



सत्यमेव जयते

Annual Report 2018-19



DEPARTMENT OF AGRICULTURE, COOPERATION & FARMERS WELFARE

Ministry of Agriculture & Farmers Welfare

Government of India

Krishi Bhawan, New Delhi-110001

www.agricoop.nic.in

ANNUAL REPORT

2018-19



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Department of Agriculture, Cooperation & Farmers Welfare
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Chapter 1

Overview

1.1 Agriculture plays a vital role in India's economy. 54.6% of the total workforce is engaged in agricultural and allied sector activities (Census 2011) and accounts for 17.1% of the country's Gross Value Added (GVA) for the year 2017-18 (at current prices). Given the importance to agriculture sector, Government of India has taken several steps for its development in a sustainable manner. Steps have been taken to improve soil fertility through the Soil Health Card Scheme; to provide improved access to irrigation and enhanced water efficiency through Pradhan Mantri Krishi Sinchai Yojana (PMKSY); to support organic farming through Paramparagat Krishi Vikas Yojana (PKVY); and to support the creation of a unified national agriculture market to boost the income of farmers. Further, to mitigate risk in agriculture sector, a scheme "Pradhan Mantri Fasal Bima Yojana" (PMFBY) was also launched in 2016.

1.2 As per the Land Use Statistics 2014-15, the total geographical area of the country is 328.7 million hectares, of which 140.1 million hectares is the reported net sown area and 198.4 million hectares is the gross cropped area with a cropping intensity of 142%. The net area sown works out to be 43% of the total geographical area. The net irrigated area is 68.4 million hectares.

1.3 Agriculture Gross Value Added (GVA): As per the estimates of National Income released by Central Statistics Office (CSO), Ministry of Statistics & Programme Implementation, the agriculture and allied sectors contributed approximately 16.0% of India's GVA at current prices during 2018-19. GVA of agriculture and allied sectors and its share in total GVA of the country at current prices during the last 5 years is as follows:

(Rs. in Crore)

Items	Years				
	2014-15	2015-16	2016-17	2017-18@	2018-19**
GVA of Agriculture and Allied Sectors	2093612	2227533	2496358	2670147	2755992
Per cent to total GVA	18.2	17.7	17.9	17.2	16.0

Source: Central Statistics Office, Ministry of Statistics and Programme Implementation, Govt. of India

**As per the press note on Second Advance Estimates of National Income 2018-19 and Quarterly Estimates of Gross Domestic Product for the third Quarter (Q3) of 2018-19 released by CSO on 28th February 2019

@ As per the First Revised Estimates of National Income, Consumption Expenditure, Saving and capital Formation for 2017-18 released on 31st January, 2019

1.4 There has been a continuous decline in the share of agriculture and allied sectors in the GVA from 18.2 percent in 2014-15 to 16.0 percent in 2018-19. Falling share of agriculture and allied sectors in GVA is an expected outcome in a fast growing and structurally changing economy.

Growth (over the previous year) in the total GVA of the Economy and that in the GVA of agriculture and allied sectors at 2011-12 basic prices is given below:

(in percent)

Year	Total Economy	Agriculture & Allied Sector	Crops	Livestock	Forestry & Logging	Fishing
2014-15	7.2	-0.2	-3.7	7.4	1.9	7.5
2015-16	8.0	0.6	-2.9	7.5	1.7	9.7
2016-17	7.9	6.3	5.0	9.9	1.4	10.0
2017-18@	6.9	5.0	3.8	7.0	2.1	11.9
2018-19**	6.8	2.7	Will be released in January, 2020.			

Source: Central Statistics Office, Ministry of Statistics and Programme Implementation, Govt. of India

**As per the press note on Second Advance Estimates of National Income 2018-19 and Quarterly Estimates of Gross Domestic Product for the third Quarter (Q3) of 2018-19 released by CSO on 28th February 2019

@ As per the First Revised Estimates of National Income, Consumption Expenditure, Saving and capital Formation for 2017-18 released on 31st January, 2019

1.5 The Agriculture and Allied sector witnessed a growth of -0.2 per cent in 2014-15, 0.6 per cent in 2015-16, 6.3 in 2016-17, 5.0 per cent in 2017-18 and 2.7 per cent in 2018-19 at 2011-12 basic prices.

Rainfall 2018-19

Monsoon Rainfall (June – September)

1.6 The cumulative rainfall in the country during the monsoon season i.e. 1st June to 30th September, 2018 has been lower by 9% than the Long Period Average (LPA). Rainfall in the four broad geographical divisions of the country during the above period has been lower than LPA by 24% in East & North East India, 7% in Central India and 2% each in South Peninsula & North-West India. Out of 36 meteorological sub-divisions, 01 met sub-division in the country had received excess rainfall, 23 met subdivisions received normal rainfall and 12 met subdivisions received deficient rainfall.

Out of 659 districts for which rainfall data available, 12(2%) districts received large excess rainfall, 94(14%) districts received excess rainfall, 301(46%) districts received normal rainfall, 240 (36%) districts received deficient rainfall and 12(2%) districts received large deficient rainfall.

Post-Monsoon Rainfall October - December

1.7 During the post-monsoon season (1st October to 31st December, 2018) country received rainfall which was 44% lower than the LPA. Out of 36 meteorological subdivisions, 2 received large excess/excess rainfall, 3 received normal rainfall and 31 received deficient/large deficient rainfall.

Winter Rainfall (January – February)

1.8 During the winter season (1st January to 20th February, 2018) country received rainfall which was 16% higher than the

LPA. Out of 36 meteorological subdivisions, 11 received large excess/excess rainfall, 5 received normal rainfall, 16 received deficient/large deficient rainfall and 4 subdivisions received no rainfall.

Production Scenario 2017-18

1.9 As a result of near normal rainfall during monsoon 2017 and various policy initiatives taken by the Government, country witnessed record foodgrain production in 2017-18. As per 4th Advance Estimates for 2017-18, total Foodgrain production in the country is estimated at 284.83 million tonnes which is higher by 9.72 million tonnes than the previous record production of foodgrain of 275.11 million tonnes achieved during 2016-17. The production during 2017-18 is also higher by 24.66 million tonnes than the previous five years' (2012-13 to 2016-17) average production of foodgrain.

1.10 Total production of Rice during 2017-18 (as per 4th Advance Estimates) is estimated at record 112.91 million tonnes. Production of rice has increased by 3.21 million tonnes than the production of 109.70 million tonnes during 2016-17. It is also higher by 6.61 million tonnes than the five years' average production of 106.29 million tonnes. Production of Wheat, estimated at record 99.70 million tonnes, is higher by 1.19 million tonnes as compared to wheat production of 98.51 million tonnes achieved during 2016-17. Production of Nutri / Coarse Cereals estimated at record 46.99 million tonnes is higher than the average production by 5.29 million tonnes. Further, it is also higher by 3.22 million tonnes as compared to their production of 43.77 million tonnes achieved during 2016-17.

1.11 Total Pulses production during 2017-18 (as per 4th Advance Estimates) is estimated at record 25.23 million tonnes which is higher by 2.10 million tonnes than the previous year's production of 23.13 million tonnes. Moreover, the production of pulses during 2017-18 is higher by 6.39 million tonnes than the Five years' average production of 18.84 million tonnes.

1.12 Oilseeds production in the country during 2017-18 (as per 4th Advance Estimates) is estimated at 31.31 million tonnes which is marginally higher than the production of 31.28 million tonnes during 2016-17. However, the production of oilseeds during 2017-18 is higher by 1.76 million tonnes than the average (2012-13 to 2016-17) oilseeds production. With a significant increase by 70.84 million tonnes over 2016-17, total production of sugarcane in the country during 2017-18 is estimated at record 376.90 million tonnes. The production of sugarcane during 2017-18 is also higher by 34.87 million tonnes than the average sugarcane production of 342.04 million tonnes.

1.13 As per 4th Advance Estimates for 2017-18, production of cotton is estimated at 34.89 million bales (of 170 kg each) which is higher by 2.31 million bales than the production of 32.58 million bales during 2016-17. Further, it is also higher by 1.39 million bales than its average (2012-13 to 2016-17) production of 33.50 million bales. Production of Jute & Mesta is estimated at 10.14 million bales (of 180 kg each) during the 2017-18.

Area, production and yield of major Crops

Crops	Area (Lakh hectare)			Production (Million Tonnes)			Yield (kg/hectare)		
	2015-16	2016-17	2017-18*	2015-16	2016-17	2017-18*	2015-16	2016-17	2017-18*
Rice	434.99	439.93	437.89	104.41	109.70	112.91	2400	2494	2578
Wheat	304.18	307.85	295.76	92.29	98.51	99.70	3034	3200	3371
Nutri /Coarse cereals	243.89	250.08	242.05	38.52	43.77	46.99	1579	1750	1941
Pulses	249.12	294.45	299.93	16.32	23.13	25.23	655	786	841
Foodgrains	1232.18	1292.31	1275.63	251.54	275.11	284.83	2041	2129	2233
Oilseeds	260.87	261.77	246.45	25.25	31.28	31.31	968	1195	1270
Sugarcane	49.27	44.36	47.32	348.45	306.07	376.90	70720	69001	79650
Cotton@	122.92	108.26	124.29	30.01	32.58	34.89	415	512	477
Jute & Mesta#	7.82	7.63	7.35	10.52	10.96	10.14	2421	2585	2481

* 4th advance estimates

@ Production in million bales of 170 kg each

Production in million bales 180 Kg. each.

Production Scenario 2018-19 (as per Second Advance Estimate released on 28.02.2019)

1.14 The cumulative rainfall in the country during the monsoon season (June to September, 2018) has been 9% lower than Long Period Average (LPA). The cumulative rainfall in North West India, Central India and South Peninsula during the aforesaid period has been overall normal. As most of the major crops producing states have witnessed normal monsoon rainfall, accordingly, production of most of the crops for the agricultural year 2018-19 has been estimated higher than the normal production (average of five years (2013-14 to 2017-18)).

1.15 The total area coverage under foodgrains is estimated at 1227.38 lakh hectares during 2018-19 (as per 2nd Advance Estimates) as compared to 1275.63 lakh hectares in 2017-18 (as per 4th Advance Estimates). Area coverage under Nutri / coarse cereals is estimated at 220.01 lakh hectares in 2018-19 as compared to 242.05 lakh hectare in 2017-18. Further, area coverage under pulses is estimated at 282.82 lakh hectares as compared to 299.93 lakh hectares in previous year. A comparative position of production of food grains, oilseeds, sugarcane and cotton during 2018-19 vis-à-vis 2017-18 is given below:

Production in 2018-19 and 2017-18

(Million Tonnes)

Crop	2018-19 (2nd Advance Estimates)	2017-18 (4th Advance Estimates)	Absolute Difference (2018-19 over 2017-18)	Percentage Increase/decrease (+)/(-) in 2018-19 over 2017-18
Foodgrains	281.37	284.83	-3.46	-1.21
Oilseeds	31.50	31.31	0.19	0.61
Sugarcane	380.83	376.90	3.93	1.04
Cotton@	30.09	34.89	-4.80	-13.76
Jute& Mesta*	10.07	10.14	-0.07	-0.69

@ Production in million bales of 170 kg each.

* Production in million bales of 180 kg each

Source: Directorate of Economics & Statistics, Department of Agriculture, Cooperation & Farmers Welfare

1.16 As per 2nd Advance Estimates for 2018-19, total foodgrain production in the country is estimated at 281.37 million tonnes which is lower by 3.46 million tonnes than the production of foodgrain of 284.83 million tonnes achieved during 2017-18 (as per 4th Advance Estimates). However, the production during 2018-19 is higher by 15.63 million tonnes than the previous five years' (2013-14 to 2017-18) average production of foodgrain.

1.17 Total production of rice during 2018-19 is estimated at record 115.60 million tonnes. Production of rice has increased by 2.69 million tonnes than the production of 112.91 million tonnes during 2017-18. It is also higher by 7.80 million tonnes than the five years' average production of 107.80 million tonnes. Production of wheat, estimated at 99.12 million tonnes, is marginally lower by 0.58 million tonnes as compared to wheat production of 99.70 million tonnes achieved during 2017-18. However, the production of wheat during 2018-19 is higher by 4.51 million tonnes than the average (2013-14 to 2017-18) wheat production of 94.61 million tonnes.

1.18 Production of nutri / coarse cereals estimated at 42.64 million tonnes is lower by 4.35 million tonnes than the production of 46.99 million tonnes achieved during 2017-18. Further, it is also lower by 0.45 million tonnes than the average production. Total pulses production during 2018-19 is estimated at 24.02 million tonnes which is lower by 1.21 million tonnes than the previous year's production of 25.23 million tonnes. However, the production of pulses during 2018-19 is higher by 3.77 million tonnes than the five years' (2013-14 to 2017-18) average production of 20.26 million tonnes.

1.19 Total oilseeds production in the country during 2018-19 is estimated at 31.50 million tonnes which is marginally higher than the production of 31.31 million tonnes during 2017-18. However, the production of oilseeds during 2018-19 is higher by 1.85 million tonnes than the average oilseeds production. With an increase by 3.93 million tonnes over 2017-18, total production of sugarcane in the country during 2018-19 is estimated at 380.83 million tonnes. However, the production of sugarcane during 2018-19 is higher by 31.05 million tonnes than

the average (2013-14 to 2017-18) sugarcane production of 349.78 million tonnes.

1.20 Production of cotton in 2018-19 (as per 2nd Advance Estimates) is estimated at 30.09 million bales (of 170 kg each) which is lower than the production of 34.89 million bales during 2017-18. Production of Jute & Mesta estimated at 10.07 million bales (of 180 kg each) is marginally lower than their production during the 2017-18.

Capital Formation in Agriculture and Allied Sectors:

1.21 Gross Capital Formation (GCF) in agriculture and allied sectors relative to GVA in this sector has been showing a fluctuating trend from 17.7 per cent in 2013-14 to 15.2 per cent in 2017-18.

Gross Capital Formation (GCF) in Agriculture and Allied Sectors relative to Gross Value Added (GVA) at 2011-12 basic prices

Year	GCF of Agriculture & Allied Sector	GVA of Agriculture & Allied Sector	GCF of Agriculture & Allied Sector as percentage of GVA of Agriculture & Allied Sector
2013-14	284424	1609198	17.7
2014-15	272663	1605715	17.0
2015-16	237648	1616146	14.7
2016-17	267836	1717467	15.6
2017-18	273755	1803039	15.2

Source: Central Statistics Office, Ministry of Statistics and Programme Implementation, Govt. of India.

As per the First Revised Estimates of National Income, Consumption Expenditure, Saving and capital Formation for 2017-18 released on 31st January, 2019.

National Policy for Farmers (NPF), 2007:

1.22 Government of India approved the National Policy for Farmers (NPF) in 2007. Many of the provisions of the NPF are being operationalised through various schemes and programmes which are being implemented by different Central Government Departments and Ministries. For the operationalisation of the remaining provisions of the Policy, an Action Plan has been finalized and circulated to the Ministries and Department concerned, as well as to all States and UTs for necessary follow up action. An Inter-Ministerial Committee constituted for the purpose also monitors the progress of the Plan of Action for the operationalisation of the NPF.

Doubling of Farmers' Income

1.23 The Government has set a target of doubling of farmers' income by the year 2022. An Inter-Ministerial Committee has been constituted to examine issues relating to doubling of farmers' income. The IMC has recommended a strategy to achieve doubling of farmers' income in real terms by the year 2022.

1.24 The Committee has identified main sources of income growth viz, improvement in crop and livestock productivity; resource use efficiency or savings in the cost of production; increase in the cropping intensity; diversification towards high value crops; improvement in real prices received by farmers; and shift from farm to non-farm

occupations. The Committee is also looking into the investments in agriculture e.g. increasing public investments for agriculture-rural roads, rural electricity, irrigation; and the need for policy support to enable investments by corporate sector in agriculture.

1.25 The Government has been reorienting the agriculture sector by focusing on an income-centeredness which goes beyond achieving merely the targeted production. The income approach focuses on achieving high productivity, reduced cost of cultivation and remunerative price on the produce, with a view to earn higher profits from farming. Various initiatives by way of schemes and policy reforms have been rolled out in consonance with this approach.

1.26 To achieve the target of doubling farmers' income, a number of schemes and programmes are being implemented by the Government i.e. Pradhan Mantri Krishi Sinchayee Yojana, Pradhan Mantri Fasal Bima Yojana, Paramparagat Krishi Vikas Yojana, Soil Health Scheme, Neem Coated Urea and e-National Agriculture Market. These are a few of the Department's flagship programs that aim to improve the productivity and earnings of farmers.

Pradhan Mantri Krishi Sinchayee Yojana (PMKSY):

1.27 The scheme has been approved with an outlay of Rs. 50,000 crore for a period of 5 years (2015-16 to 2019-20). The major objectives of PMKSY are to achieve convergence of investments in irrigation at the field level, expand cultivable area under assured irrigation, improve on-farm water use efficiency to reduce wastage of water, enhance the adoption of precision irrigation and other water saving technologies (Per Drop More Crop), promote sustainable water conservation practices etc. A decision was taken in July, 2016 by the cabinet for implementation of PMKSY in a mission mode. The mission is administered by

Ministry of Water Resources, River Development and Ganga Rejuvenation with the Per Drop More Crop component, being administered by DAC&FW.

