two level of Central/State Government agencies eligible to open account in RBI. Agencies may be a Central Autonomous Body or a Central Public Sector Enterprise or a State Government Agency.

#### B) Model - 1A: Implementation through Hybrid Treasury Single Account (TSA)

This Model is applicable to schemes having Budget Estimate of Rs 100 Crore or more in a Financial Year, and where there is a private Sub-Agency (SA) involved in implementation of the scheme which cannot open an account in the RBI and/or where there are more than two level of Government /Private SAs involved in implementation of the scheme as RBI does not provide facility to open accounts for 3rd & below level agencies.

#### C) Model - 2: Implementation through scheduled commercial bank (SCB)

This Model shall be applicable for Central Sector Schemes with Budget Estimate of less than Rs 100 crore. However, Ministries /Departments may also opt for Model 1/1A to implement such schemes. Under this model, every Ministry/Department will designate a Central Nodal Agency (CNA) for implementing each Central Sector Scheme and CAN will open a

- Central Nodal Account (savings bank account) for each Central Sector Scheme in a scheduled commercial bank authorized to conduct Government business by the Ministry /Department concerned.
- 2) SNA SPARSH model - "Just-in-Time" release of Centrally Sponsored Schemes (CSS) funds through e-kuber platform of Reserve Bank of India (RBI) as promulgated by DoE vide their OM dated 13.07.2023, 21.05.2024, 04.10.2024 and 17.12.2024 respectively.
- Further, DoE vide order O.M dated 17.12.2024, 28 schemes in 26 states (21 existing 05 new) have been notified for on-boarding on SNA-SPARSH platform, wherein RKVY and KY have been selected for implementation through SNA-SPARSH.
- 3) Revised Procedure for flow of funds under Centrally Sponsored Schemes (CSS) - Implementation of Central SNA (CSNA) module.
- D. Consolidated instruction on various aspects of Security while using PFMS:**
- Ministry of Finance, Department of Expenditure, Office of the Controller General of Accounts vide O.M. No. 1-17016/1/2022-ITD-CGA/10985/229 dated 30.09.2022 has issued consolidated instructions on various aspects of security while using PFMS:
- a) Access Management:**
- i) For new user registration of officials dealing with PAO and DDO module of PFMS, only NIC/GOV domain email id will be allowed. Same email-id and mobile number can be used maximum for four user ids within same PAO code and additional three user ids for across PAO codes keeping in view of multiple charges handled by users in different field offices.
  - ii) A system of two levels approval for creation of user and e-mail/SMS alert on creation of users to approvers has been built into the system.
  - iii) Marking of inactive user ids > 45 days as disabled is being enforced in PFMS.
- iii) At the time of relieving of any Group A & Group B Officer who is a user in PFMS viz. CCA level user, PAO type user, his/her digital signature & user id should be deactivated.
  - iv) A notification to alert the user for change is given in case user login in the system other than the system generally being used by the user.
- b) Password Policy in PFMS:**
- i) Password should be of length of minimum 8 characters.
  - ii) Password mandatorily should include both special as well as Alpha numeric Characters.
  - iii) Password should not have similarity with user name or part of the user name.
- c) Processing of Payments:**
- i) The I Key/DSC of the Pr. AO has to be invariably approved by the CCA level user, whereas I Key/DSC of PAOs by the Pr. Accounts Officer level user and that of the CDDOs by the PAO level user. The Timeout procedure for inserting the I Key/DSC for every session has been made in PFMS.
  - ii) PAOs may be advised strictly not to access the PAO/DDO module and not use digital signatures for making payment from the computers installed outside their office locations.
  - iii) All guidelines stipulated to be followed for making payments should be strictly adhered to and verification against physical documents should be done at all levels unless stipulated by explicit directions for user of electronic medium.
  - iv) All Pay and Accounts Officers authorized for making payments shall verify each payment file of a batch with the corresponding physical bill/e-bill without fail before putting the digital signature.
- d) Network Security:**
- i) Always use genuine software, install the latest updates/patches for operating system, Antivirus and Application Software.

# Department of Agriculture & Farmers Welfare

- ii) Enable firewall, Limit user privileges on the computer, Check and verify email sender IDs and web links before opening file attachments.
  - iii) Use strong passwords, Protect against social engineering attacks.
  - iv) Use only official supplied USB storage media.
  - v) Users should be periodically briefed about Cyber Security measures.
  - vi) Avoid downloading and installing pirated software.
  - vii) Internet-connected computers should not be used for drafting/storing sensitive official documents/correspondences.
- E. Revised Guidelines on Financial Limits to be observed in determining cases relating to 'New Service'/'New instrument of Service' promulgated by Budget Division, DEA vide their OM No. F.1(22)-B(AC)/2022 dated 23.02.2024.
- F. Re-appropriation of funds – Revised Guidelines on the subject has been issued by Department of Expenditure, Ministry of Finance vide their OM No. 01(14)/2016-E.II(A) (Part-III) dated 28.03.2024.
- G. Civil Accounts Manual, Revised Fourth edition has been published by O/o Controller General of Accounts in month of February, 2024 which was released by Finance Secretary on Civil Accounts Day, 2024.
- H. Delegation of Financial Power Rules, 2024 has been published by Department of Expenditure, Ministry of Finance which has come into force with effect from the 1st day of April, 2024.

## I. Some Other New Initiatives

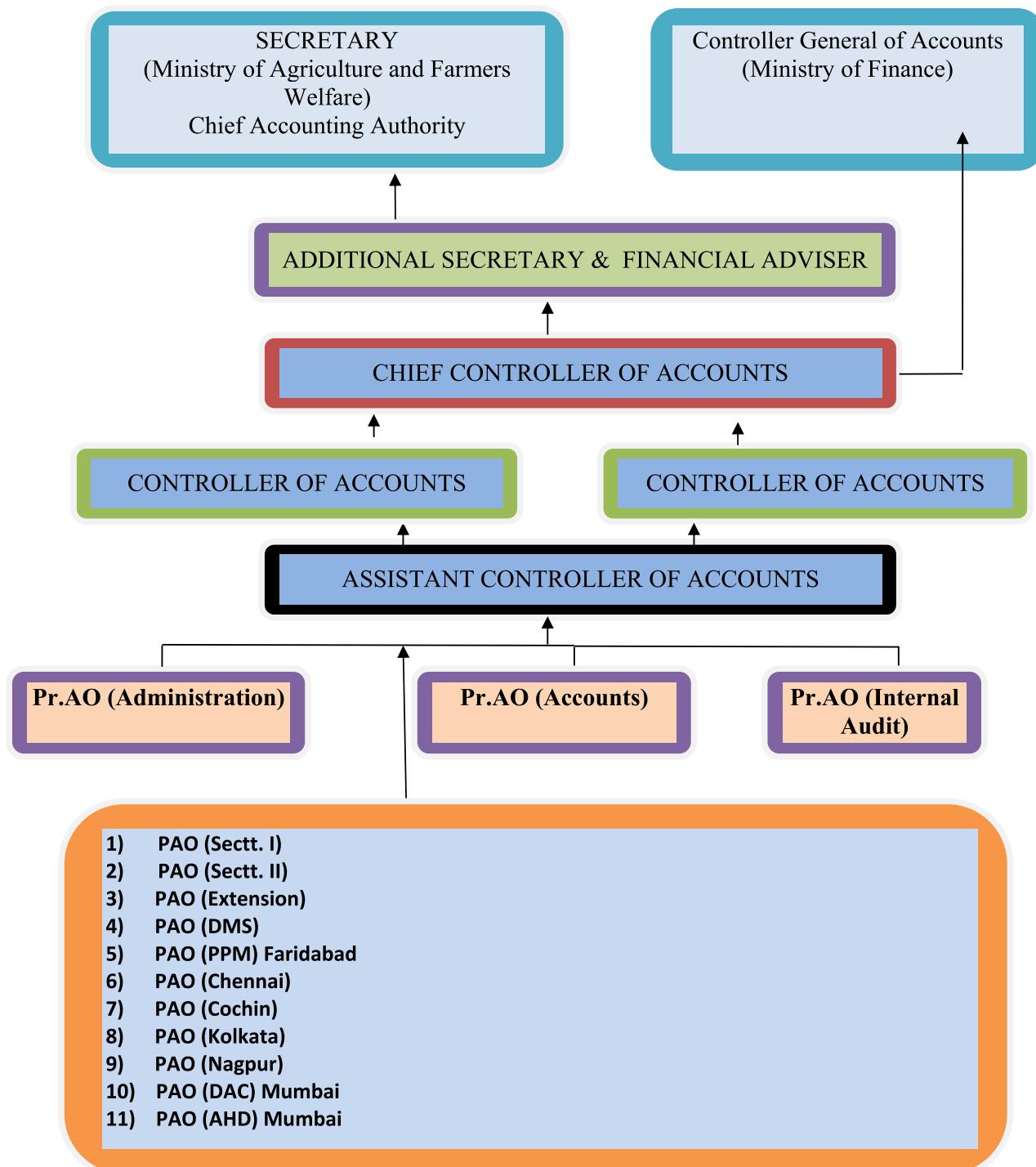
- Implementation of DoE guidelines on TSA/SNA/CNA in letter and spirit.
- The statement of scheme-wise expenditure, unspent balances, outstanding UCs, scheme wise and state wise MIS of excess/deficit transfer from treasury to SNA, fund available in SNA account, interest remitted to CFI, status of