1.28 During 2018-19, an amount of Rs.2240.35 crore has been released as on 31st December, 2018 to States under PMKSY-Per Drop More Crop component. An area of about 6.48 lakh ha has been covered under Micro Irrigation and 12,473 number of water harvesting structures constructed till December, 2018.

Agricultural Credit

1.29 Government announces annual target for agricultural credit in the budget every year. Agricultural credit flow has shown consistent progress every year. The agricultural credit flow target for the year 2017-18 was fixed at Rs.10,00,000 crore and against this target the achievement was Rs.11,68,503 crore. The agricultural credit flow target for 2018-19 has been fixed at Rs.11,00,000 crore and against this target the disbursement till 31st December, 2018 has been Rs.9,33,365 crore.

Interest Subvention Scheme

1.30 The Department implements the Interest Subvention Scheme under which short-term crop loans upto Rs.3 lakh for a period of one year are provided to farmers at concessional interest rates of 7% per annum, which in case of timely repayment gets reduced to 4% per annum. During the financial year, following the budget announcement, the benefit of Interest Subvention (@2%) and Prompt Repayment Incentive (@3%) are also being provided to animal husbandry and fisheries farmers to meet their working capital needs.

Crop Insurance

1.31 Various Crop Insurance Programmes have been implemented in the country since

1985. In 2016, the “Pradhan Mantri Fasal Bima Yojana (PMFBY) was approved for implementation from Kharif 2016 along with pilot Unified Package Insurance Scheme (UPIS) and Restructured Weather Based Crop Insurance Scheme (RWBCIS). Under the PMFBY & RWBCIS, a uniform maximum premium of only 2% of the sum insured is to be paid by farmers for all Kharif crops and 1.5% for all Rabi crops. In case of commercial and horticultural crops, the maximum premium to be paid by farmers is only 5%. The premium rates to be paid by farmers are very low and balance premium is paid by the Government, to be shared equally by Central and State Government, to provide full insured amount to the farmers against crop loss on account of natural calamities.

Commission for Agricultural Costs and Prices:

1.32 Commission for Agricultural Costs and Prices (CACP) which was set up with a view to evolve a balanced and integrated price structure, is mandated to advice on the price policy (MSP) of 23 crops. These include seven cereal crops (paddy, wheat, jowar, bajra, maize, ragi and barley), five pulse crops (gram, tur, moong, urad and lentil),

seven oilseeds (groundnut, sunflower seed, soybean, rapeseed-mustard, safflower, nigerseed and sesamum), copra (dried coconut), cotton, raw jute and sugarcane {Fair and Remunerative prices (FRP)}. 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 Central Ministries, State Governments, Farmers, Farmers Association and Research Institutes.

Determinants of MSP:

1.33 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, inter-crop price parity and terms of trade between agricultural and non-agricultural sectors, 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.



Chapter 2

Functions and Organizational Structure

2.1 Structure: The Department of Agriculture, Cooperation & Farmers Welfare (DAC&FW) is one of the four constituent Departments of the Ministry of Agriculture & Farmers Welfare, the other three being Department of Animal Husbandry & Dairying, Department of Fisheries and Department of Agricultural Research and Education (DARE). This Department is headed by Agriculture & Farmers Welfare Minister who is assisted by three Ministers of State. The Secretary (AC&FW) is the administrative head of the Department. The Secretary is assisted by one Principal Adviser, 5 Additional Secretaries including one Financial Adviser, Agriculture Commissioner, 15 Joint Secretaries including Mission Director (Mission on Integrated Development of Horticulture) & Mission Director (National Mission on Sustainable Agriculture), Horticulture Commissioner, Horticulture Advisor, Economic Advisor and Deputy Director General. In addition, Chairman of Commission for Agriculture Costs and Prices (CACPC) advises Department on pricing policies for selected agricultural crops.

2.2 The DAC&FW is organized into 27 divisions (Annexure-2.1) and has five 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, eight Autonomous Bodies, ten National-Level Cooperative Organizations and two Authorities (Annexure-2.3) are functioning under administrative control of Department.

2.3 Administrative Improvements: 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. The complaints/allegations received in the Unit are authenticated as per the direction/guidelines of CVC. After authentication, the complaints/allegations are finalized on receipt of factual reports from concerned division. Complaint cases and Departmental proceedings are monitored through meetings, reminders, reports/returns etc. Further, identification of sensitive posts in the DAC&FW is also undertaken as per the guidelines of CVC to enable periodical rotation of staff posted in these posts by competent authority. AVU prepares list of Officers of Doubtful Integrity and Agreed List in consultation with CBI. Vigilance Awareness week was observed from 29th October to 5th November, 2018.

2.4 A Public Grievance Cell has been set up and is fully functional in the Department of Agriculture, Cooperation & Farmers Welfare under the Joint Secretary who not only acts as Grievance Officer of the Department but is also 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, Cooperation & 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 2018-

19 (from 01.04.2018 to 31.12.2018), 3566 public grievance petitions/suggestions have been received through CPGRAMS portal and 1144 cases were carried forward from previous year, out of 4710 total cases, 4077 cases have been disposed of and 633 cases were pending in this Department at the end of December, 2018.

2.5 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).

2.6 Implementation of the Right to Information Act, 2005: During year 2018-19 (as on 31.12.2018), 5507 physical & online RTI applications and 212 appeals seeking information under the Right to Information Act, 2005 were received in RTI Cell and replies were sent to the applicants in time.

2.7 Information and Facilitation Counter: This counter provides information in respect of Department of Agriculture, Cooperation & Farmers Welfare. During year 2018-19, 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 DAC&FW, Ministry of Agriculture and Farmers Welfare.

2.8 Progressive use of Hindi: The Department has an Official Language Implementation Committee (OLIC), chaired by 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 review, quarterly meetings of the Official Language Implementation Committee were held.

2.9 The Hindi 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 Hindi Division also participated in the meetings of the Official Language Implementation Committees of the Attached and Subordinate offices, Corporations, etc., and extended necessary guidance to them in the implementation of Official Language Act and Rules. In addition to this, offices under the control of this Department, wherein 80 per cent of the officers and employees have acquired working knowledge of Hindi, was notified in the Gazette of India under Rule 10 (4) of the Official Language Rules, 1976.

2.10 Every year, the Department nominates Clerks and Stenographers for training in Hindi Shorthand and Typing, under the Hindi teaching Scheme of the Department of Official Language. Nine Employees have been given Cash awards for doing original noting and drafting in Hindi under the incentive scheme for promoting use of Hindi in the official work of the Department. A seat to seat workshop on Hindi Phonetics was organized by the Division wherein officers/officials of various divisions of DAC&FW were trained.

2.11 With a view to create awareness regarding the use of Hindi in the official work of the Department, a Hindi Fortnight was held from the 1-15 September, 2018. On this occasion, the Hon'ble Minister for Agriculture and Farmers Welfare issued an appeal to all officers and staff of the Department of Agriculture, Cooperation and Farmers Welfare to do more official work in Hindi. During the Hindi Fortnight, various Hindi competitions such as essay writing, noting and drafting, translation and vocabulary, poetry recitation, debate and dictation were organized and a large number of officers and employees participated in these competitions. Cash awards

and certificates of appreciation were given to the 30 winners of these competitions.

2.12 The Second Sub-Committee of the Committee of Parliament on Official Language conducted inspection of various offices of the Department of Agriculture, Cooperation 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 at these inspection meetings. In addition to this, 17 subordinate/attached offices have been inspected by the officers of the Hindi Division of Department of Agriculture, Cooperation and Farmers Welfare.

2.13 Reservation for Scheduled Castes/ Scheduled Tribes /Other Backward Classes: Department of Agriculture, Cooperation and 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. A separate Reservation Cell

has also been set up for handling the reservation related matters.

2.14 Prevention of Harassment of Women Employees: An Internal Complaints Committee regarding prevention of sexual harassment of women at their work place was reconstituted by the Department. This Committee is chaired by a senior lady officer of the Department. The committee is represented by 6 members (including Chairman), which comprises of 5 women members, (2 of whom belong to 2 NGOs) and 1 male member of the Department. Three meetings of the Committee were held during the year. One complaint alleging harassment was received from a woman employee in the Department during 2018-19, which is under process.

2.15 The Internal Complaints Committee (ICC) of the Department has provided its Report according to section 21 of The Sexual Harassment of Women at Workplace (Prevention, Prohibition and Redressal) Act, 2013, as follows:

No. of complaints received during 2018-19	No. of complaints disposed of during 2018-19	No. of cases pending for more than 90 days	No. of workshops/ programmes carried out during 2018-19	Nature of action taken by the employer
1	Nil	1	Nil	N.A.



Chapter 3

Directorate of Economics & Statistics

Overview

3.1 Directorate of Economics & Statistics, an attached office of DAC&FW, is guided by the vision of enriching economic and statistical data and analytical inputs required by the Department of Agriculture, Cooperation & Farmers Welfare for providing better agricultural economic development policy. Its mission is to provide important statistics on area, production, cost and yield of principal crops, minimum support prices, to implement schemes related to improvement of agricultural statistics, and carrying out agro-economic research. The main objectives of the Directorate are generation and dissemination of agricultural statistics and research and analysis. The Directorate provides inputs to DAC&FW, CACP and also places a large volume of data and information in the public domain for use of all researchers and stakeholders.

3.2 Major Programmes/Activities

3.2.1 Agricultural Statistics Division

Agricultural Statistics (AS) Division of Directorate of Economics & Statistics (DES), releases four Advance Estimates (AEs) followed by Final Estimates of production of major agricultural crops of the country. Each of these five estimates is available State-wise and at the national level for the 28 identified crops including pulses. The time of release and period covered under each of these estimates are as under:

- The First Advance Estimates are released in September. These cover only kharif crops, when kharif sowing is generally over.
- The Second Advance Estimates are normally released in February, the following year when rabi sowing is also over. The second advance estimates cover kharif as well as rabi crops. They take into account; (i) firmed up figures on kharif area coverage; (ii) available data on crop cutting experiments for yield assessment of kharif crops and (iii) tentative figures on area coverage of rabi crops.
- The Third Advance Estimates incorporate revised data on area coverage for rabi crops and better yield estimates of kharif crops. These are released in April-May.
- The Fourth Advance Estimates are released in July-August. By this time, fully firmed up data on area as well as yield of kharif crops and rabi crops are expected to be available with the States. As such, Fourth Advance Estimates are expected to be very close to the Final Estimates.
- Final Estimates are released about seven months after the Fourth Advance Estimates in February of the following year. This allows sufficient time to States to take into account even the delayed information while finalizing area and yield estimates of various crops.

While finalizing all-India level estimates, the crop-wise data on area, production and yield received from State Governments are thoroughly scrutinized and validated on the basis of information from alternative sources such as Remote Sensing technology based

forecast from Mahalanobis National Crop Forecast Centre (MNCFC); econometric modeling based crop forecast provided by Institute of Economic Growth (IEG), New Delhi; inputs received from the weekly Crop Weather Watch Group (CWWG) meetings; trends in the area, production and yield of crops during the last 5 years; rainfall conditions; and trends in procurement and prices of respective commodities on area, production and yield.

The Second Advance Estimates of major Agricultural and Commercial Crops have been released by the Division on 28th February, 2019. Time Series of Production as per 2nd Advance Estimates 2018-19 is at Annexure 3.1(a) and 3.1 (b).

3.2.2 Cost Study (CS) Division

Cost Study Division is mainly responsible for implementation and monitoring of a Comprehensive Scheme for Studying the Cost of Cultivation of Principal Crops in India and other issues relating to this scheme including answering parliament questions, generating cost of cultivation and production estimates and providing to CACP for the purpose of arriving at the recommendations of the Minimum Support Prices (MSP) etc.

Cost of cultivation surveys are important data source for decision making on sectors of national importance. These are very intensive surveys wherein data are collected on the various inputs which are used for the cultivation of crop.

3.2.3 Food Economics and Commercial Crops Divisions

(A) Food Economics Division of DES examines the Kharif and Rabi Price Policy Report of Commission for Agricultural Costs & Prices (CACP).

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. The price policy also seeks to evolve a balanced and integrated price structure in the perspective of the overall needs of the economy. Towards this end, the Government announces Minimum Support Prices (MSPs) for twenty two (22) mandated crops and Fair and Remunerative Price (FRP) for Sugarcane based on the recommendations of the CACP after considering the views of State Governments and Central Ministries/ Departments concerned. In addition, MSP for Toria and de-husked coconut is also fixed on the basis of MSPs of rapeseed/mustard and Copra respectively. While recommending the price policy, CACP considers a number of important factors like cost of cultivation, trends in market prices, demand and supply situation, effect on general price level, effect on cost of living etc.

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 notified Kharif, Rabi and other commercial crops with a return of at least 50 percent of cost of production for the season 2018-19. This decision of the Government was also a historic one as it redeemed the promise of fixing the MSPs at least at a level of 50 per cent return over cost of production. It fulfills the commitment to the farmers to provide 50 per cent return over cost of production and is steadily moving towards increasing farmers' incomes. A statement showing Cost, MSP and percent return over cost for the year 2017-18 and 2018-19 is given as under:

Cost*, MSP and percent return over cost

(Rs/quintal)

Sl. No.	Commodity	2017-18			2018-19		
		Cost	MSP	% Return over cost	Cost	MSP	% Return over cost
	KHARIF CROPS						
1	PADDY(Common)	1117	1550	38.8	1166	1750	50.1
	(Grade A) ^		1590			1770	
2	JOWAR (Hybrid)	1556	1700	9.3	1619	2430	50.1
	(Maldandi) ^		1725			2450	
3	BAJRA	949	1425	50.2	990	1950	97.0
4	MAIZE	1044	1425	36.5	1131	1700	50.3
5	RAGI	1861	1900	2.1	1931	2897	50.0
6	ARHAR(Tur)	3318	5450	64.3	3432	5675	65.4
7	MOONG	4286	5575	30.1	4650	6975	50.0
8	URAD	3265	5400	65.4	3438	5600	62.9
9	COTTON(Medium Staple)	3276	4020	22.7	3433	5150	50.0
	(Long Staple) ^		4320			5450	
10	GROUNDNUT IN SHELL	3159	4450	40.9	3260	4890	50.0
11	SUNFLOWER SEED	3481	4100	17.8	3592	5388	50.0
12	SOYABEEN	2121	3050	43.8	2266	3399	50.0
13	SESAMUM	4067	5300	30.3	4166	6249	50.0
14	NIGERSEED	3912	4050	3.5	3918	5877	50.0
	RABI CROPS						
1	WHEAT	817	1735	112.4	866	1840	112.5
2	BARLEY	845	1410	66.9	860	1440	67.4
3	GRAM	2461	4400	78.8	2637	4620	75.2
4	MASUR (LENTIL)	2366	4250	79.6	2532	4475	76.7
5	RAPESEED/MUSTARD	2123	4000	88.4	2212	4200	89.9
6	SAFFLOWER	3125	4100	31.2	3294	4945	50.1
7	TORIA ^		3900			4190	
	OTHER CROPS						
1	COPRA (Milling)	4758	6500	36.6	5007	7511	50.0
	(Ball)^		6785	42.6		7750	
2	DE-HUSKED COCONUT ^		1760			2030	

3	JUTE	2160	3500	62.0	2267	3700	63.2
4	SUGARCANE	152	255	67.8	155	275	77.4

* 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 separately compiled for Paddy(Grade A), Jowar (Maldandi), Cotton (Long staple), Toria, Copra(ball) and De-husked coconut.

(B) Commercial Crops Division is responsible for examining the Price Policy Reports for Raw Jute and Copra submitted by CACP. The division also fixes the MSP of Toria by taking the average of price differentials between rapeseed/mustard and toria /lahi black in important markets for the previous five years.

- For 2019 season, the MSP has been fixed at Rs.9521/-per quintal of Milling Copra and Rs. 9920/- per quintal of Ball Copra. The MSP would yield returns of 50 percent for Milling Copra and 56.29 percent for Ball Copra over the weighted average cost estimated at Rs. 6347 for 2019 season.
- For 2019-20 season, the MSP for Raw Jute (TDN₃ equivalent to TD₅ of old grade) has been fixed at Rs. 3950/- per quintal. The MSP would yield returns of 55.81 percent over the weighted average cost of production which is estimated at Rs. 2535 per quintal.
- The MSP of toria of Fair Average quality (FAQ) for 2018-19 season, to be marketed in 2019-20 season, has been fixed at Rs 4190/-per quintal.

3.2.4 Special Data Dissemination Standards (SDDS) Division

The Division 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 data is brought out in the Directorate's publications of '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 URL of the website is <http://aps.dac.gov.in/LUS>. Similarly, the district wise compiled data on Area, Production and Yield (APY) from 1998-99 onwards are also available on the website. The URL of the website is <http://aps.dac.gov.in/APY>. The Division also generates quarterly estimates of agricultural production for use in the compilation of quarterly National Accounts by the Central Statistics Office. In the absence of direct data, quarterly production is estimated by using the estimates of Kharif and Rabi seasons in conjunction with the crop calendar.