legacy data are being shared with the program division on weekly basis for monitoring of fund flow and helping them in just in time (JIT) release.

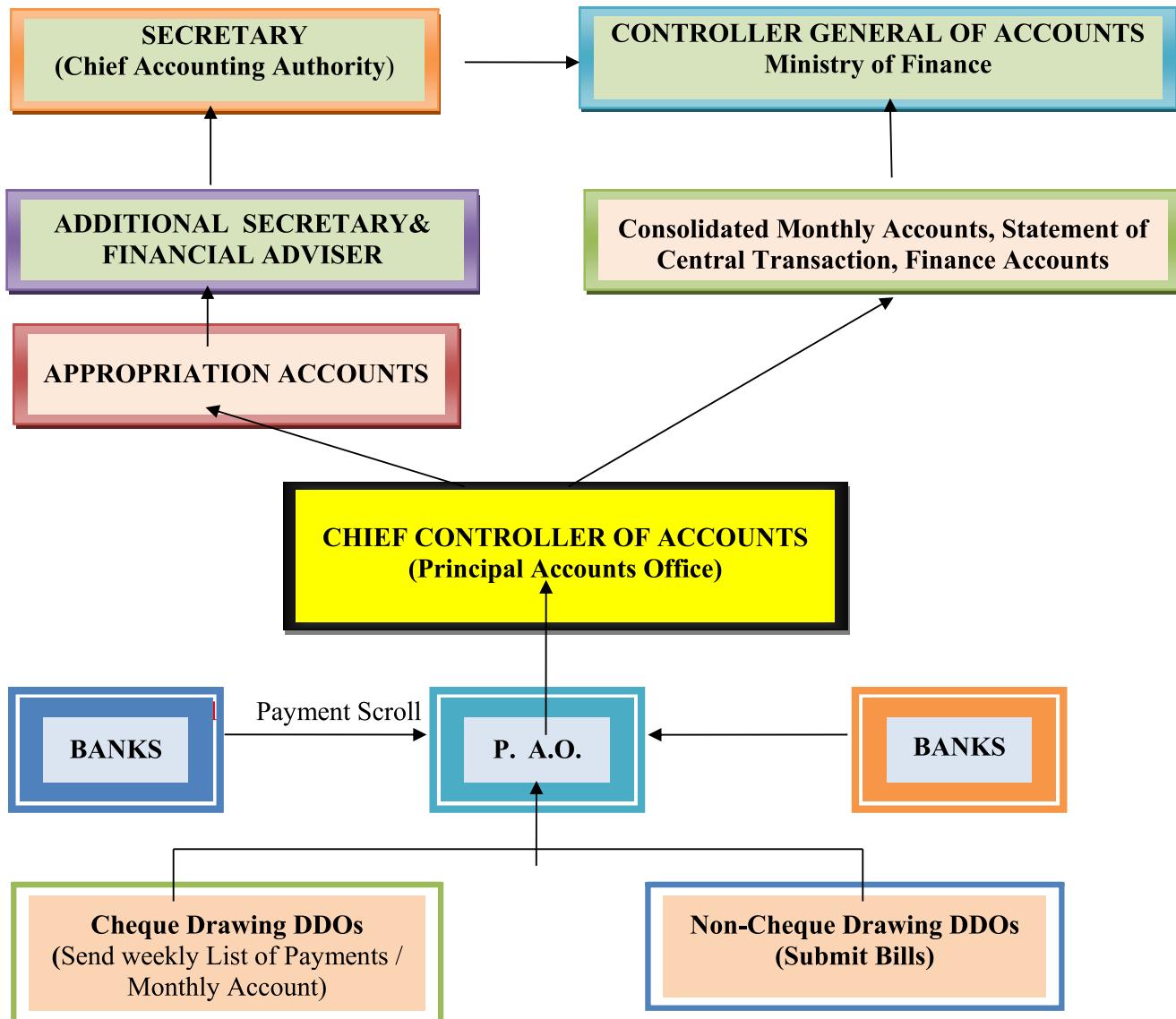
- A series of training has been organized by Principal Accounts Office on e-bill and TSA module of PFMS to all the stake holder including divisional heads.
- A special drive was launched for settlement of outstanding MEA debit claims.
- Delay in payment to seller/supplier in government e-market place (GeM) and status of pending bill with reference to block budget as per PFMS are being informed to respective Head of Department with a copy to PPS to Secretary and AS & FA so that payment could be released within stipulated timeline prescribed by DoE.
- Internal Audit Committee headed by Chief Accounting Authority i.e. Secretary (DA&FW) have been set up in terms of O/o CGA OM. A special drive for liquidation of outstanding internal audit paras have been launched in 2023-24 and periodical review of outstanding paras has taken place in SoM chaired by Secretary on weekly basis.
- Setting up of committee for NPS oversight mechanism and uploading of quarterly report in NPS dashboard along with comments of Financial Advisor.
- Designation based e-mail has been opened for all officials of Principal cum Pay & Accounts Office.
- Special campaign 2.0 for disposal of pending matter including RTI, PG and VIP references.
- Pan India training cum Roll-out plan for electronic bill system (e-bill) of PFMS in 2023-24.
- Operationalization of revised/new Object Heads of Accounts under Rule (8) of DFPR issued vide DoE notification dated 12.12.2022 and O/o CGA OM dated 15.12.2022 and a workshop was also organized by Principal cum Pay & Accounts Office in this regard.

- To improve the internal control and upgradation of skills, officers/officials working in Principal cum Pay & Accounts Office have been transferred as per CVC, DoP&T guidelines and instructions issued by O/o CGA.
  - Implementation of 2nd factor biometric authentication through FIDO device to access PFMS.
  - Opening of Scheme-wise bank account for release of 100% Central Financial Assistance to implementing Agencies and GIA (Salary, General & Creation of Capital Assets) to ABs other than TSA/SNA/CNA route.
  - Celebration of Civil Accounts Week from 01.04.2023 to 07.04.2023.
  - Enhancing efficiency of payment process by way of monitoring TM-02 report (under CAM report in payment tab) of PFMS on weekly & monthly basis.
  - Constitution of PFMS cell in Principal cum Pay & Accounts Office under the chairmanship of DCA as the first port of call for the PD and IFD for any PFMS related issue in pursuance of MoF, DoE, PFMS division OM F.No. 8/(01)/PFMS/2023 dated 17.04.2023.
  - Implementation of new window based digital signing utility in place of existing Java based utility in the sanction module of PFMS.
  - Special drive for issue of qualifying service certificate by Head of Office to government servant in consultation with PAOs on time in terms of Rule 32 of Central Civil Pension Rules, 2021.
  - Reconciliation of expenditure between PAO & DDO on monthly basis.
  - Dealing with pension matters sensitively and on time.
  - Special drive for liquidation of CGA and C&AG audit paras.
  - Roll-out of processing of Electronic Inter Government Adjustment Advices (e-IGAA) in PFMS.
  - Preventive measures at various level to avoid any financial irregularities in terms of O/o CGA OM dated 19.07.2023.
  - A Dashboard has been launched for monitoring the release and expenditure under Establishment Expenditure, Central Sector Scheme, Centrally Sponsored Scheme including other central expenditure in Department of Agriculture and Farmers Welfare.
- 24.1.9 .** The expenditure as on 31.12.2024 with reference to the B.E. 2024-25 is given at Exhibit-C.

## ACCOUNTING ORGANIZATION SETUP IN MINISTRY OF AGRICULTURE AND FARMERS WELFARE



**EXHIBIT- 'B'**  
**FLOW OF ACCOUNTING INFORMATION**



**Department of Agriculture and Farmers' Welfare  
Report on Monitoring of Expenditure over BE  
Transaction Date : 01.04.2024 to 31.12.2024**

(Rs in Crores)