3.2.5 Prices & Markets Division

Prices & Market Division provides necessary market intelligence to the Government and is involved in collection, compilation and dissemination of data/ information on prices - wholesale, retail, farm harvest and international prices of important agricultural commodities. Wholesale prices of 170 selected agricultural commodities from approx. 700 market centers spread across the country and retail prices of 45 food items from 87 market centers are collected and compiled on weekly basis. Thirteen (13) field level Market Intelligence Units (MIUs) reporting to this division play a major role in data collection. Weekly wholesale prices of 102 agricultural commodities from 237 market centers spread across the country (823 quotations) are provided to the Department of Industrial Policy & Promotion (DIPP), Ministry of Commerce & Industry, for preparation of monthly Wholesale Prices Index (WPI). The Division

also maintains data on international prices of 35 agricultural commodities across the world. The Division compiles data on farm harvest prices of 35 principal crops from 30 States / Union Territories. Two annual publications “Agricultural Prices in India” and “Farm Harvest Prices of Principal Crops in India” are brought out every year.

The Agricultural Market Information System (AMIS), an inter-agency platform launched in 2011 by the G20 Ministers of Agriculture, is hosted by Food & Agriculture Organisation of United Nations to enhance food market transparency and policy response for food security. AMIS-FAO prepares Food Balance Sheet, where data on inputs of production, food, feed & seed use, trade as well as wastage of 4 grains (wheat, rice, maize and soya bean) are maintained globally. As per the government directive, Prices & Market Division provides required data to AMIS-FAO at regular intervals.

3.2.6 International Agriculture & Compilation Division

International Agriculture and Compilation (IAC) Division is the nodal Division in the Directorate of Economics & Statistics for providing inputs/comments on international issues relating to agricultural economics and statistics. The Division also carries out the compilation and manuscript preparation works related to the flagship publications of the Department, namely Agricultural Statistics at a Glance, Pocket Book of Agricultural Statistics and State of Indian Agriculture.

Target & Achievement: During 2018-19, IAC Division provided inputs and comments on international issues relating to food security & nutrition, Sustainable Development Goals (SDGs) related to agricultural sector, bilateral and multilateral cooperation for improvement in agricultural statistics, IT applications in agriculture, etc. In addition, the Division

published the latest issues of the Agricultural Statistics at a Glance and Pocket Book of Agricultural Statistics. These publications are also made available on the website www.agricoop.nic.in & <http://eands.dacnet.nic.in>

India Agricultural Outlook Forum: IAC Division organized the second ‘India Agricultural Outlook Forum 2018’ on 10th-11th September, 2018 at NASC Complex, Pusa, New Delhi. The Forum serves as a platform for exchange of national and international agricultural outlook, policy insights and expertise on various agricultural development issues. This year’s event was attended by delegates from USDA, representatives from embassies, senior officials from Ministries/Departments of Government of India and State Governments, experts from national and international Agriculture Research Institutes and Universities, experts from Chambers of Commerce, industry and farmers associations. The multi-stakeholder consultative process of sharing of experiences and best practices is envisaged to play an important role in making effective and informed policy decisions and thereby creating an enabling environment for the farmers to profit and prosper.

3.2.7 Coordination Division

The main work of Coordination Division is to coordinate all issues between DAC&FW and the Divisions concerned in DES. Its main activities include DAC&FW level Coordination for preparing Economic Survey Chapter on Agriculture & Food Management and for routine matters wherein several Divisions of DES and those of DAC&FW are involved, preparation of material for Annual Report, providing information on release and utilization of funds under plan schemes, Parliament Questions etc.

3.2.8 Plan Scheme

The DES implements the Plan Scheme “Integrated Scheme on Agriculture Census,

Economics & Statistics”. This scheme comprises six components of which one component is ‘Agriculture Census’ pertains to Agriculture Census Division of DAC&FW. The remaining five components are being implemented by the Directorate of Economics & Statistics. The details of the five components are as follows:

(I) Comprehensive Scheme for studying the Cost of Cultivation of principal crops in India

The Cost of Cultivation of principal crops in India is being implemented in India since 1970-71 as a Central Sector Plan Scheme. The main objectives of the scheme 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.

The Scheme is implemented through 16 Agricultural/Central Universities/ Colleges and cost of cultivation/production estimates in respect of principal crops are worked out and are transmitted to the CACP so as to enable them to recommend the MSP to the Government of India.

The cost estimates generated under the Schemes are also used for 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. are also using the data for research purposes subject to permission of the DES, Department of Agriculture, Cooperation and Farmers Welfare.

The Scheme is implemented in 20 States namely Andhra Pradesh, Telangana, Haryana, Himachal Pradesh, Jharkhand, Karnataka, Kerala, Madhya Pradesh,

Maharashtra, Orissa, Punjab, Rajasthan, Tamil Nadu, Uttar Pradesh, Uttarakhand and West Bengal. The studies in the States except newly created States of Chhatisgarh, Jharkhand, Uttarakhand and Telengana are undertaken by the parent States Agriculture universities/colleges located in the respective States. As far as the four newly created States are concerned, presently their parent institutions undertake these studies.

(II) Agro-Economic Research (AER) Scheme

The Agro-Economic Research (AER) Scheme is a network of 15 AER Units and Centers which conduct research studies in the field of Agricultural Economy on yearly basis to meet the need of the Government of India, Ministry of Agriculture and Farmers Welfare. The scheme is fully funded by Ministry of Agriculture and Farmers Welfare through grants-in-aid under central sector scheme “Integrated Scheme on Agriculture Census, Economics and Statistics”.

Objective of the AER Scheme

- (i) to conduct investigations into specified agro-economic problems which are of special interest to the Ministry, either at the macro or the micro level.
- (ii) to carry on continuous studies on changes in the rural economy by means of periodic surveys and re-surveys of selected villages representing typical situations.
- (iii) to carry on research work on structural changes and fundamental problems of agricultural economy and rural development of the country.
- (iv) to give technical advice to the Union Government and State Government on such issues as with mutual agreement may be referred to them.

Target & Achievement:

During current year 2018-19, AER Units and Centers have completed 21 studies till date out of the target of 36 studies and 15 studies are near completion. Out of allocation of Rs.2950.00 lakh during the current financial year 2018-19, Rs.1776.17 lakh has been released to AER Units and Centers upto December, 2018.

(III) Planning, Management and Policy Formulation

This 12th Five Year Plan Scheme was formulated by merging two ongoing schemes of 11th Five Year Plan: Planning and Management of Agriculture and Strengthening of Agricultural Statistics; and discontinuing Drought Management Schemes.

Objectives

The Scheme aims at funding activities of DES and DAC&FW for:

- Conferences/workshops and seminars,
- Outsourcing of services of involving eminent economists, agricultural scientists, experts and institutions,
- Engaging consultancy services, and improvement of agricultural statistics methodology; strategy for development of crops, animals, dairy, poultry, irrigation, soil and water conservation etc.
- Publishing paper/reports based on the recommendations of the workshop, seminars, conference, held by the Directorate of Economics & Statistics and DAC&FW.

For the year 2018-19, out of Budget Estimates of Rs. 60.00 lakh under the scheme, Rs.14.34 Lakh has been released during the current financial year 2018-19.

(IV) Improvement of Agricultural Statistics.

The basic objective of the Central Sector Scheme, Improvement of Agricultural Statistics, is to collect and improve agricultural statistics of principal agricultural crops. The Scheme has three components; (i) Timely Reporting Scheme (TRS), (ii) Improvement of Crop Statistics (ICS) and (iii) Establishment of an Agency for Reporting of Agricultural Statistics (EARAS). Since 2007-08, the scheme has been converted to Central Sector Scheme from Centrally Sponsored Scheme with 100 percent funding by the Central Government. The Component-wise details of the scheme are as under:

1. Timely Reporting Scheme (TRS):

The objective of this component is to obtain estimates of area under principal crops in each season, with the breakup of area under irrigated/unirrigated and traditional/high yielding varieties of crops on the basis of random sample of 20% of villages by a specific date. These estimates are used for generating advance estimates of production of principal crops. This component is being implemented in 17 land record States and Union Territories of Delhi and Puducherry.

2. Improvement of Crop Statistics (ICS):

The objective of this component is to improve the quality of statistics on area and production of crops through supervision and monitoring. Under this component, a sample check of area enumeration of 10,000 villages and approximately 30,000 crop cutting experiments at harvest stage are undertaken. These sample checks are equally shared by the Central Agency i.e. National Sample Survey Office; and the State Agricultural Authorities. These checks specifically relate to (a) Enumeration of crop-wise area covered in the selected villages as recorded by the Patwari; (b) Total Area under each crop recorded in

Khasra Register of villages; and (c) Supervision of Crop Cutting Experiments at the harvest stage. The IAS scheme is being implemented in 25 TRS/EARAS states and the Union Territory of Puducherry. The performance of the implementation of this component is also being closely monitored through Quarterly and Seasonal progress Reports.

3. Establishment of an Agency for Reporting of Agricultural Statistics (EARAS): This Component is being implemented in the permanently settled States of Kerala, Orissa and West Bengal and North Eastern States of Nagaland, Sikkim, Arunachal Pradesh and Tripura. Under the component, an agency has been established in these states for generating estimates of area and production of principal crops and land use statistics, on the basis of complete enumeration of 20% villages in each year. The performance of the implementation of the component is being closely monitored through Quarterly and Seasonal progress Reports. For the financial year 2018-19, under Improvement of Agricultural Statistics Scheme, against total allocation of Rs. 120.99 Crores (BE), Rs. 86.13 Crore have been released till 31st December, 2018.

(V) Forecasting Agricultural output using Space, Agro-meteorology and Land based observations (FASAL)

Department of Agriculture, Cooperation and Farmers Welfare (DAC&FW) has been implementing a Central Sector Plan Scheme namely “Forecasting Agricultural output using Space, Agro-meteorology and Land based observations (FASAL)” since Aug., 2006 with Partner Organizations, India Meteorological Department (IMD), New Delhi, Institute of Economic Growth (IEG), New Delhi and Space Application Centre (SAC), Ahmadabad to provide

multiple-in-season forecast based on Agromet, Econometric and Remote Sensing based methodology. Multiple forecast of 11 major crops namely Rice (Kharif & Rabi), Jowar (Kharif & Rabi), Maize, Bajra, Jute, Ragi, Cotton, Sugarcane, Groundnut (Kharif & Rabi), Rapeseed & Mustard and Wheat were envisaged at National/State/District level depending on the status of technology available. However, based on the technology feasibility and the requirement, the 11 crops are changed to Rice (Kharif & Rabi), Jowar(Rabi), Maize (Rabi), Soybean, Jute, Pulses (Rabi), Cotton, Sugarcane and Groundnut(Rabi), Rapeseed & Mustard and Wheat. Presently, the forecasts in respect of 8 crops namely, Wheat, Rice (Kharif and Rabi), Jute, Sugarcane, Cotton, Rapeseed/mustard and Rabi sorghum are being prepared.

3.2.9 Extended Range Forecast System (ERFS)

Department of Agriculture, Cooperation and Farmers Welfare has sponsored a project entitled “Development and Application of Extended Range Forecast System for Climate Risk Management in Agriculture (ERFS)” since 2006 in collaboration with other partner organizations viz. IIT, India Meteorological Department (IMD), National Centre for Medium Range Weather Forecast (NCMRWF), Space Application Centre (SAC) Ahmadabad and Indian Council of Agriculture Research (ICAR).

The project aims at generating extended range deterministic and probabilistic rainfall and temperature forecasts for metrological sub-divisions of India at monthly and seasonal scale and disseminating to the farming community and to advise them about various measures.

The project was completed on 31st October, 2018 and outcome has been transferred to IMD and MNCFC. The weather forecasting of precipitation and air temperature on

monthly and seasonal scale has immense importance in agriculture as it offers extra lead time to farming community for decision making in adverse condition.



Chapter- 4

National Mission on Agricultural Extension & Technology (NMAET)

Agriculture Extension:

4.1 Overview

The Sub Mission on Agricultural Extension (SMAE) under the National Mission on Agricultural Extension and Technology (NMAET) is being implemented during the 12th Plan with an objective to restructure and strengthen 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.

4.2 Major Schemes and Objectives

4.2.1 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 Agriculture Extension (SMAE) under Green Revolution – Krishonnati Yojana. It is now under implementation in **676 districts of 29 States & 2 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 for 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 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, agri-preneurs, input suppliers, corporate sector, etc.
- **Farming System Approach:** The activities specified in the cafeteria are broad enough to promote extension delivery consistent with 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 necessary allocation for activities related to organizing and supporting farmer groups. In order to supplement these efforts, a provision for rewards and incentives to the best organized farmer groups has also been provided.
- **Convergence:** The SREP and SEWP would also be mechanisms for ensuring 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.

4.2.2 Mass Media Support to Agricultural Extension

This Scheme is utilizing countrywide infrastructure and networks of All India Radio and Doordarshan and focusing 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.

4.2.3 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. **MANAGE** is the implementing agency for training component under the Scheme through a network of identified Nodal Training Institutes (NTIs) in various states. **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 Centres through Commercial Banks. The credit linked back-ended subsidy @ 36% of the Total Financial Outlay (TFO) capital cost of the project funded through 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, benefits of MUDRA Scheme loans also are made available to the entrepreneurs establishing agri-ventures under the Scheme.

4.2.4 Kisan Call Centers (KCC):

The KCC Scheme was launched on 21st January 2004 to provide answer to farmers' queries on agriculture and allied sectors through toll free telephone lines. A country wide 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 local languages. KCCs operate from 21 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.

4.2.5 Human Resource Development (HRD) Support

DAC&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 (EETIs) at the regional level and the State Agricultural Management & Extension Training Institutes (SAMETIs) at the State level.

Model Training Courses (MTCs): Model Training Courses of eight days duration on thrust areas of agriculture, and allied sectors

are sponsored by the Directorate of Extension (DOE) with the objective of improving the professional competence and upgrading the knowledge and skills of middle level field functionaries working in agriculture and allied departments of State/UTs Governments.

Diploma in Agricultural Extension Services for Input Dealers (DAESI): DAESI is of one year 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. So far 15505 input dealers have been trained upto December, 2018. It has been decided to implement DAESI programme across the country through SAMETIs with involving Agribusiness Companies, ATMAs, KVKs, Agril. Collages and NGOs.

4.2.6 National Gender Resource Centre in Agriculture (NGRCA)

NGRCA of the DAC&FW is established in Extension Division and is supported under the Scheme of Extension Support to Central Institutes. DOE NGRCA reflects the national commitment for empowerment of women through 'strategy of mainstreaming and agenda setting'. The Centre acts as a focal point for convergence of all gender related activities and issues in agriculture and allied sectors within and outside DAC&FW; addressing gender dimension to agricultural policies and programmes; rendering advocacy/ advisory services to the States/UTs to internalize gender specific interventions for bringing farm women in the mainstream of agricultural development.

Being a Nodal Agency for women in agriculture in DAC&FW, Ministry of Agriculture & Farmers Welfare, the Centre is actively involved in the revision of guidelines of various Beneficiary oriented Schemes/programmes of DAC&FW to ensure allocation of resources and flow of benefits to the women farmers in proportion to their participation in agricultural activities.

4.3 Income/Production and Target Achievement

4.3.1 Support to State Extension Programmes for Extension Reforms Scheme (ATMA SCHEME)

Implementation Status

- Total 676 ATMAs have been constituted in 29 States and 2 UTs.
- Institutional arrangements viz. Inter Departmental Working Group (IDWG)/ in 29 States and 2 UTs, ATMA Core Committees – Governing Board (GB) & ATMA Managing Committee in 676 Districts; Block Technology Team (BTT) in 6022 Blocks & Block Farmer Advisory Committees (BFACs) reconstituted in 5122 Blocks; District FACs have been constituted in 600 districts and State Level FACs in 23 States.
- State Extension Work Plans (SEWPs) of 29 States/ 2 UTs have been prepared and approved based on District Agriculture Action Plans of 676 ATMA districts. An amount of **Rs. 427.58 crore has been released** to the States up to 31st December, 2018 for implementation of the Scheme and total release since the inception of the Scheme in 2005-06 up to 31st December, 2018 has been to the tune of **Rs. 4642.54 crore**.

- Physical performance of the Scheme since its inception in 2005-06 (April 2005 to 31st December, 2018) is as below:

- ✓ Over 49068145 farmers including 11911343 farm women (24.28%) have participated in farmer oriented activities like Exposure Visits, Trainings, Demonstrations, Farm Schools & Kisan Melas.
- ✓ Over 260294 Commodity based Farmer Interest Groups (CIGs)/ FIGs have so far been mobilized under the Scheme.
- ✓ Over 134702 Farm Schools have been organized on the fields of outstanding farmers.
- Progress of implementation during current financial year (up to December, 2018):
 - ✓ 3132082 farmers including 862423 farm women (27.54%) have been reportedly participated in farmer oriented activities like exposure visits, trainings, demonstrations & kisan melas.
 - ✓ 15627 CIGs/ FIGs organized.
 - ✓ 9409 Farm Schools organized.
 - ✓ 15045 specialists & functionaries have been reported as deployed under ATMA upto December, 2018.
 - ✓ 183252 Farmer Friends also identified by the states.