Sr. No.	Name of Scheme/Description	BE 2024-25	RE 2024-25 ( Tentative )	Progressive Exp. Upto 31.12.2024 (Provisional)	%age of expenditure over BE	%age of expenditure over RE (Tentative)
1	2	3	6	7	8	
<b>1</b>	<b>Establishment Expenditure of the Centre</b>					
1.1	Department of Agriculture and Farmers Welfare	220.18	212.90	139.58	63.39%	65.56%
1.2	Minister (Agriculture) , Embassy of India, Rome	5.71	4.00	2.64	46.23%	66.00%
1.3	National Seeds Research and Training Centre	8.00	6.00	2.39	29.88%	39.83%
1.4	National Project on Promotion of Organic Farming	24.99	24.00	14.93	59.74%	62.21%
1.5	Central Fertilizer Quality Control and Training Institute	13.01	13.00	6.07	46.66%	46.69%
1.6	Directorate of Plant Protection Quarantine and Storage	187.75	198.55	135.82	72.34%	68.41%
1.7	National Rainfed Area Authority	4.00	4.00	2.49	62.25%	62.25%
1.8	Crop Directorates	16.00	16.00	9.88	61.75%	61.75%
1.9	Support to Control Institutes / Dte. of Extension	19.00	19.00	13.98	73.58%	73.58%
1.10	Principal Accounts Office	36.82	32.00	23.33	63.36%	72.91%

Sr. No.	Name of Scheme/Description	BE 2024-25	RE 2024-25 (Tentative)	Progressive Exp. Upto 31.12.2024 (Provisional)	%age of expenditure over BE	%age of expenditure over RE (Tentative)
1	2	3	6	7	8	
1.11	Directorate of Economics and Statistics	0.00		0.00	0.00%	
1.12	Commission for Agricultural Costs & Prices	9.50	9.85	7.20	75.79%	73.10%
1.13	Mahalanobis National Crop Forecasting Centre	35.11	106.00	2.86	8.15%	2.70%
1.14	Tractor Training and Testing Institutes	96.90	96.00	37.21	38.40%	38.76%
1.15	Directorate of Oil Seeds Development	3.00	2.80	1.40	46.67%	50.00%
1.16	Directorates and Institute of Development of Horticulture	10.00	10.00	6.36	63.60%	63.60%
1.17	Soil & Land Use Survey of India	40.00	40.00	28.39	70.98%	70.98%
1.18	Directorate of Marketing and Inspection	70.00	70.00	47.29	67.56%	67.56%
	<b>Total - Establishment Expenditure of the Centre</b>	<b>799.97</b>	<b>864.10</b>	<b>481.82</b>	<b>60.23%</b>	<b>55.76%</b>
<b>2</b>	<b>Central Sector Schemes/Projects</b>					
2.1	Pradhan Mantri Fasal Bima Yojana	14600.00	15864.00	11963.44	81.94%	75.41%
	Additional Transfer to agriculture infrastructure fund and Development (PMFBY)	2000.00				

## Department of Agriculture & Farmers Welfare

Sr. No.	Name of Scheme/Description	BE 2024-25	RE 2024-25 ( Tentative )	Progressive Exp. Upto 31.12.2024 (Provisional)	%age of expenditure over BE	%age of expenditure over RE (Tentative)
1	2	3	6	7	8	
2.2	Modified Interest Subvention	22600.00	22600.00	10836.78	47.95%	47.95%
	Additional Transfer to agriculture infrastructure fund and Development (MISS)		2000.00			
2.3	Market Invention scheme and price Support scheme	0.00	75.13			0.00%
2.4	Pradhan Mantri Annadata Aay Sanrakshan Abhiyan (PM-AASHA)	6437.50	6437.50	5399.36	83.87%	83.87%
2.5	Distribution of Pulses to State/Union Territories for Welfare Schemes	300.00	300.00	246.62	82.21%	82.21%
2.6	Pradhan Mantri Kisan Samman Nidhi (PM-KISAN)	60000.00	63500.00	42725.78	71.21%	67.28%
	Additional Transfer to agriculture infrastructure fund and Development (PM-KISAN)		2000.00			
2.7	Pradhan Mantri Kisan Mandhan Yojana	100.00	100.00	74.59	74.59%	74.59%
2.8	Formation and Promotion of Farmers Producers Organization	581.67	584.19	289.58	49.78%	49.57%
2.9	Agriculture Infrastructure Fund	600.00	750.00	368.39	61.40%	49.12%
2.10	Namo Drone Didi	500.00	250.00	0.12	0.02%	0.05%