4.3.2 Mass Media Support to Agricultural Extension

Telecast of Krishi Darshan Programmes on Doordarshan: Under this Scheme, a 30

minute programme is being telecast 5 days a week 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) and 03 programmes namely – Krishi Darshan, Hello Kisan and choupal Charcha (5 days a week) on DD Kisan – 24 hour dedicated Channel for agriculture and farming community.

Broadcast of Kisan Vani Programme on All India Radio: Under this component, 96 FM/AM stations of All India Radio are broadcasting 30-minute programme six days a week 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, National Food Security Mission (NFSM), Kisan Credit Card and Agri -Clinic and Agri -Business Centers (ACABC), package of practices available to the farmers under NFSM, and other important flagship programmes like Neem Coated urea, Pradhan Mantri Krishi Sichai Yojana, Crop Insurance Scheme, National Agriculture Market, Soil Health Card, Bee Keeping, National Horticulture Mission (NHM), Parampagat 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 above, the ‘**Focused Publicity & Awareness Campaign**’ cutting across all 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, Cooperation & Farmers Welfare. This campaign has continued in an aesthetic, professional and politically neutral manner. Video Spots and Audio spots are being broadcast/telecast through AIR, DD, Lok Sabha TV and also on 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, Ministry is using various multimedia platforms i.e. railway panels/stations, bus panels, exhibitions through Directorate of Field Publicity, web based digital platforms, hoardings etc. for media campaign on above flagship programmes.

Technical Support to DD Kisan Channel: Recently launched DD Kisan, a 24 hour agriculture based channel is catering to the requirements of the farming community inclusive of research updates, extension advisories, market rates and weather updates and is also utilized extensively under the MMSAE for dissemination of information.

Support to Community Radio Stations (CRS): To promote agriculture extension through mass media at community level, the Ministry of Agriculture & Farmers Welfare is also providing support for 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 on date,

8 CRSs are operational in KVKs and NGOs under this Scheme and are 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.

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 1 Regional Kendra at Guwahati, 6 NC Programme Producing Kendras and 22 HPT/LPT along with 8 FM radio stations. The Regional and NC Kendras are producing programmes as per area based requirement and local dialects.

Financial Provisions:- During the year 2018-19, out of 217.71 crore (RE), an amount of Rs. 206.06 crore has been incurred upto 31.12.2018 under Central Sector Scheme 'Mass Media Support to Agriculture Extension' for Krishi Darshan and Kisan Vani Programmes being implemented through Prasar Bharati including 'Focused Publicity and Awareness Campaign' through Radio/ TV /Print and other outdoor media platforms.

4.3.3 Establishment of the Agri-Clinics and Agri-Business Centres (AC&ABC)

So far, 61,897 candidates have been trained and 26183 agri-ventures have been established in the country during the period of implementation of the Scheme upto December, 2018. During the year 2018-19, starting from April, 2707 candidates have been trained and 433 agri-

ventures have been established upto September, 2018. Out of the ventures established since inception, 2198 has been subsidised as on November, 2018. During the year 2018-19, 200 ventures were subsidized.

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. Online process for training programme has been rolled out on 01-01-2018 through the module www.acabcmis.gov.in. Development of software for complete online process for subsidy is underway. Now benefits of Mudra Loan Scheme have been extended for ACABC Ventures. Provision of extension service to farmers by these agri-preneurs has been made a mandatory component of the Scheme. Details of the Scheme may be seen at www.agriclinics.net.

Pre-Seasonal DAC&FW-ICAR Interfaces

Pre-seasonal DAC&FW-ICAR Interfaces (Subject Matter Group Meetings between ICAR and Subject Matter Divisions of DAC&FW) are organized to evolve joint strategies on the emerging issues of agriculture and allied sector. The recommended action by these group meetings are further discussed during an interface meeting with active participation of officers from DAC&FW, ICAR and Department of Animal Husbandry Dairying and Fisheries (AHD&F). The Pre-Kharif 2017 DAC&FW-ICAR Interface was organized during March, 2017 and the group recommendations of the said interface were shared with senior officer of State Agriculture Department during National Conference on Agriculture for Kharif Campaign held during April, 2017. Pre-Kharif 2018 Interface was held on 27th March, 2018 and the giving recommendations were showed to all stake holders. The Pre-Rabi 2018 DAC&FW Interface was organized in the month of September, 2018

and the group recommendations were shared with all States/UTs.

4.3.4 Kisan Call Centers (KCC):

Since inception of the Scheme till December, 2018 over **400.49 lakh** calls have been registered in the KCCs. During the current year around **37.28 lakh** calls have been received upto December, 2018. In order 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 private television 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 concerned Block Level Officer for replying the query through KKMS interface within the given time frame FTA, it is escalated to concerned Block Level Officer for replying the query through KKMS interface within the given time frame.

The restructured Kisan Call Centre programme has many good number of unique features viz. all in one PCs; 100% call recording; call barging; voice mail service; customized IVRS; call conferencing through the experts; 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 for receiving SMSs from experts on the subject area. With these modernized facilities at each KCC location, there has been encouraging response from farmers.

4.3.5 HR Support

National Institute for Agricultural Extension Management (MANAGE):

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 167 training courses planned for 2017-18, 222 training courses have been organized by **MANAGE** up to March, 2018. Against the budget estimate of Rs.1440.00 lakh, entire amount of **Rs.1440.00 lakh has been released** till 31st December, 2018. 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 2018-19.

Extension Education Institutes (EIs):

Four Extension Education Institutes namely, Nilokeri (Haryana), Hyderabad (Telangana), Anand (Gujarat), Jorhat (Assam) are functioning at the Regional Level. The objectives of EIs 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 2018-19, a total of 190 training programmes have been planned, out of which the EIs have conducted 142 training programmes with 3266 participants upto December, 2018. Against the budget grant of

Rs. 1555.00 lakh an amount of Rs. 1400.00 lakh has been released to the EEIs upto December, 2018.

EEl set up at Jorhat (Assam) in 1987 has been providing training support at the regional level to the middle level field functionaries in 8 States of North Eastern Region and West Bengal. During the year 2018-19 (till December, 2018), 21 courses have been organized with 483 participants. An amount of Rs. 230.00 lakh has been released to EEI, Jorhat till December, 2018 as against the budget estimate of Rs. 265.00 lakh during 2018-19.

Model Training Courses (MTCs): During 2018-19, 70 Model Training Courses have been planned, out of which 46 training courses have been organized with 923 participants upto December, 2018. Against the budget grant of Rs. 185.00 lakh, an amount of Rs. 125.00 lakh has been released upto December, 2018.

Diploma in Agricultural Extension Services for Input Dealers (DAESI): So far 15505 input dealers have been trained upto December, 2018. It has been decided to implement DAESI programme across the country through SAMETIs with involving Agribusiness Companies, ATMAAs, KVKs, Agril. Collages and NGOs. During the current year 2018-19, as against the target of 250 programmes, 68 programmes have been started upto December, 2018 with 5920 participants.

4.3.6 National Gender Resource Centre in Agriculture (NGRCA)

The Macro/Micro level and Action Research Studies initiated by the Centre include-

- Study on “Kisan Credit Card & Issues Related to Credit Availability to

Women: Role of Financial Institutions in Empowering Women Farmers”.

- “Gender Based Impact Analysis of ATMA Programme.”

The Publications brought out by NGRCA are:

- “Success Stories of Women Farmers (English & Hindi)” and
- “Farm women Friendly Handbook (English & Hindi)”.
- Compendium on Woman Agri-preneurs (under Process)

The Centre has also developed a Collaborative Project with ICAR–CIPHET, Ludhiana for empowerment of women in agriculture & allied sectors and enhancing their incomes. The project is likely to be considered for funding under RKVY in 2019-20.

The Centre has Celebrated Mahila Kisan Diwas, 2018 on October 14-15, 2018 in a big way by-

- (i) Mobilizing participation of various stake holders viz. women farmers, women entrepreneurs, Academia, Researchers/Scientists, Farmer Organizations, Representatives from Banking Sector, Industry, NGO etc. who are involved in the process of women’s empowerment and emancipation through agriculture and allied sectors.
- (ii) Steering Group discussion on key thematic areas impinging lives of women farmers. These include-
 - a. Issues, Constraints and strategies for Farm Women in Agriculture;
 - b. Issues, Constraints and strategies for Farm Women in Animal Husbandry, Dairying, Fisheries and other off-farm activities; &

- c. Farm Women's access to institutional credit and micro-financing and building agri-enterprises
- (iii) Laying of an Exhibition by Institutions, Agripreneurs and progressive women farmers on innovative technology and farm practices.
- (iv) Felicitation and honouring of 45 Progressive Women Farmers from across the country for their exemplary work in Agriculture and allied sectors based on their nominations by respective State Governments/ MANAGE.
- (v) Two Books titled "Success Stories of Women Farmers (English & Hindi)" and "Farm women Friendly Handbook (English & Hindi)" were released.
- (vi) About, 400 stakeholders, including women from across the country participated in this event.

4.4 Programmes of North-Eastern States

The status of implementation of Schemes in the North Eastern Region is as follows:

Support to State Extension Programme for Extension Reforms

S.No.	Name of the State	No. of ATMA Registered
1.	Arunachal Pradesh	21
2.	Assam	26
3.	Manipur	9
4.	Mizoram	8
5.	Meghalaya	11
6.	Nagaland	11
7.	Sikkim	4
8.	Tripura	8
Total:		98

During the current financial year 2018-19, Budget estimate of Rs. 6300 lakh was earmarked for North Eastern States for implementing the Scheme whereas, an amount of (Rs. 3439.42 lakh) has been released to North Eastern States - Arunachal Pradesh (Rs. 557.44 lakh), Manipur (Rs. 473.90 lakh), Meghalaya (Rs. 243.85 lakh), Mizoram (Rs. 206.95 lakh), Nagaland (Rs.1327.65 lakh), Tripura (Rs.472.94 lakh) and Sikkim (Rs. 156.69 lakh) till December, 2018.

4.5 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 since the inception is given below:

S. No.	State	Candidates Trained	Ventures Established
		Since Inception	Since Inception
1.	Arunachal Pradesh	35	03
2.	Assam	735	227
3.	Manipur	439	128
4.	Meghalaya	35	03
5.	Mizoram	34	00
6.	Nagaland	184	21
7.	Sikkim	09	01
8.	Tripura	04	01
Total		1475	384

4.6 Kisan Call Centers (KCCs): The KCC located at Guwahati caters to the needs of the North Eastern Region except Sikkim which 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, 2018 are, Arunachal Pradesh (10427), Assam (306212), Manipur (32346), Meghalaya (16724), Mizoram (7905), Nagaland (3489), Sikkim (13615) and Tripura (46259). The calls registered from these states during current year up to December, 2018 are Arunachal Pradesh (733), Assam (19404), Manipur (1092), Meghalaya (421), Mizoram (71), Nagaland (84), Sikkim (1388) & Tripura (2087).

4.7 Extension Education Institute (EEI):

EEI set up at Jorhat (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. During the year 2018-19, 21 courses have been organized with 483 participants trained. An amount Rs. 230.00 lakhs has been released to EEI Jorhat upto December, 2018.

IT Division

4.8 Overview

Department 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 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 areas, different ICT strategies have been devised.

4.9 Major Schemes and Objectives

(i) National e-Governance Plan– Agriculture (Centrally Sponsored Scheme) (NeGPA):

Department is implementing National e-Governance Plan – Agriculture (NeGP-A).

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 proper time causes loss to farmers. NeGP-A 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 extended in 2nd Phase to cover all the States and 7 UTs from 2014-15. NeGP-A aims to achieve rapid development in India through use of Information & Communication Technology (ICT) for timely access to agriculture related information for the farmers. In the current financial year (as on 14-03-2019), an amount of Rs. 22.53 crore have been released to the States under the scheme.

(ii) National e-Governance Plan – Agriculture (Central Sector Scheme) erstwhile AGRISNET(Strengthening/Promoting Agricultural Information System):

This is the scheme for strengthening of IT infrastructure of the Department and its offices. Under the scheme, the payments are made to Centre for Development of Advance Computing (C-DAC) for sending SMSs to registered farmers on m-kisan portal. As on date, more than 5.15 crore farmers are registered on m-kisan portal i.e. mkisan.gov.in for receiving agro advisories.

4.10 Targets & Achievements and Success Stories:

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. Department has developed a portal - mkisan(mkisan.gov.in), where more than **5.13 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.

Weather information about likelihood of rainfall, temperature, etc. enables farmers to make informed decision in choice of seed varieties, decide on timing of sowing and harvesting. With market information, farmers are better informed about markets 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 right time. This helps reducing distress sales by farmers due to market supply fluctuations. Around 2326 crore SMSs have been sent through mkisan since its inception in 2013.

The screenshot displays the mKisan website interface. At the top, there is a navigation bar with icons for Pull SMS, IVRS, Push SMS, Ksewa, KCC, Buyer Seller, Mobile Apps, and Reach Us. Below this, a search bar is visible. The main content area features a statistics section with the following data:

Since 25th May 2013	To See this site in languages other than English & Hindi, Use this	Select Language
No. of SMSs	No. of Farmers	Advisory Count
23, 26, 35, 55, 059	4, 91, 83, 433	4, 14, 081

Below the statistics, there is a section titled "LIVE MESSAGES" with text in Hindi and English. The English text reads: "Unleashing the power of mobile in the hands of farmers to get information/advisories as per his or her preferences in the form of text/voice messages and getting access to numerous databases even without internet!". The messages list two entries from Mr. BAHORI LAL KUREEL, Project Director (General) at Sagar, PANNA, MADHYAPRADESH, regarding SMS for 15468 and 15489 farmers.

On the right side, there is a "Login Interface" with fields for "USER NAME" (Email or Mobile) and "PASSWORD", a "6+1" security image, and a "SUBMIT" button. There is also a "Forgot Password" link and a "User Manual" link.

At the bottom, there are social media links for RSS and Twitter, and logos for AGRICULTURE, NFSM, and ICAR.

4.11 Farmers' Portal (www.farmer.gov.in):

Farmers' Portal is a one stop shop for farmers where a farmer can get relevant information on range of topics including seeds, fertilizer, pesticides, credit, good practices, dealer network, availability of inputs, agromet advisory, animal husbandry etc. This information can be drilled

down through the pictorial view of Map of India placed on the Home page as well.

While over 800 websites of various departments and organisations related to Agriculture & allied sectors in the Central and State Governments and 80 applications/portals of the Department

pertained to agriculture & allied sectors from organisational and schematic view-point, not even one portal existed for the farmers and that was the genesis of the Farmers' Portal.

This centralized repository is the back bone of all mobile apps and SMS advisories. This portal

provides information across all stages of crop management right from sowing of seeds till post harvesting. The beauty of this web based portal is that one can shift down to the block level and get the information of particular block.



4.12 Development of Mobile Apps:

Spreading agricultural 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 extension services which can address food security issues. Various mobile apps have been developed for farmers. Some of them are listed below:

4.12.1 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, cold storage & godowns, crop insurance, veterinary centres and diagnostics labs. 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 commodity in nearest area and the maximum price in state as well as India have been added to empower farmers in the best possible manner. With click of a button, farmers can get all this information in hand provided they have a smart phone and decent internet connectivity. Total downloads: **9,85,203**



4.12.2 Pusa Krishi: This Mobile App “PUSA KRISHI” has been developed to realize the dream “LAB to LAND” of our Prime Minister. Indian Agriculture Research Institute, PUSA has developed many high yielding varieties of Agriculture, Horticulture crops and other path breaking technologies in the fields of Natural Resources management, Integrated Nutrient management, Plant protection, Soil and water management, mechanization, diagnostic technologies etc. This app will help farmers to get information about technologies developed by IARI, which will eventually help in increasing returns to farmers. This mobile app is also intended towards Agri. Start-ups, industry partners to whom these technologies will be transferred for further taking it to the farmers. Total downloads: **40,467**.



4.13 Other Miscellaneous:

DBT implementation in Schemes of the Department

- 15 schemes of the Department identified for DBT implementation
- 14 schemes are already on-boarded (linked with Centralised DBT portal of DBT Bharat Mission).
- Management Information System of these schemes linked with Central Agriculture portal (dbtdacfw.gov.in).

DBT On boarded Schemes

1	Agri Clinics and Agri Business Centres (ACABC) Scheme
2	Sub Mission on Agriculture Mechanization (Two component – One Central Sector and other Centrally Sponsored)
3	Pradhan Mantri Krishi Sinchai Yojana
4	Mission for Integrated Development of Horticulture
5	Support to States for Extension Reforms ATMA Scheme (two components – one for Farmers and other for Functionaries)
6	Sub-Mission on Seeds and Planting Material
7	Crop Insurance Schemes
8	National Mission on Oilseeds & Oil Palm (NMOOP)
9	Integrated Scheme on Agriculture Cooperation
10	National Food security Mission (NFSM)
11	KrishiUnnatiYojana (KUY)-MOVCDNER
12	NMSA-Rainfed Area Development
13	Interest Subsidy for Short term Credit to farmers

SEEDS Division:

4.14 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 could be made available in time to farmers in the country. The functions/ responsibilities includes :-

- 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 – a subordinate office.
- Matters relating to International Rice Research Institute (IRRI) South Asia Regional Centre (ISARC), Varanasi, Uttar Pradesh.