Sr. No.	Name of Scheme/Description	BE 2024-25	RE 2024-25 ( Tentative )	Progressive Exp. Upto 31.12.2024 (Provisional)	%age of expenditure over BE	%age of expenditure over RE (Tentative)
	1	2	3	6	7	8
2.11	Blended Capital Support to Finance Startups for Agriculture and Rural Enterprise Relevant for Farm Produce Value Chain	62.50	62.50	0.00	0.00%	0.00%
2.12	National Beekeeping Honey Mission (NBHM)	75.00	75.00	32.75	43.67%	43.67%
	<b>Total - Central Sector Schemes/Projects</b>	<b>105856.67</b>	<b>116598.32</b>	<b>71937.41</b>	<b>67.96%</b>	<b>61.70%</b>
<b>3</b>	<b>Other Central Sector Expenditure</b>					
3.1	Contributions to International Organizations	62.00	62.00	1.50	2.42%	2.42%
3.2	Protection of Plant Varieties and Farmers Rights	50.00	50.00	37.13	74.26%	74.26%
3.3	National Institute of Plant Health Management	22.00	21.50	14.42	65.55%	67.07%
3.4	National Institute of Agriculture Extension Management (MANAGE)	6.50	7.00	3.25	50.00%	46.43%
3.5	Chaudhary Charan Singh National Institute of Agriculture Marketing	5.00	17.00	2.50	50.00%	14.71%
3.6	National Horticulture Board	20.99	22.00	15.50	73.84%	70.45%

## Department of Agriculture & Farmers Welfare

Sr. No.	Name of Scheme/Description	BE 2024-25	RE 2024-25 ( Tentative )	Progressive Exp. Upto 31.12.2024 (Provisional)	%age of expenditure over BE	%age of expenditure over RE (Tentative)
1	2	3	6	7	8	
3.7	Coconut Development Board	35.00	35.00	26.00	74.29%	74.29%
3.8	Agriculture Economics and Statistics	230.00	246.93	169.83	73.84%	68.78%
3.9	Agriculture Census	50.00	43.25	30.61	61.22%	70.77%
3.10	IRRI South Asia Regional Centre	25.00	21.75	12.50	50.00%	57.47%
<b>Total - Other Central Sector Expenditure</b>		<b>506.49</b>	<b>526.43</b>	<b>313.24</b>	<b>61.85%</b>	<b>59.50%</b>
4	<b>Centrally Sponsored Schemes</b>					
4.1	Rashtriya Krishi Vikas Yojana (RKVY)	7553.00	6000.00	2597.52	34.39%	43.29%
4.2	National Mission on Natural Farming	365.64	100.00	8.17	2.23%	8.17%
4.3	Krishionnati Yojana	7447.00	7106.36	2254.95	30.28%	31.73%
<b>Total - Centrally Sponsored Schemes</b>		<b>15365.64</b>	<b>13206.36</b>	<b>4860.64</b>	<b>31.63%</b>	<b>36.81%</b>
<b>Total (Grant No. 01)</b>		<b>122528.77</b>	<b>131195.21</b>	<b>77593.11</b>	<b>63.33%</b>	<b>59.14%</b>

**FUNCTIONS AND ORGANIZATIONAL STRUCTURE  
LIST OF FUNCTIONAL DIVISIONS IN THE DEPARTMENT  
OF AGRICULTURE AND FARMERS' WELFARE**

**DIVISIONS:**

1. Administration
2. Agricultural Census
3. Agricultural Marketing
4. Budget, Finance and Accounts
5. Credit
6. Crops & Post Harvest Management of Foodgrain
7. Digital Agriculture
8. Drought Management
9. Economic, Statistics & Evaluation
10. Extension
11. Farmers Welfare
12. Policy & Coordination
13. Hindi
14. Horticulture
15. Investment and Price Support
16. Integrated Nutrients Management
17. International Cooperation
18. Mechanization and Technology
19. Natural Resource Management
20. Plant Protection
21. RKVY
22. Rainfed Farming System
23. Seeds
24. Oil Seeds
25. Agriculture Trade Policy, Promotion & Logistics Development
26. Vigilance
27. O&M/PG/RTI

### **FUNCTIONS AND ORGANIZATIONAL STRUCTURE INVENTORY OF FIELD FORMATIONS**

#### **I. ATTACHED OFFICES**

1. Commission for Agricultural Costs and Prices, Shastri Bhavan, 'F' Wing, Second Floor, New Delhi.
2. Directorate of Plant Protection, Quarantine and Storage, N.H.IV, Faridabad (Haryana).
3. Directorate of Marketing & Inspection, N.H.IV, Faridabad (Haryana).
4. Mahalanobis National Crop Forecast Centre, New Delhi.

#### **II. SUB-ORDINATE OFFICES**

1. Central Farm Machinery Training & Testing Institute, Budni (Madhya Pradesh).
2. Northern Region Farm Machinery Training & Testing Institute, Hissar (Haryana).
3. Southern Region Farm Machinery Training & Testing Institute, Garladinne, Distt. Anantapur (A.P).
4. North Eastern Region Farm Machinery Training & Testing Institute, Biswnath Chariali, Distt. Sonitpur (Assam).
5. Directorate of Cotton Development, Bhoomi Sarvekshan Bhawan, Near Centre Point School, Seminary Hills, Katol Road, Nagpur, Maharashtra-440013.
6. Directorate of Jute Development, 234/4, Acharya Jagdish Bose Road, Nizam Palace Campus, Kolkata-700020 (West Bengal).
7. Directorate of Millets Development, Mini Secretariat Building, Room No. 710, 6th Floor, Bani Park, Jaipur (Rajasthan).
8. Directorate of Sugarcane Development, 8th Floor, Hall No.3, Kendriya Bhavan, Aliganj, Lucknow - 226024 (U.P).
9. Directorate of Rice Development, 191, Patliputra Colony, Patna-800013 (Bihar).
10. Directorate of Wheat Development, 86, Delhi - Jaipur Expy, Sector 18, Gurugram, Haryana 122008
11. Directorate of Extension, Krishi Vistar Bhavan, Dr. K.S. Krishna Marg, IARI Campus, Pusa, New Delhi-110 012.
12. Directorate of Oilseeds Development, Telhan Bhavan, Himayat Nagar, Hyderabad (A.P).
13. Directorate of Pulses Development, 8th Floor, Vindhya Bhawan, Bhopal- 462004 (M.P).
14. Central Fertiliser Quality Control & Training Institute, N.H.IV, Faridabad (Haryana).
15. National Centre of Organic Farming, C.G.O. Complex, Kamla Nehru Nagar, Hapur Road Chungi, Ghaziabad (U.P).
16. Directorate of Cashewnut and Cocoa Development, M.G. Road, Kochi-682011 (Kerala).
17. Directorate of Arecanut and Spices Development, Cannanore Road, Kozhikode-673005 (Kerala).
18. Office of the Minister (Agriculture), Embassy of India, ROME (ITALY).
19. All India Soil and Land Use Survey, IARI Campus, Pusa, New Delhi-110 012.
20. National Seed Research & Training Centre (NSRTC) VARANASI (U.P.).
21. Central Institute of Horticulture, Medziphema, Nagaland.

**I. PUBLIC SECTOR UNDERTAKINGS**

**1. National Seeds Corporation, New Delhi.**

**II. AUTONOMOUS BODIES**

1. Coconut Development Board, Kochi (Kerala).
2. National Horticulture Board, Gurgaon (Haryana).
3. Small Farmers' Agri Business Consortium, New Delhi.
4. National Institute for Agricultural Extension Management, Hyderabad (A.P).
5. National Institute of Agricultural Marketing, Jaipur (Rajasthan).
6. National Institute of Plant Health Management, Hyderabad (A.P.)
7. National Centre for Cold Chain Development, 2nd Floor, B-Wing, Janpath Bhawan, New Delhi.

**III. AUTHORITIES**

1. Protection of Plant Varieties and Farmers' Rights Authority, NASC Complex, DPS Marg Opp. Todapur, Delhi-110012.
2. National Rainfed Area Authority, NASC Complex, Dev Prakash Shastri Marg, Pusa, New Delhi- 110012.