4.15 Major Schemes and Objectives

(i) Sub-Mission on Seed and Planting Material (SMSP):- “Sub Mission on Seed and

Planting Material (SMSP)” under Centrally Sponsored Scheme “National Mission on Agricultural Extension and Technology (NMAET)” is under implementation with the objective to develop/strengthen seed sector and to enhance production and multiplication of high yielding certified/ quality seeds of all agricultural crops and making it available to the 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 SMSP scheme are as under:

S. No.	Intervention
i.	Strengthening for Seed Quality Control
ii.	Strengthening of Grow Out Test(GOT) Facilities
iii.	Support to Seed Certification Agencies
iv.	Seed Village programme
v.	Certified seed production of oilseeds, pulses , fodder and green manure crops through seed villages
vi.	Seed Processing Facilities
vii.	Seed Storage Facilities
viii.	Transport Subsidy on Movement of seeds to NE States etc
ix.	National Seed Reserve
x.	Application of Bio-technology in Agriculture
xi.	Public Private Partnership in Seed Sector
xii.	Assistance for Boosting Seed Production in Private Sector
xiii.	Support to Sub-Mission Director and Survey / Studies
xiv.	PPV&FRA

(ii) Production of Breeder, Foundation and Certified/Quality Seeds: Seeds are the basic and critical input for agricultural production.

The Indian Seeds programme recognizes three generations of seeds, namely, breeder, foundation and certified seeds. The details of production of breeder and foundation seeds as well as production of certified seeds from 2005-06 to 2017-18 are shown in the following table:-

YEAR	Production/Availability of Seed (Metric Tonnes)		
	Breeder Seed (Production)	Foundation Seed	Certified/ Quality Seed
2005-06	6823	74800	1405000
2006-07	7382	79654	1481800
2007-08	9196	85254	1943100
2008-09	9441	96274	2503500
2009-10	10683	114638	2797200
2010-11	11921	180640	3213592
2011-12	12338	222681	3536200
2012-13	11020	161700	3285800
2013-14	8229	174307	3473130
2014-15	8621	157616	3517664
2015-16	9036	149542	3435248
2016-17	11071.44	220907	3802904
2017-18	10508.59	195415	4194111
2018-19	99671.53 (Tentative)	180096	3988899

(iii) Strengthening of Seeds Quality Control Organizations (State Seed Certification Agencies and State Seed Testing Laboratories): - The responsibility of execution of seed law enforcement is vested with the State Governments. Seed Inspectors, notified under the relevant provisions of the Seeds Act, 1966 and the Seeds (Control) Order, 1983, inspect the premises of seed distribution agencies to draw samples for testing. Appropriate action is taken against sellers of sub-standard seeds as per the provisions of the Seeds Act/ Rules and Seed (Control) Orders. These Inspectors are also authorized to stop the sale of sub-standard seeds and to seize

their 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.

(iv) Policy on Export/Import of Seeds and Planting Materials: - The export/ import of seeds have increased with rationalization and simplification of the export/import regime. This has benefited Indian farmers, the seed industry and entrepreneurs. 136 cases were recommended for issue of export and 84 cases were recommended for import during the year 2017-18. During the year 2018-19 (upto November, 2018) 82 cases of export and 52 cases of import have been recommended to make available the best seed and planting to the farmers.

(v) Use of Bt. Cotton Hybrid Seeds: - Bt. Cotton is the only transgenic crop approved in the country for commercial cultivation. The Genetic Engineering Appraisal Committee (GEAC) of the Ministry of Environment, Forests and Climate Change is the nodal agency for grant of permission for environmental release of Bt. Cotton hybrids under the Environment Protection Act, 1986 in the country. At present, about 1400 Bt. Cotton hybrid seeds are available for cultivation in the country. These Bt. Cotton hybrids are grown in ten (10) States i.e., Gujarat, Madhya Pradesh, Maharashtra, Andhra Pradesh, Telangana, Karnataka, Tamil Nadu, Haryana, Punjab and Rajasthan. The area under Bt. Cotton has increased from 29073 ha in Kharif 2002 to 110.76 lakh ha. in 2017-18.

The Department has issued Cotton Seed Price Control Order, 2015 under Section 3 of the Essential Commodities Act, 1955 for regulating the maximum sale price (MSP) of Bt cotton hybrid seeds. For 2017, Department has notified the MSP of Bt. Cotton (vide SO

No. 802 (E) dated 10th March, 2017) at Rs. 635/- per 450 grams of Bt. Cotton seed plus 120 grams of refugia of BG-I version and Rs. 800/- for BG-II version of Bt. Cotton Hybrid. For 2018, the price of Bt. Cotton was fixed to Rs. 635/- for BG-I version and reduced from Rs. 800/- to Rs. 740/- for BG-II version of Bt. Cotton seeds for per packet of 450 grams.

(vi) National Seed Reserve: - The Establishment & Maintenance of Seed Bank Programme has been re-structured as National Seed Reserve for implementation during 12th Plan. The basic objectives of the scheme are to meet the requirement of seeds of short and medium duration crops varieties to farmers during natural calamities and unforeseen conditions. The National Seed Reserve (NSR) programme is implemented by about 22 implementing agencies in the country namely NSC, State

Seeds Corporations and State Department of Agriculture of Tamil Nadu, Himachal Pradesh, Jammu & Kashmir and Jharkhand. Under the programme, one time financial assistance for procurement of seeds called Revolving fund and cost of material handling equipment is provided to the implementing agency. Assistance is also provided for maintenance of certified and foundation seeds of identified crops, construction of seed godown, establishment of seed processing plant, Cost of Material handling equipment, Cost of service out sourced and computerization & networking facilities, besides price differential cost for left over stock of seeds as per norms of the scheme. The quantity of certified and foundation seeds maintained under NSR and amount released to the participating agencies during 2015-16 to 2018-19 are as under:-

Year	Targets of Physical quantity (in lakh quintals)	Physical Achievement (in lakh quintals)	Amount released to implementing agencies
2015-16	3.65	2.76	21.24
2016-17	3.65	2.77	19.12
2017-18	3.66	3.66	26.78
2018-19	3.72	1.46*	9.49*

* only kharif 2018

(vii) SAARC Seed Bank : India signed the Agreement on establishment and maintenance of SAARC Regional Seed Bank in November, 2011 at the XVII SAARC summit held at Maldives in 2011 with the objective to provide regional support to national seed security efforts; address regional seed shortage through collective actions and foster inter-country partnerships, to promote increase of Seed Replacement Rate (SRR) with appropriate varieties at a faster rate as far as possible so that the use of quality seed for crop production

can be ensured; and to act as a regional seed security reserve for the Member States.

Accordingly, National Seeds Corporation Limited (NSC), New Delhi has been declared as National Designated Agency to coordinate for establishment and maintenance of SAARC Regional Seed Bank in India. The National Designated Agency (NDA) would be entrusted the task of establishing SAARC Seed Bank as per provisions contained in the agreement. It will work as the National Focal Point also.

National Seeds Corporation Limited, State Seeds Corporations and State Department of Agriculture are declared as implementing agency to establishment and maintenance of the SAARC Regional Seed Bank in the Country.

In addition, Government of India constituted a National Technical Committee to coordinate all related activities i.e working out modalities, technicalities of participation to the SAARC Regional Seed Bank in the Country.

(viii) Seed Village Programme: - In order to upgrade the quality of farmer saved seeds which is about 60-65% of the total seeds used for crop production programme, following interventions are made:

- (a) 50% assistance for the seeds for 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 per farmer.
- (b) Farmers' Trainings : Financial assistance of Rs.15000 per group (50-150 farmers each group) is provided for farmers training on seed production and post harvest seed technology (Rs.0.15 lakh)
- (c) Seed treating/dressing drums: Financial assistance for treating seeds produced in the Seed Village is available @ 3500 per seed treating drum of 20Kg capacity and Rs. 5000 per drum of 40Kg capacity.
- (d) Seed Storage bins: To encourage farmers to develop storage capacity of appropriate quality, financial assistance is available to farmers for purchasing Seed Storage bins. The rate of assistance is as under: @33% for SC/ST farmers for 10 qtls. capacity upto maximum of Rs.1500 @33% for SC/ST farmers for 20 qtls. capacity upto maximum of Rs.3000 @25% for General farmers for 10 qtls.

capacity upto maximum of Rs.1000 @25% for General farmers for 20 qtls. capacity upto maximum of Rs.2000 Assistance for purchase of only one seed bin for each identified farmer is available in the Seed Village Programme. The implementing agency may also distribute smaller size of seed bins as per demand of farmer and financial assistance is reduced accordingly

The year-wise physical progress of the programme since 2009-10 are as under : -

Year	Number of Seed Village Organized	Quantity of Seed Produced (In Lakh Quintals)
2009-10	69,127	79.564
2010-11	1,01,067	161.553
2011-12	89,244	199.28
2012-13	78,943	116.708
2013-14	68455	145.14
2014-15	48004	193.71
2015-16	29249	91.82
2016-17	22891	58.52
2017-18	6741	17.60
2018-19* (as on 5.12.2018)	40048	58.09

* The progress from most implementing agencies is yet to be received after crop harvest.

(ix) Boosting Seed Production in Private Sector: - Under this component of the Credit linked back ended subsidy @40% of the capital cost of the project in general areas and 50% in case of hilly and scheduled areas subject to an upper limit of Rs 150 lakhs per project is funded. Two percent (2%) of the total fund utilized under the component will be allowed as administrative charges to the Nodal agency. So far, 605 such projects have been sanctioned for the small entrepreneurs in 17 States with 143.11 lakh qtls. seed

processing capacity and storage capacity of 51.27 lakh qtls as on 31.10.2018.

(x) Programme being implemented in the North-Eastern States: - Details of the programmes being implemented in the NE region is at **Annexure 4.1**

4.16 Modifications in New Policy on Seed Development: - The National Seed Policy, 2002 provides that all imports of seeds and planting materials, etc. will be allowed freely subject to EXIM Policy Guidelines and the requirements of the Plants, Fruits and Seeds (Regulation of import into India) Order, 1989 as amended from time to time. Import of parental lines of newly developed varieties will also be encouraged. The Policy also provides that seed and planting materials imported for sale into the country will have to meet minimum seed standards of seed health, germination, genetic and physical purity as prescribed. All importers will make available a small sample of the imported seed to the Gene Bank maintained by National Bureau of Plant Genetic Resources (NBPGR). In order to harmonize New Policy on Seed Development, 1988 with the National Seed Policy, 2002, following two modifications have been made in the New Policy on Seed Development, 1988:

(i) Seeds of wheat and paddy – In order to provide to the Indian farmer the best planting material available in the world to increase productivity, the import of seeds of wheat and paddy may also be allowed as per provisions of the Plant Quarantine Order, 2003 as amended from time to time for a period not exceeding two years by companies, which have technical/financial collaboration agreement for production of seeds with companies abroad, provided the

foreign supplier agrees to supply parent line seeds/nucleus or breeder seeds/technology to the Indian company within a period of two years from the date of import of the first commercial consignment after its import has been recommended by DAC. For trial and evaluation of the variety sought to be imported by eligible importers, 16 kg. seed in case of wheat and 5 kg. in case of paddy will be given to ICAR or farms accredited by ICAR for sowing. After receipt of the satisfactory results of trial/evaluation, an eligible importer may apply for the bulk import of such seeds to the DAC.

(ii) Similar procedure of trial/evaluation has been recommended for import of the seeds of coarse cereals, pulses and oil seeds.

Further, Seeds Division has simplified the forms for export and import of seeds and planting materials.

Implementation of OECD Seed Schemes in India

4.17 The objective of the Organization for Economic Co-operation and Development (OECD) Seed Schemes is to encourage use of seeds of consistently high quality in participating countries. The scheme authorizes the use of labels and certificates for seed produced and processed for international trade according to OECD guidelines. The scheme also facilitates the import and export of seed, by the removal of technical trade barrier through international recognize labels. India's participation in OECD schemes aims to enhance seed export capabilities and probabilities.

4.18 The Department has become a member of OECD Seed Scheme from 23rd October, 2008 and 249 varieties in 20 crops have been enlisted

in OECD list of varieties till now. International workshop on OECD Seed Certification had been organized by Telangana State Seed & Organic Certification Authority (TSSOCA), Hyderabad to accelerate the seed export through OECD seed scheme. National Task Force on OECD Scheme has also constituted to enhance India's share of seed export through this scheme.

4.19 Gender Perspective in the Implementation of SMSP: There is no separate allocation of funds under the various components/ schemes of Seeds Division for women farmers. Implementing agencies/ States have been requested to allocate adequate funds for participation of women farmers in Seed Village Programme.

4.20 Organisations under Seed Division

(i) Protection of Plant Varieties and Farmers' Rights Authority

Implementation of Protection of Plant Varieties and Farmers' Rights

Legislation for Protection of Plant Varieties and Farmers' Rights was enacted in year 2001. The legislation provides for the establishment of an effective system for protection of plant varieties, the rights of farmers' and plant breeders and to encourage the development of new varieties of plants. Funds are released to Protection of Plant Varieties and Farmers' Rights Authority (PPV&FRA) to provide necessary back-up support for implementation of this legislation.

Achievements

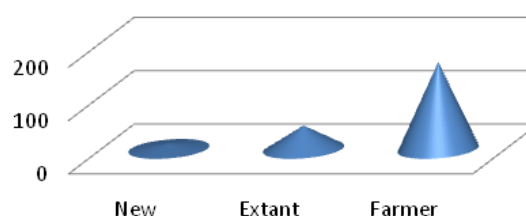
(a) During 2018-19, the Authority received 551 applications representing 63 genera/species belonging to 41 New, 50 extant and 460 farmer's categories. The highest number of application were received for 229 cereals,

followed by 86 legumes, 35 cucurbits, 71 oilseeds, 09 fruits, 49 vegetables, 48 spices, 03 medicinal & aromatic, 17 flowers, 3 fiber crops and 1 Sugar crops. The applications were also received during this year seeking registration of plant varieties belonged to 11 different plant families.

(b) Strong linkages have been developed with seed industry and, as of now, 26 stakeholder including 16 private companies, have submitted applications for registration with the Authority. The Authority issued 74 certificate of registration for 8 crop species. The highest number of certificates were issued in Rice (48), followed by Maize (9), Brinjal (3), coriander (1), Bread Wheat (8), Black Pepper (3), Tomato (1) and Small cardamom (1).

(c) Out of 74 certificates of registration issued during 2018, 6 belonged to New category, 3 to Extant Notified, 9 to Extant VCK, and 56 to Farmers' category.

Figure-3.1 : Category-wise certificate issued



(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 and 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 premiere 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. As per National programme to maintain uniformity in seed testing, during 2018-19 (till December, 2018) NSRTC has received 16650 nos. of seed samples under 5% re-testing programme, 48 nos. of Court referred seed samples and 9 nos. of seed samples under PT programme from ISTA, Switzerland.

During 2018-19 (till 15th January, 2019) NSRTC has organized 08 National Training Programme on various seed related issues for the benefit of various stakeholders of Govt., Public and Private Sector etc.

(iii) International Rice Research Institute (IRRI), South Asia Regional Center (ISARC): Union Cabinet in its meeting held on 12.07.2017 had approved the proposal for ISARC at National Seed Research and Training Center (NSRTC) Campus, Varanasi, Uttar Pradesh. Memorandum of Agreement has been signed by Secretary (DAC&FW) and Director General, IRRI, Philippines on 2nd August, 2017. Gazette Notification has been issued on 3rd October, 2017 by the Ministry of External Affairs to accord immunities

and privileges to IRRI and its offices and activities in India including ISARC as per United Nations (Privileges and Immunities) Act, 1947. ISARC has started functioning.

(iv) National Seeds Corporation: National Seeds Corporation Limited is a Schedule-B Central Public Enterprise under the Administrative Control of the Department of Agriculture, Cooperation and Farmers Welfare. It enjoys “Mini Ratna” (Category-I) status. The performance of NSC during 2016-17 is as under:-

During 2017-18 NSC has produced/procured approximately 15.60 lakhs quintal Seeds. NSC is undertaking Seed Production of more than 600 varieties/hybrids/lines including parental lines of about 60 crops consisting of Cereals, Millets, Oilseeds, Pulses, Fodder, Fibers, Green Manure, Potato and wide range of Vegetable crops. During the financial year 2017-18 NSC has distributed 11.66 Lakh qtls of seed in the country. NSC earned Profit after Tax (PAT) of Rs. 24.98 crores during 2017-18. NSC paid dividend @ 30% on Profit after Tax amounting to Rs. 9.03 crores (including Dividend Tax) during 2017-18 on the PAT for the financial Year 2016-17. During the current financial year 2018-19 NSC has distributed 12.90 lakhs quintals of seed upto November, 2018. Upto 31.12.2018 total likely sowing area at the farms 14,300 hectares has been completed and sales will be 14.95 lakh quintal.



National training on Seed Certification, Quality Regulation and Law Enforcement (December 10th-14th, 2018) organised by NSRTC



FTF-ITT program on Seed Production, Processing and Commercialization (Feb. 12-26, 2019) organised by NSRTC



Krishak Kalyan Karyashala (01.09.2018) organised by NSRTC



National training on Advancement in Seed Testing (November 12th-16th, 2018) organised by NSRTC



Pivot Irrigation System in the Field



Seed coating Machine in operation at CSF, Raichur



Combines in operation



Fisheries Production Unit at CSF, Suratgarh



Fisheries production Unit- activities being seen by the Officers of the Corporation.



Mobile Van distributing NSC's Seed among the Farmers in far flung areas in Kolkata region







International Workshop on “DUS testing in potato” Organized on 11th-12th June, 2018 under Indo German Bilateral Programme at CPRI, Shimla.





Indo-German International Workshop on DNA Based System and Techniques for Consolidate DUS organized on 20-21 November, 2018 at NASC Complex, New Delhi

Sub Mission on Agricultural Mechanization (SMAM)

4.21 Overview

4.21.1 Agriculture Mechanization is an essential input to modern agriculture to increase the productivity and for making judicious use of other inputs like seeds, fertilizers, chemicals & pesticides and natural resources like water, soil nutrients etc. besides reducing the human drudgery and cost of cultivation. Agriculture Mechanization also helps in improving safety and comfort of the agricultural worker, improvements in the quality and value addition of the farm produce and also enabling the farmers to take second and subsequent crops making Indian agriculture more attractive and profitable. It also helps the Indian farming to become commercial instead of subsistence. There is a linear relationship between availability of farm power and farm yield. Therefore, there is a need to

increase the availability of farm power from 1.841 kW per ha (2012-13) to 4.0 kW per ha by the end of 2030 to cope up with increasing demand of food grains.

4.21.2 This will call for greater engineering inputs which will require developments and introduction of high capacity, precision, reliable and energy efficient equipment. Looking at the pattern of land holding in India, it may be noted that about 84 % of the holdings are below 1 ha. There is a need for special efforts in farm mechanization for these categories of farmers to enhance production and productivity of agriculture. In the existing scenario of land fragmentation and resulting continued shrinkage of average size of operational holdings, percentage of marginal, small and semi-medium operational holdings is likely to increase. Such small holding makes individual ownership of agricultural machinery uneconomic and operationally unviable. 'Custom Hiring

Centers of Agricultural Machineries' operated by Cooperative Societies, Self Help Groups and private/rural entrepreneur are the best alternative in enabling easy availability of farm machineries to the farmers and bringing about improvement of farm productivity for the benefits of Small & Marginal farmers.

4.21.3 Department of Agriculture, Cooperation & Farmers Welfare has integrated the components of agricultural mechanization under various schemes and programmes aiming at catalyzing an accelerated but inclusive growth of agricultural mechanization in India. The precise interventions with a special emphasis on 'reaching the unreached' will bring small and marginal farmers' at the core. With this aim Sub Mission on Agricultural Mechanization (SMAM) has been introduced during 12th plan w.e.f April 2014.

4.22 Objectives of SMAM

- (i) Increasing the reach of farm mechanization to small and marginal farmers and to the regions where availability of farm power is low;
- (ii) Promoting 'Custom Hiring Centres' to offset the adverse economies of scale arising due to small landholding and high cost of individual ownership;
- (iii) Creating hubs for hi-tech & high value farm equipments;
- (iv) Creating awareness among stakeholders through demonstration and capacity building activities;

Ensuring performance testing and certification at designated testing centers located all over the country.

4.23 Financial Assistance in SMAM under its various components: The financial assistance as cost subsidy to the tune of 40-50% is being provided for the individual ownership of the farm machinery which is also applicable for farm

machinery component under RKVY, NFSM, NHM & NMOOP schemes for different categories of Machinery & Equipment. The financial assistance @40% is provided for establishment of farm machinery banks to provide the custom hiring services for the benefits of small and marginal farmers. For installing solar photovoltaic water pumping system, financial assistance as per NRME norms is provided. To promote the mechanization in selected village with low level of farm mechanization, financial assistance @80% of the project cost for farm machinery banks is given to the group of minimum 8 farmers. Hiring assistance for various farm operations carried out through the farm machinery banks set up under financial assistance is also provided @ 50% of the cost of operation/ha limited to Rs. 2000 per ha. to farmers.

4.24 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. This is evident from the sale of tractors and power tillers, taken as indicator of the adoption of the mechanized means of farming, during the last five years is given below

Year Wise Sale of Tractors and Power tillers

Year	Tractor Sales (Nos.)	Power tiller Sale (Nos.)
2011-12	5,35,210	60,000
2012-13	5,90,672	47,000
2013-14	6,96,828	56,000
2014-15	5,51,463	46,000
2015-16	6,26,839	48,882
2016-17	5,80,000	45,200
2017-18	7,96,873	51,680

4.25 Average farm power availability for the cultivated areas of the country has been increased from 0.48 kW/ha in 1975-76 to 1.84 kW/ha in 2012-13 and crossed 2.02 kW/ha by 2017-18.

4.26 Achievements:

4.26.1 Training of Farmers & Technicians:

The Farm Machinery Training & Testing Institutes (FMTTIs) located at Budni (Madhya Pradesh), Hissar (Haryana), Garladinne (Andhra Pradesh), and Biswanath Chariali (Assam), as per details given below are imparting training

to different categories of beneficiaries like farmers, technicians, under graduate engineers, entrepreneurs and the foreign nationals nominated under international exchange treaty on selection, operation, maintenance, energy conservation and management of agricultural equipments.

1.	Central Farm Machinery Training & Testing Institute, Tractor Nagar, P.O. Budni -466455, Distt. Sehore (MP)	E-Mail : fmti-mp@nic.in Website: http://fmttibudni.gov.in/
	Phone : 07564-234729	
2.	Northern Region Farm Machinery Training & Testing Institute, Sirsa Road, Hisar (Haryana)-125001	E-Mail : fmti-nr@nic.in Website: http://nrfmtti.gov.in/
	Phone : 01662-276984	
3.	Southern Region Farm Machinery Training & Testing Institute Tractor Nagar, P.O. Garladinne-515731 Distt. Anantpur (Andhra Pradesh)	E-Mail : fmti-sr@hub.nic.in Website: http://srfmtti.dacnet.nic.in/
	Phone : 08551-286441	
4.	North Eastern Region Farm Machinery Training & Testing Institute P.O. Biswanath Chariali -784176, Distt. Sonitpur, (Assam)	E-Mail : fmti-ner@hub.nic.in Website: http://nerfmtti.nic.in/
	Phone : 03715-222094	

4.26.2 During the year 2017-18, total 9689 trainees were trained till 31st March, 2018 against the annual target of 9000 in different courses. To supplement the efforts of the FMTTIs, outsourcing of the training through the identified Institutions, ICAR Institutions, ATMA Institutions, National innovation Foundation, training programmes are funded as per norms prescribed by Ministry of Skill Development and Entrepreneurship.



4.27 Testing and Evaluation of Farm Machinery & Equipment: The Farm Machinery Training and Testing Institute at Budni is authorized to conduct commercial tests on tractors and other agricultural machines as per relevant BIS test codes besides conducting the testing of tractors and power tillers under CMV Rules 1989. CFMTTI is also National designated authority for testing of tractors as per OECD codes.

The institute at Hisar, conducts commercial tests on self-propelled combine harvesters, plant protection equipments, agricultural implements and other machines as per relevant BIS codes and authorized to issue the CMVR certificate in respect of the combined harvesters under CMVR 1989. The Institute at Garladinne is authorized to test power tillers and also conduct tests on various agricultural implements & equipments. The institute at Biswanath Chariali (Assam) tests bullock drawn implements, manually operated equipment, tractor drawn implements, self propelled machines and small hand tools. During the financial year 2017-18, the four FMTTIs altogether have tested 331 machines of various categories, including tractors, power-tillers, combine harvesters, and other machinery and equipments, till 31st March, 2018 against the target of 320.



4.28 To cope up with the ever increasing demand of testing of agricultural machines and equipments, DAC & FW has designated 34 testing centers of SAU, ICAR and State Governments. During 2017-18 and 2018-19 Farm Machinery Testing Centre College of Food Technology, University of Horticulture Sciences Udyanagiri, Navanga, Bagalkot-587104, Karnataka and re-designated College of Agricultural Engineering and Technology, Marathwada Agricultural University, Parbhani, Maharashtra respectively..

4.29 Demonstration of Newly Developed Agricultural/ Horticultural Equipment: To support and encourage the Agriculture mechanization at field level and to bring the awareness of new technologies among the farmers, demonstrations of newly developed agricultural equipment including Post harvesting, horticultural equipment have been included under component 1 & 2 of the SMAM scheme. Under these components, 100% financial assistance as Center Sector Scheme is provided @Rs 4000 per ha up to 100 ha per season for the field demonstration of farm machinery and post harvesting technology/equipments on farmer's field. Total 278 field demonstrations have been conducted by the FMTTIs during the current financial year 2017-18.





4.30 Custom Hiring Centres: To promote the mechanization of small and marginal farm holdings and farm holding in difficult area with low level of mechanization, the efforts has been made to concentrate on establishment of farm Machinery Bank & Hi tech, high productive farm machinery hubs for custom hiring services. Under the components 4, 5 & 6 of the SMAM total Rs. 91.15 crores as cost subsidy, has already been released to States in the first installment during 2018-19 to establish 174 Farm machinery Banks for providing the custom hiring services in the country till November, 2018.

4.31 Farm Mechanization Programmes under various schemes of Agriculture: Financial Assistance in the form of subsidy at the rate of 40-50 percent under RKVY, NFSM & NHM, NMOOP is applicable as per guidelines of SMAM to the farmers for individual ownership of agricultural equipment including hand tools, bullock-drawn/ power-driven implements, planting, reaping, harvesting and threshing equipment, tractors, power-tillers and other specialized agricultural machines.

4.32 Activities in the North-Eastern States: A 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 2017-18 total 1016 trainees were trained at this NERFMTTI at Biswanath Chariali, Assam against the target of 1000 and have tested 30 nos. of agricultural implements and machinery against the annual target of 30. To support the agricultural Mechanization in North Eastern States where the Mechanization level is very low, the maximum permissible subsidy per machine per beneficiary is provided @ 50% limited to Rs. 1.25 lakhs/beneficiary for procurement of various agricultural machinery and equipments for individual ownership, and 95% of the cost of the machinery/Implement up to Rs 10 lakhs per farm Machinery bank for the establishment of Farm Machinery Banks with a minimum of 8-10 farmers respectively. During the year 2017-18, cost subsidy of Rs.91.15 crores has already been released to NE States under the different components of SMAM.

4.33 Gender Friendly Equipment for Women: Under the component 1 of SMAM, Agricultural Mechanization through Training, Testing, and Demonstration, a total 2726 women have been trained during the Financial Year 2017-18. 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.





4.34 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.

4.35 Promotion of Agricultural Mechanization for In-Situ Management of Crop Residue in the States of Punjab, Haryana, Uttar Pradesh and NCT of Delhi.

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 in-situ management of crop residue by retention and incorporation into the soil through the use of appropriate mechanization inputs.
- (III) Promoting Farm Machinery Banks for custom hiring of in-situ crop residue management machinery to offset the adverse economies of scale arising due to small land holding and high cost of individual ownership.
- (IV) Creating awareness among stakeholders through demonstration, capacity building activities and differentiated Information, Education and communication strategies for effective utilization and management of crop residue.

4.36 Components of Scheme

The Scheme has the following components (100% Central Share)

- (i) **Establish Farm Machinery Banks for Custom Hiring of in-situ Crop Residue Management Machinery** - financial assistance @ 80% of the project cost is provided to the Co-operative Societies of farmers, FPOs, Self-Help Groups, registered Farmers Societies / farmers groups, Private Entrepreneurs, Group of women farmers or self-help groups

for establishment of farm machinery banks or custom hiring centres of in-situ crop residue management machinery. Groups of farmers / Individual farmers having their own tractor / combine harvester would be preferred for establishing Custom Hiring Centre (CHC). Old established CHCs, with Non-Crop Residue Machinery, will also be eligible for a fresh project under the scheme.

- (ii) **Financial Assistance to farmers for Procurement of Agriculture Machinery and Equipment for in-situ Crop Residue Management-** financial assistance @ 50% of the cost of machinery/equipment is provided to individual farmers for purchase of machinery/equipment for crop residue management. The machineries identified by the Task Force for in-situ crop residue management are Super Straw Management System (Super SMS) to be attached with Combine Harvester,

Happy Seeder, Paddy Straw Chopper/ Shredder/Mulcher, Shrub Master/Cutter cum Spreader, Hydraulic Reversible M. B. Plough, Rotary Slasher, Zero Till Seed cum Fertilizer Drill, Rotavator.

- (iii) **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, etc.

(iv) **Funds Released: (Rs. In Crores) – 2018-19**

States/ Agency	Establishment of CHCs	Distribution of machinery	IEC activities	Flexi Funds/ Admn. Expences	Total
Punjab	176.00	71.30	16.80	5.28	269.38
Haryana	72.00	41.50	21.64	2.70	137.84
Uttar Pradesh	37.58	95.27	12.84	2.91	148.60
ICAR	0	0	19.36	0	19.36
Total	285.58	208.07	70.64	10.89	575.18

4.37 Impact of implementation of the scheme Promotion of Agricultural Mechanization for In-Situ Management of Crop Residue in the States of Punjab, Haryana, Uttar Pradesh and NCT of Delhi has been seen very positive

impact on in-situ management of crop. In this scheme Super straw management, Happy Seed Drill, Chopper/Shredder, Reversible Mould Board Plough, Zero Seed Drill, Shrub Master and Mulcher has been used by farmers.



Demonstration of Happy Seeder Machine



Demonstration of Mulcher



(Germination of wheat crops sown by Happy Seed Drill)

4.38 Success Stories

(i) Power Tiller for Tilling the Soil

A Powertiller was purchased by a farmer Thiru.A.Ramu, S/o Alagu Thevar, Pulikuruchi village in Tiruchuli block of Virudhunagar District during the year 2014-15 under the Agricultural Mechanization Programme. The farmer is small farmer possessing an area of 0.48 Ha land in SF. The total cost of powertiller was Rs.1,61,175/=. He has invested an amount of Rs.86,175/= as farmer's contribution for purchasing VST Sakthi-130 DI model powertiller and the Agricultural Engineering Department gave an amount of Rs.75,000/- as subsidy amount.

In addition to his own use, the farmer hired out the powertiller to nearby farmers for 60 hours by collecting Rs.300/= hour as hire charge. The farmer used the powertiller for hiring activity and collected an amount of Rs.18,000/- as hire charge. The farmer spent an amount of Rs.1000/= and Rs.8000/- for repair and maintenance and fuel charges respectively. The net earnings of the farmer by using the powertiller is Rs.9,000/-.



(ii) Success Story of Sri Muthumari Amman Farmers Production Group Agricultural Machinery and Implements Hiring Centre :A village based “Custom Hiring Centre” was established at Palacode Block in Dharmapuri District of Tamil Nadu under the scheme of SMAM in the year 2017-18 at an outlay of Rs.10.00 Lakhs, which includes farmer’s contribution amount of Rs.2.00 Lakhs and

SMAM subsidy assistance of Rs.8.00 Lakhs .The centre named **Sri Muthumari Amman Farmers Production Group Agricultural Machinery and Implements Hiring Centre** is owned by farmers group of Mungapatti, Ernahahalli Revenue village of Palacode Block, Palacode Taluk, Dharmapuri District, Tamil Nadu.



Agricultural Machinery Custom Hiring Centre

List of Agricultural Machinery Received with Subsidy under SMAM in 2017-18

Sl.No	Machinery / Implement	Qty (in Nos)	Total Amount (in Rs)	Subsidy (80% in Rs)
1	Tractor – 40 -70 PTO HP	1	586946	415676
2	Rotavator – 42 Blade	1	98200	68000
3	Brush Cutter	1	22172	15480
4	High Capacity Axial Flow Multi Crop Thresher	1	378200	268000
5	9 Tyne Cultivator	1	31000	20000
6	5 Tyne Cultivator	1	32120	20800 Ltd to 12844
	TOTAL	6	1148638	800000

Hire Charges :

Sl. No.	Agricultural Machinery / Implement	Custom Hiring Hire charge (in Rs)	Private market hire charge (in Rs)
1	Tractor	-	-
2	Rotavator	Rs 650/ Hour	Rs 800/Hour
3	5Tyne cultivator	Rs 550/ Hour	Rs700/Hour
4	9 Tyne cultivator	Rs 550/ Hour	Rs700/Hour
5	Multi crop Thresher	Rs 800/ Hour	Rs1000/Hour
6	Brush cutter	Rs 250/Hour	Rs 350/Hour

Cost Economics of CHC:

Sl.No	Item	Amount in Rs
Fixed Cost per annum		
1	Depreciation	5,000
2	Interest	13,000
	Total	18,000
Variable Cost per annum		
1	Fuel	50,800
2	Lubrication	6,000
3	Repair and maintenance	6,000
4	Labour charges	49,000
	Total	1,11,800
Total Cost per annum		
	Total Fixed Cost	18,000

Total Variable Cost	1,11,000	
Total cost	1,29,000	
Benefits per annum		
1	Hire charges	1,90,000
2	Others	-
3	Gross return (GR)	1,90,000
4	Cost	1,29,000
Benefits	61,000	

Plant Protection and Plant Quarantine:

4.39 Overview

The Plant Protection Division performs regulatory, monitoring, surveillance and human resource development function through a scheme called “Sub Mission on plant protection and Plant Quarantine”.