**State-wise Allocation and Release under RKVY ( DPR Components)  
from 2023-24 to 2024-25 (as on 22.01.2025)**

Sl. No.	Name of the States	202324 #		( in Crore )	
		Allocation	Release	Allocation	Release
1	Andhra Pradesh	86.33	86.33	86.33	64.76
2	Bihar	77.68	48.42	77.68	72.83
3	Chhattisgarh	41.63	41.63	41.63	20.84
4	Goa	8.89	0.95	8.89	2.23
5	Gujarat	74.94	59.21	74.94	37.48
6	Haryana	34.48	28.86	34.48	31.50
7	Himachal Pradesh	14.61	3.66	14.61	9.26
8	Jharkhand	35.96	7.39	35.96	18.00
9	Karnataka	82.89	129.52	82.89	41.46
10	Kerala	30.69	14.24	30.69	19.18
11	Madhya Pradesh	99.79	66.97	99.79	62.37
12	Maharashtra	129.48	94.73	169.48	94.74
13	Orissa	55.91	46.76	55.91	27.95
14	Punjab	36.80	25.63	36.80	18.40
15	Rajasthan	93.57	30.00	83.57	41.79
16	Tamil Nadu	77.75	139.55	107.75	107.76
17	Telangana	61.07	0.00	51.00	25.50
18	Uttar Pradesh	137.07	191.63	36.08	90.70
19	Uttarakhand	36.08	25.01	137.07	31.20
20	West Bengal	82.98	165.71	102.98	70.88
21	Arunachal Pradesh	12.54	58.16	32.54	16.28
22	Assam	98.18	236.85	105.06	125.06
23	Manipur	16.26	29.06	16.26	0.00
24	Meghalaya	23.03	19.96	23.03	11.52
25	Mizoram	12.70	26.77	17.70	4.43
26	Nagaland	19.49	82.49	36.96	18.47
27	Sikkim	6.78	66.78	21.78	5.45
28	Tripura	27.14	61.26	27.14	6.79
29	Andaman & Nicobar	3.33	1.00	3.33	0.00
30	Chandigarh	0.67	0.00	0.67	0.00
31	D & N Haveli	4.44	0.00	4.44	0.00
32	Daman & Diu	0.67	0.00	0.67	0.00
33	Delhi	0.67	0.00	0.67	0.00
34	Jammu & Kashmir	5.21	4.32	5.21	2.61
35	Ladakh	4.44	1.11	4.44	0.00
36	Lakshadweep	0.44	0.00	0.44	0.00
37	Puducherry	0.13	0.03	0.13	0.00
	<b>Total</b>	<b>1534.71</b>	<b>1793.98</b>	<b>1669.01</b>	<b>1079.41</b>

**No. of project approved by State Governments under PM-RKVV (DPR)**

Sl. No.	Name of the States	Year 2023 -24	Year 2024 -25
1	Andaman & Nicobar	6	5
2	Andhra Pradesh	24	28
3	Arunachal Pradesh	63	55
4	Assam	68	46
5	Bihar	34	20
6	Chhattisgarh	21	37
7	Goa	13	5
8	Gujarat	29	41
9	Haryana	26	29
10	Himachal Pradesh	12	12
11	Jammu & Kashmir	8	5
12	Jharkhand	15	14
13	Karnataka	85	74
14	Kerala	12	77
15	Ladakh	0	6
16	Madhya Pradesh	28	34
17	Maharashtra	67	13
18	Manipur	23	32
19	Meghalaya	10	24
20	Mizoram	60	77
21	Nagaland	50	65
22	Orissa	9	38
23	Puducherry	4	2
24	Punjab	28	26
25	Rajasthan	27	88
26	Sikkim	7	10
27	Tamil Nadu	24	32
28	Telangana	29	19
29	Tripura	9	7
30	Uttar Pradesh	40	45
31	Uttarakhand	17	5
32	West Bengal	48	113
	<b>Total</b>	<b>896</b>	<b>1084</b>

List of important projects implemented under PM-RKVV by State Governments

S. No.	Project description
1.	Establishment of Custom Hiring Centres with Agriculture Drones
2.	Creation of Pesticide Testing Laboratory facility
3.	Strengthening of Biological Control Laboratories and Bio Fertilizer Lab
4.	Distribution of Gender Friendly Hand Tool kits and implements
5.	Construction of Storage Godowns for farmers
6.	Horticulture mechanization through farm mechanization
7.	Strengthening of Seed Farms
8.	Construction of Water Harvesting Structures
9.	Construction of tissue culture lab
10.	Construction of Farm machinery testing and evaluation center
11.	Setting up of multigrain crop processing unit
12.	Demonstration on crops, oil seeds, pulses, millet production programme
13.	Construction of Multipurpose seed store and technology dissemination center
14.	Establishment of Farmers Training centre / hostel
15.	Integrated Farming System Based on Multipurpose Water Harvesting Project
16.	Farm Mechanization
17.	Construction of Mushroom production unit
18.	Construction of seed testing lab
19.	Strengthening of horticulture nurseries
20.	Establishment on farm pack houses for fruit, vegetables, species etc.

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**Department of Agriculture & Farmers Welfare**  
**Ministry of Agriculture & Farmers Welfare**  
**Government of India**  
**Krishi Bhawan, New Delhi-110 001**  
**[www.agriwelfare.gov.in](http://www.agriwelfare.gov.in)**