4.40 The primary aim of this Sub mission 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. In this regard, the destructive Insect and pests Act, 1914 and the Insecticides Act, 1968 provide the legal framework for the regulatory function. The Sub Mission has 4 important components, (i) Strengthening and Modernization of Plant Quarantine Facilities (SMPQF), (ii) Strengthening and Modernization of Pest Management Approach (SMPMA), (iii) Monitoring of Pesticide Residues at National Level (MPRNL) and (iv) National Institute of Plant Health Management (NIPHM).

Strengthening and Modernization of Plant Quarantine Facilities (SMPQF)

4.41 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 material.

4.42 The Plant Quarantine (Regulation Import into India) Order, 2003 issued under provisions of Destructive Insect and Pest Act, 1914 (DIP Act) regulates imports. Post entry quarantine inspection is under taken in case of propagating plant material. Phytosanitary Certificates (PSC) are issued for exports as per International Plant Protection Convention (IPPC), 1951 of the Food and Agricultural Organization (FAO). These

functions are being discharged by 57 Plant Quarantine Stations (PQS) functioning under Directorate of Plant Protection Quarantine & Storage (DPPQ&S), Faridabad at various international airports, seaports and land customs stations across the country to facilitate international trade in agricultural products. To bolster the Plant Quarantine infrastructure, 16 New Plant Quarantine Stations have been proposed at the notified points of entry.

4.43 During 2018-19 (Upto 31st December, 2018) Pest Risk Analysis (PRA) for 11 agricultural commodities were carried out to determine potential Bio-security risk if imported while for getting market access of Indian products in other countries technical information for 59 commodities to the various National Plant Protection Organizations were provided. During the period 76,480 Import Release Order (IROs) were issued for seeds and plant materials and 2,48,627 Phytosanitary Certificates (PSCs) issued for export .

4.44 Further, in total 671 Pest control Agencies have been accredited for undertaking fumigation with Methyl bromide (MBr) under NSPM-12 and for Aluminum Phosphide (Alp) 491 Pest control Agencies have been accredited under NSPM-22, whereas for Forced Hot Air Treatment (FHAT) 502 accredited Agencies were certified for wood packing materials. To meet out the requirement of importing countries as per bilateral agreements specific SOPs were formulated and registered 277 Rice Processing units for export of Rice to USA and 192 for China, 85 Peanut Processing units, 127 dry Chilli warehouses and 66 Pack houses for fresh fruits and vegetables. To facilitate export of fresh Mango fruit 36 units were registered for Hot Water Immersion Treatment facilities and 04 units of Irradiation facilities have been registered to ensure pest free export of agri commodities to the foreign countries.

4.45 Plant Quarantine stations play an important role in Bio-security as during inspection of imported commodities for various countries during 2018-19 intercepted 236 Quarantine pest various PQ stations viz. Sirex wasp (Sirex spp), Agrilus anxius, Galium spp., Ahasverus advena., Typhaea stercorea, Carpophilus mutilates, Hypothenemus hampei, Aspidiotus nerii, Elsinoe australis, Cryptolestes pusillus, Elsinoe australis, Cryptolestes ferrugineus, Psocids (Psocoptera sp.) in Regional Plant Quarantine Station, Mumbai. Ephestia spp, Cryptolestes sp, Ambrosia beetle (Platypus sp.), Carpophilus sp., Cryptolestes ferrugineus, Scolytus scolytus, Tomiscus piniperda, Pityogenes spp, Xyleborus affinis, Ips typographus, Hylesinus spp., Xylosandrus spp., in Plant Quarantine Station, Mundra. Anoplophora spp. in PQS, Kandla. Monilia sp, Hypothenemus hampei, Diplodia sp, Agrilus anxius, Diplodia sp, Ahasverus advenain RPQS, Chennai. Ephestia spp, Ips typographus, Carpophilus spp, Silvanus bidentatus, Ambrosia beetle (Platypus sp.), Cryptolestes ferrugineus in PQS Tuticorin. Selenaspis articulates, Carpophilus spp., Ephestiaspp. in PQS, Cochin. Cryptolestes ferrugineus in PQS, Visakapatnam. Ephestia elutella, Ephestia spp., in PQS, Mangalore. Embellisia allii in RPQS, Amritsar. Ahasverus advena in RPQS, Kolkata.

4.46 In continuation to the ease of doing business, Directorate of Plant Protection, Quarantine & Storage (DPPQ&S) has initiated the issuance of e-phyto (Digital Phyto-sanitary Certificate) to all the countries and it came into effect from 15-06-2017. Further, the PQ import procedure are also simplified and elaborated in the recent SOP for Phytosanitary inspection and Plant Quarantine import clearance of plants/plant products and other regulated articles to facilitate trade. Standard Operating Procedure (SOP) for export of Peanut and Dried chillies

have been adopted to ensure pest free export of peanut and dried chillies. Revision of Plant Quarantine (Regulation of import into India) Order, 2003 has been done.

Strengthening and Modernization of Pest Management Approach (SMPMA)

4.47 IPM is an eco- friendly approach, which aims at keeping pest below economic thresholds level by employing all available alternate pest control methods and techniques such as cultural, mechanical and biological control with greater emphasis on use of bio-pesticides and pesticides of plant-origin like Neem formulations. The use of chemical pesticides is advised as a last resort when pest crosses economic threshold level (ETL). IPM related activities are being implemented through 35 Central Integrated Pest Management Centers (CIPMCs) located in 29 States and 01 Union Territory. These activities are funded under central sector plan scheme “**Strengthening and Modernization of Pest Management Approach (SMPMA)**”. IPM activities are propagated through Farmers Field Schools (FFSs). This is a form of adult education evolved from the concept that farmers learn optimally from field observations and experimentation. Farmers’ Field Schools (FFSs) are organized to help farmers tailor IPM practices to suit their needs. These schools are conducted separately for the Kharif and Rabi seasons each FFS lasting 14 weeks. During **December 2018-19, 360 FFSs** were conducted in which **10,800** farmers were trained.

4.48 Apart from conducting FFS, the CIPMCs carry out pest/disease monitoring and conservation, production and release of bio-control agents. Pest and disease situation was surveyed covering **3.97 lakh** hectares. **7.37 crore** bio-control agents were mass produced in laboratories and released against targeted insect-pests in various crops. Augmentation and conservation was taken up in 420.71

thousands hectares. Under short duration HRD programme total **40** (two days) and **08** (five days) programmes were also organized. **01** number of Season Long Training Programmes (SLTPs) were also organized in coconut and apple crop through which **40 Master Trainers** were trained. **Eighty seven (87)** IPM Packages of practices for pest/diseases management in major crops have been developed in collaboration with NIPHM, Hyderabad and NCIPM, New Delhi. The revised IPM Packages of practice have also been circulated to State Department of Agriculture/horticulture/ICAR Institutions/State Agriculture Universities & all states/UTs. These packages have already been uploaded in the DPPQS and DAC&FW websites as well as on farmers' portal.

4.49 Seed treatment and Grow Safe Food were also taken up. 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, seed treatment campaign is taken up every year by Department during Kharif and Rabi seasons involving State Departments of Agriculture and CIPMCs. Similarly, GSF campaign has been taken up on large scale basis to avoid abuse misuse of chemical pesticides in agriculture. Farmers and pesticide dealers are sensitized through display hoarding and distributing literature. Special surveys was conducted by special teams constituted by DAC&FW comprising officers/officials from Central Government, CIPMCs, State Department of Agriculture, SAUs and ICAR on Maize crop against Fall Army worm at Karnataka, Andhra Pradesh, Telangana, Tamil Nadu, Gujarat, Maharashtra, Madhya Pradesh, Odisha, Chhattisgarh, West Bengal etc. Dte. has organized various Krishi Melas and Seminars viz. Exhibition cum Seminar in Mathura, Krishi Unnati Mela in New Delhi and Krishi Kumbh Exhibition at Lucknow etc.

Implementation of Insecticides Act, 1968:

4.50 The Insecticides Act, 1968 regulate import, manufacture, sale, transportation, distribution and use of insecticides with a view to prevent risk to humans or animals, and for matters connected therewith. Registration Committee, constituted under Section 5 of the Act, is empowered to register the pesticides/insecticides under Section 9 of the Act after verifying that it is efficacious and safe for use by farmer. In order to bring about greater transparency and efficiency in the process of registration of pesticides, on-line registration of insecticides has been partially operationalized. The system enables partial on-line filing of applications for registration in all categories viz under section (4)/9(3B)/9(3)/Export/Endorsements. The Certificates of Registration under section 9(4) along with label and leaflets are being generated from the database of 9(3) created in the Sectt. of CIB&RC in Computerized Registration of Pesticides (**CROP**) Software. Label/leaflets of pesticides containers have been revised to facilitate farmers in the safe use of pesticide.

Central Insecticide Laboratory (CIL)

4.51 The quality of pesticides is monitored by Central and State Insecticide Inspectors who draw samples of insecticides from pesticide manufactures/dealers for analysis in 68 State pesticide testing laboratories (SPTLs) spread across 23 States and one Union Territory. For the States which do not have facilities for testing pesticides, Regional Pesticide Testing Laboratories (RPTLs) have been set up by Central Government at Chandigarh and Kanpur. In case of dispute, samples are referred to Central Insecticides Laboratory (CIL), Faridabad. For quality assurance, the CIL has obtained accreditation from National Accreditation Board for Testing

and Calibration Laboratories (NABL) for biological and chemical testing as per ISO/IEC17025:2005. The RPTLs have also obtained NABL accreditation for chemical testing. Keeping in view the growth in consumption of bio-pesticides and need to regulate their quality, assistance for setting up bio-pesticides testing facilities is being provided to states. Eight labs and NIPHM have been notified for testing bio-pesticides that are at par with CIL for bio pesticides testing. Funds are provided to State Government for setting up/strengthening pesticide testing labs. Creation of necessary infrastructure is under process at National Pesticide Reference Repository (NPRR) and National Pesticide Investigational Laboratory (NPIL). NPRR will store and supply reference standards etc. necessary for analysis of pesticide samples while NPIL will help detect presence of chemical pesticides in microbial bio-pesticide products. This laboratory will also house a technical audit division for pesticide testing laboratories. NPRR and NPIL are expected to bring about a qualitative change in standards of quality testing of pesticides. **National Pesticide Reference Repository (NPRR)** to address issues of supply of reference standards and variation in analysis of pesticide samples has been established. For detecting presence of chemical pesticides in microbial bio-pesticides products, **National Pesticides Investigational Laboratory (NPIL)** has also been established. Procurement of equipment is underway. NPRR and NPIL would be fully functional shortly.

Techno-Legal Cell

4.52 Techno-Legal Cell is a component of Implementation of Insecticides Act (IIA) and its main objective is to make concerted efforts to ensure timely availability of quality pesticides to the farming community by ensuring effective implementation of the provisions of The Insecticide Act, 1968. It co-ordinates between SPTLs and DAC&FW for

various purposes like grant-in-aid to the states and UTs for setting up of new State Pesticides Testing laboratories (SPTLs) and strengthening of existing SPTLs and Bio-pesticides Testing Laboratories in the states. TLC also co-ordinates between RPTLs, Directorate and DAC&FW and extends technical and legal expertise to SPTLs, RPTLs and Insecticide Inspectors of Central and State Govt. starting from drawl of samples up to launching of prosecution in case of misbranded samples and illegal practices adopted by any manufacturer/importer. The Cell is also involved in notification of Central Insecticide Inspectors (CIIs) in official Gazette of Govt. of India. A total No. of 181 officers of the Directorate has been notified as Insecticide Inspectors. Sincere efforts are made by TLC to prevent manufacturing and sale of spurious pesticides with the help of these inspectors and with co-operation of all State Government for conducting raids/inspection in manufacturing, distribution and trading premises etc. in routine and on specific complaints received from various sources.

4.53 During 2018-19, teams of Insecticide Inspectors were deputed for conducting inspection and verification of complaints in various states like Maharashtra, Haryana, U.P. and Gujarat. Efforts have been made by TLC to prevent activities related to illegal import of pesticides in the country. Necessary action as per the provisions of The Insecticides Act, 1968 is being taken against all those firms which have been found to be involved in illegal manufacturing/ import of pesticides. A total of 144 samples of chemical pesticides, 17 samples of Bio-products and Bio-pesticides were drawn during the year 2017-18. Similarly, 35 samples of pesticides have been drawn by Insecticide inspectors of the Directorate during 2018-19, till date. Prosecution against 09 firms have been launched during 2017-18 and 07 firms during the year 2018-19, till date, which have been found

to be involved in manufacturing and selling of misbranded pesticides and illegal import of pesticides. Further, launching of prosecution against 25 firms, which have been found to be involved in illegal import/manufacturing of pesticides is in progress.

Locust Control & Research

4.54 The scheme Locust Control and Research is being implemented through an Organisation known as Locust Warning Organisation (LWO) established during 1939 and later merged with directorate of PPQ&S in 1946. The Locust Warning Organisation (LWO) monitors locust development and its activities over an area of 2.00 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 ten Locust Circle Offices (LCOs) located at Bikaner, Jaisalmer, Barmer, Jalore, Phalodi, Nagaur, Suratgarh, Churu in Rajasthan and Palanpur & Bhuj in Gujarat, Locust Warning Organisation (LWO) Field Headquarters at Jodhpur and Locust Division at Central Headquarter Faridabad (Haryana). Besides, there is one Field Station for Investigation on Locust (FSIL) situated at Bikaner. To strengthen the locust monitoring and forecasting and as per the recommendations made during 28th Session of the FAO Commission 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. LWO has wireless network for exchanging the information on locust survey and control between various field offices and Hqrs. Faridabad. Satisfactory, locust control potential is being maintained in the form of pesticides, plant protection equipment, wireless sets, GPS, eLocust3 and trained manpower. This type of survey is undertaken in the field to monitor the presence of locust, ecological conditions and

also undertaken to determine whether locust populations has crossed economic threshold level [adults more than 10,000 per km. and 5-6 hoppers per bush] that may require control. The surveys are undertaken in sandy areas with green vegetation and about two weeks after rain has fallen. These surveys are done regularly during whole of the year. The frequency of the survey is doubled from May to November (rainy season) as compared to the frequency of surveys from December to April. The surveys are undertaken from sunrise to midday and for a few hours in the evening before sunset in the temperature range of 20°-38° C.

4.55 The Pesticide Management Bill 2008, which is intended to replace Insecticide Act, 1968 to provide for a more effective regulatory framework for introduction and use of pesticides in the country was in the Parliament (Rajya Sabha) on 21.10.2008. The Parliament Standing Committee on Agriculture laid its report on the Bill in Parliament on 18.02.2009. The recommendations of the Standing Committee have been examined and taking into account these recommendations, the official amendments to the Pesticides Management Bill have been finalized for introduction into Parliament.

Monitoring of Pesticide Residues at the National Level:

4.56 This Scheme was launched in 2005, as a Central Sector Scheme to collect, collate and analyze data and information on a centralized basis, on prevalence of pesticide residues in agricultural products at farm-gate and market yards. Samples of agricultural commodities and food commodities including animal produce are drawn and analyzed in 25 participating laboratories of Central Government and Agricultural Universities. All the participating laboratories are accredited by National Accreditation Board for Testing

and Calibration of Laboratories (NABL) in the field of pesticide residue analysis as per ISO/IEC 17025:2005. The pesticide residue data generated is shared with concerned State Governments for corrective action for judicious and proper use of pesticides on Crops with an integrated pest management approach.

National Institute of Plant Health Management:

4.57 National Institute of Plant Health Management (NIPHM), as part of its mandate has trained a total of 3,413 agricultural officials and farmers in the past 6 months. NIPHM is also conducting research through program oriented projects. During the year 2018-19 (for the period from April to December, 2018), 128 regular training programs were conducted, in which 3810 persons have been trained. NIPHM has initiated two novel projects viz., Creating spraying awareness among the farmers and pilot study on resource inventory and estimation of village water resources. The spraying awareness project envisages in training a group of unemployed youth in systematic spraying techniques and engaging them in spraying activity in the villages. The data collected through estimation of village water resources project would be beneficial in planning the cropping pattern in accordance to water availability. Three customized training programs for FCI Quality Control officials were conducted in NIPHM on “Stored Grain Pest Management”. All the officials were given hand on training for detection and identification of the pests, good storage practices and maintenance of food grains. Two days training cum workshop was conducted to create awareness about the potential threats to India, analyze the pathway of exotic pests, alien invasive species and their impacts, SPS issues and emergency preparedness measures for introduced pests. Two days awareness training programme on “Plant Quarantine Regulations” for customs

officers was conducted at Chennai. An exclusive 15 days International programme on Detection and Diagnosis of Pests, Pest Risk Analysis and Fumigation for Uzbekistan officials was conducted and 27 executives have participated in the programme.

4.58 Conducted workshop of DAC&FW project on “*Indiscriminate use of chemical fertilizers and pesticides*” project review from 30.10.18 and 31.10.18 at BCKV, Kalyani, West Bengal, and the field trials conducted by the BCKV also were inspected. A special training program on ISO/IEC 17025:2017 conducted with 93 participants. A workshop on “Monitoring of Pesticide Residues at National Level” was conducted on 12-07-2018. One day workshop on “Organic farming and Farmer Producer Organizations (FPOs) – A way forward” was organized

4.59 Review of IPM packages for 8 crops viz., Lentil, Coffee, Clove, Methi, Month bean, Mint, Horsegram and Tapioca was approved by DAC&FW. Entomopathogenic Fungi (EPF), namely *metarhiziumanisopliae* and *beauveriabassiana* were sub-cultured and purified and the pure culture was maintained in the laboratory for carrying out the further research works. Trials are also being carried out to get the pure culture of *lecanicilliumlecanii*. In addition to this, mass production of EPF on NIPHM sterilized medium has been initiated. Mother cultures of Nuclear Polyhedrosis Virus (NPV)–*Spodoptera NPV (SpLi NPV)*, Bio-Fertilizers – VAM, *Rhizobium Azotobacter*, *Azospirillum*, PSB and *Azolla*, Bio-Pesticides–*Trichoderma* and *Pseudomonas* kits, Parasitoids & Predators are being distributed to the farmers during their training program.

4.60 NIPHM has entered Memorandum of Understanding with Bhabha Atomic Research Centre, Department of Energy, Mumbai for

several collaborations related to irradiation as a phytosanitary measures for export of selected agriculture commodities.

In a bid to promote Environmentally Sustainable Agriculture, NIPHM has adopted Amdapur Village, and scientists from NIPHM regularly visit the village and guide the farmers on regular intervals. Scientists from NIPHM are closely working with the farmers of D.Dharmavaram village and training them in the control of wild Boar menace under the Wild Boar Management Project. As part of the DPMP project, an intensive campaign was taken up for sensitizing the farmers in production of Bio Agents and establishment of units at village level. On-farm production units were started at five villages viz., Relakunta, Mucherla, Nallabelli, Shambunnipalli and Varikole. Awareness programs on the “Safe Disposal of used Pesticide Containers” were conducted in various villages for farmers and dealers. As part of developing world class infrastructure at the institute, foundation stone was laid for construction of State-of-Art Pesticide Analysis Laboratory by Shri S.K. Pattanayak IAS, Secretary to Government of India, DAC&FW, Ministry of Agriculture and Farmers Welfare, Government of India. A new “Farmers Training Hall” was established in the campus along with Solar Roof top system (100KWh) for NIPHM was inaugurated by Shri Jalaj Shrivastava IAS, Additional Secretary, DAC&FW. Newly established “Farmers Advisory Service Cell” and “Fruit Fly laboratory” were inaugurated by Dr. B. Rajender, IAS, Joint Secretary (PP), DAC&FW. A new “Seed Health Testing Laboratory” is also established to explore various aspects in seed health.



Laying of Foundation Stone for the New Pesticide Management Laboratory Building by Shri Shobhana K. Pattanayak IAS, Secretary, DAC&FW



Interaction of Shri. Jalaj Shrivastava IAS, Addl. Secretary DAC&FW, with farmers on the occasion of inauguration of “Farmers Training Hall”

4.61 An Open Day Exhibition was organized at NIPHM on 24-10-2018 to promote awareness and scientific temperament among school children and to spread awareness among farmers. The program was inaugurated by Dr. B. Rajender, IAS, Joint Secretary (PP), Ministry of Agriculture & Farmers Welfare, Government of India and was graced by Ms. G. Jayalakshmi IAS, Director General, NIPHM and Mr. Rajesh Malik, Director (PP), DAC&FW. Low cost NIPHM technologies were demonstrated to the farmers and other participants. Women farmers from neighboring villages were invited on the eve of ‘National Women Farmers Day’ in collaboration with SERP, Telangana and were apprised of various eco-friendly technologies, that can be adopted by them at the farm level.



Open Day for school students on 11th Foundation Day – Occasion graced by Dr. B. Rajender IAS, Joint Secretary (PP) and Mr. Rajesh Malik, Director (PP), DAC&FW



Demonstration to Uzbekistan officials Rodent Pest Management strategies at NIPHM Laboratory



Open Day for school students to demonstrate Plant Health Management Techniques



Field demonstration on “Non Pesticide Management Strategies and Production of Bio-agents for Important Crops (Women Farmer Producer Groups under SERP)

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 MIDH Division is comprising following four units: -

- (i) AAP/Budget Unit - This unit deals with Annual Action Plans (AAPs) of States/UTs & National Level Agencies (NLAs), Proposal for EFC/CCEA, physical and financial progress, monitoring of the schemes, evaluation of schemes, release of funds under MIDH, UCs, audit matters and audit paras etc.
- (ii) Project Unit – This unit deals with project based proposals under MIDH, PAC/EMC meeting relating to projects, Integrated Cold Chain Availability Platform (ICAP), Value chain related matters, court cases related to project based activities, Indo-Israel, Indo-Duch & Indo German international cooperation projects etc.
- (iii) Coordination Unit – This unit deals with the work of Intra and inter division coordination, coordination with other Ministries/Agencies dealing in matters related to Horticulture, Annual Report, Public Grievances, National conferences, Rajbhasha/Hindi/quarterly progress report, Technical Support Group of MIDH including engagement of Consultants and

outsourced staff, e-Samiksha/Group of Secretaries/PRAGATI etc.

- (iv) CDB and NHB Unit - This unit deals with all administrative and financial matters of NHB & CDB (except IC & Exhibitions) and Release of funds, UCs and audit matters relating to NHB & CDB.

5.3 Major Schemes – Objectives

In MIDH, there are 5 (five) 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 States 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. 2546.28 crore has been earmarked for MIDH during 2018-19 which has been reduced to Rs. 2108.43 crore at RE. As on 31st March, 2019, funds to the tune of Rs. 2005.00 crore have been released

for implementation of activities of MIDH i.e. Rs. 1091.20 crore under NHM, Rs. 382.25 crore under HMNEH, Rs. 260.00 crore under NHB, Rs. 264.40 crore under CDB and Rs. 5.00 crore to CIH.

5.4 Brief of schemes under MIDH is as follows:

5.4.1 National Horticulture Mission (NHM):

This Centrally Sponsored Scheme was launched in the year 2005-06, aims at the holistic development of horticulture sector by ensuring forward and backward linkages through cluster approach with the active participation of all stake holders. A total of 384 districts in 19 States and 4 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 intervention under NHM.

5.4.2 Horticulture Mission for North East and Himalayan States (HMNEH)

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 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.

5.4.3 National Horticulture Board (NHB)

The National Horticulture Board (NHB) was established in the year 1984 by the Government of India as an autonomous organization and registered as a society with the Registrar of Firms and Societies, Chandigarh with its headquarters presently in Gurugram and 35 field offices located all over the country. The broad aims and objectives of the Board are the creation of production hubs for commercial horticulture development, post harvest infrastructure and cold chain facilities, promotion of new crops, and promotion of growers' associations.

The Board is implementing the following schemes:

- (i) Development of Commercial Horticulture through Production and Post Harvest Management
- (ii) Capital Investment subsidy scheme for construction/ expansion/modernization of cold storages for Horticulture Produce
- (iii) Technology Development and Transfer for Promotion of Horticulture.
- (iv) Horticulture Promotion Services/ Expert Services and Strengthening Capability of NHB.

5.4.4 Coconut Development Board (CDB)

Coconut Development Board Kochi, (CDB) is a statutory body established by Govt. of India by an Act of Parliament (Coconut

Development Board Act 1979) and came in to existence in January 1981. The thrust areas of 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 coconut sector.

The major programmes that are being implemented by the Board are;

- A. Production and Distribution of Quality Planting Materials
 - (a) Establishment of Demonstration cum-Seed Production Farms
 - (b) Establishment of Regional Coconut Nurseries
 - (c) Establishment of Nucleus Coconut Seed Garden
 - (d) Establishment of Small Coconut Nurseries
- B. Expansion of Area under Coconut
- C. Integrated Farming for productivity improvement
 - (a) Laying out of Demonstration Plots
 - (b) Aid to Organic Manure Units
- D. Technology Demonstration/Quality Testing Lab
- E. Marketing, Market Intelligent Services, Statistics and Strengthening of Export Promotion Council
- F. Infrastructure and Administration including Technical Service & Project Management
- G. Coconut Palm Insurance Scheme
- H. Kera Suraksha Insurance Scheme

5.4.5 Central Institute of Horticulture, Medziphema, Nagaland

Recognizing the huge potential for development in the North-Eastern region and to provide institutional support to tap this potential, Government of India has set up the “Central Institute of Horticulture” at Medziphema, Nagaland in the year 2005-06 under the Central Sector Scheme. This Institute is set up for holistic development of horticulture in NE Region of India.

The Institute is being set up at Medziphema in an area of 43.50 ha, which is situated at 35 kms from Dimapur and 45 kms from Kohima city on National Highway 39. It has an elevation ranging from 250 to 300 metres having temperature between 12 to 35 degree centigrade and average rainfall of 2500 mm. The area has low hilly terrains with good soil suitable for growing most of the sub tropical horticultural crops.

Vision: To emerge as the pioneering, innovative, farmer focused and self-supporting horticultural Institute in the country.

Mission: To provide excellent, innovative and relevant training to all the stakeholders so as to empower individuals and enable horticulture industry to bring about socio-economic development and sustainability in North East Region.

Objectives & Programmes of the Institute

- ❖ Capacity building by training of trainers and farmers/beneficiaries.
- ❖ Demonstration of improved production technologies.
- ❖ Certificate courses in horticulture.
- ❖ Accreditation and Certification of Nurseries in NE region.

- ❖ Follow-on extension support in the field of horticulture.
- ❖ Promotion of organic cultivation of horticulture crops.
- ❖ Establishing convergence and synergy among programmes in the field of horticulture.
- ❖ Monitoring of Centrally Sponsored Programmes in the area of horticulture.
- ❖ Transfer of technology through method & result demonstration & publication of folders, manuals, leaflets etc.
- ❖ Promotion of Organic Farming.
- ❖ Marketing and agri-business promotion through exhibitions, seminars, workshops, exposure trips, buyers & sellers meet.
- ❖ Coordination with state horticulture departments of NER and other National Organizations, NGOs, farmers' group and self help groups.

Focus Areas

- ❖ Training of state government officials and farmers/beneficiaries of North Eastern Region.
- ❖ Production and supply of quality planting material.
- ❖ Accreditation and certification of horticulture nurseries in NER.
- ❖ Certificate courses in horticulture.
- ❖ Skill development courses in horticulture.

5.5 Physical and Financial Progress:

5.5.1 National Horticulture Mission (NHM)

A. Physical Progress: The summary details of progress achieved under NHM so far during 2018-19 are given at Table 1 below:

Table 1: Progress under NHM

S. No.	Components	Unit	Progress during 2018-19 (as on 28th February, 2019)
1	Area Expansion	Ha.	104509
2	Rejuvenation	Ha.	7156
3	Protected Cultivation	Ha.	28111
4	Integrated Pest/ Nutrient Management	Ha.	48206
5	Nurseries	No.	14
6	Water Resources	No.	3915
7	Beekeeping	No.	110624
8	Horticulture Mechanization	No.	5224
9	Post Harvest Management	No.	
	(i) Pack House		1709
	(ii) Cold Storage		96
	(iii) Primary/mobile processing units		498
10	Market Infrastructure	No.	625

B. Financial Progress: During FY 2018-19, as on 31st March, 2019, funds to the tune of Rs. 1091.20 crore have been released to States/Union Territories implementing NHM scheme against BE of Rs.1209.00 crores and RE of Rs. 1139.00 crore.

5.5.2 Horticulture Mission for North East and Himalayan States (HMNEH)

A. Physical Progress: The summary details of progress achieved under HMNEH so far during 2018-19 are given at Table 2 below:

Table 2: Progress under HMNEH

S.No.	Components	Unit	Progress during 2018-19 (as on 28th February, 2019)
1	Area Expansion	Ha.	13857
2	Rejuvenation	Ha.	928
3	Protected Cultivation	Ha.	1993
4	Integrated Pest/Nutrient Management	Ha.	10125
5	Nurseries	No.	34
6	Water Resources	No.	345
7	Beekeeping	No.	32940
8	Horticulture Mechanization	No.	35934
9	Post Harvest Management	No.	
	(i) Pack House		527
	(ii) Cold Storage		1
	(iii) Primary/mobile processing units		5
10	Market Infrastructure	No.	40

B. Financial Progress: During the current financial year (as on 31.03.2019), funds to the tune of Rs. 382.25 crore have been released to States implementing HMNEH scheme against BE of Rs.530.00 crore (including Rs. 150 crores for Prime Minister Development package - 2015 for J&K State).

5.5.3 National Horticulture Board (NHB)

A. Physical Progress:

- Under the scheme – “Development of Commercial Horticulture through Production and Post Harvest Management”, the Board sanctioned 1199 projects during the current financial year (as on 28.02.2019)

involving subsidy of Rs. 152.72 Crore. The projects include fruit orchards, Hi-Tech Horticultural Crops of vegetables & flowers in protected cultivation. Tissue Culture Units, Mushroom Cultivation, Establishment of Pack House and Grading Centres, Ripening Chamber, Refer van, Retail outlets, Pre-cooling units, Primary Processing, Honey processing units etc.

- Under the scheme – “Capital Investment subsidy scheme for construction/expansion/modernization of cold storages for Horticulture Produce”, the Board sanctioned 59 projects of Cold Storages/CA Storages under report involving subsidy of Rs. 89.78 Crore during the current financial year (as on 28.02.2019).

- Under the scheme – “Technology Development and Transfer for Promotion of Horticulture”, NHB has assisted 60 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. 1.89 Crore during the current financial year in (as on 28.02.2019)

B. Financial Progress: Funds amounting to Rs. 260.00 crore (as on 31.03.2019) have been released to NHB against BE of Rs. 600.00 crore.

C. Special Projects:

India Garden, Beijing: As part of the Commitment made at the level of Hon’ble Prime Minister of India, National Horticulture Board is participating in the International Horticulture Exhibition, 2019 being held in Beijing China w.e.f 29.04.2019 to 07.10.2019. The India Garden covering an area of of 1066 square meter will focus on the essential Indian theme of ‘Man living in Harmony with Nature’. The 9 meter high replica of Sanchi Gateway sandstone sculpture at the entrance to the garden will become a landmark of Indian Garden. Multistage lotus pool fountain, about 100 sq meter of cave shape exhibition hall with waterfall, traditional souvenir Booth, Indian restaurant , different trees , flowers , grasses native to India are other highlights of Indian Garden. Civil work and sculpture artifacts are nearly completed. Major plantation work will be taken up in the month of March 2019 to be completed in the first fortnight of April, 2019.

5.5.4 Coconut Development Board (CDB)

A. Physical Progress: India being the largest Coconut producing country in the world produces 33.02% of global production

of coconut. The Coconut palm provides food security and livelihood opportunities to more than 12 million people in India. It is also a fiber-yielding crop supporting more than 15,000 coir-based industries which provides employment to nearly 6 lac workers. The crop contributes around Rs.2,50,000 million to the country’s GDP and earns export revenue of around Rs.4296.59 million. As per the All India estimate for the year 2017-18, the area and production of coconut in the country is 2.099 million hectares and 24378.10 million nuts respectively. The four southern states of Kerala, Tamil Nadu, Karnataka, and Andhra Pradesh account for 89.39 percent of the coconut area and 92.79 percent of the coconut production in the country. The productivity of coconut at national level for 2017-18 is 11,616 nuts per hectare.

B. Financial Progress: During the current financial year, funds to the tune of Rs. 264.40 crore (as on 31.03.2019) (including 82 crores for Gaza Cyclone affected area) has been released to CDB for coconut development in the country against BE of Rs. 193 crore.

5.5.5 Central Institute of Horticulture (CIH), Nagaland

A. Physical Progress:

- During the year 2018-19, a total of 1301 farmers and 23 officials have been provided training and exposure visit by the Institute. 64 persons have been trained in 2018-19 through 4 skill trainings on Floriculture-Protected Cultivation and Gardener and 19 persons were trained through 3 months course in PHM and Value Addition.
- 69200 nos. of rootstocks have been raised and 55940 nos. of plants of Citrus, Cashew, Guava & Mango have been propagated during the year 2018. Four (4) nurseries have also been accredited by CIH in Arunachal Pradesh, Assam & Nagaland in 2018.

- 16 nos. of on farm demonstrations have been established during the year 2018 and 3 nos. of off-farm demonstrations has been established in Tuensang and Pfutsero districts of Nagaland.

B. Financial Progress: Funds amounting to Rs. 5.00 crore have been released to CIH, Nagaland against BE of Rs. 9.50 crore.

C. Achievements (till February 2019)

The Institute provides a number of programmes for the benefit of the farming community in NE states. The Institute regularly conducts

trainings & skill development courses, technology demonstrations, quality planting material production, nursery accreditation, protected cultivation, post harvest management and marketing for the welfare and betterment of the farming community.

(i) Capacity Building & Trainings

During the year 2018-19, a total of 1392 farmers and 23 officials have been provided training and exposure visit by the Institute. More focus is given on practical application during such training programmes.



Trainers training



Farmers training

(ii) Production of Quality Planting Material

With the objective to provide disease free quality planting material, the Institute produces a variety of plants in its nursery units. Altogether,

77205 nos. of rootstocks have been raised and 52547 nos. of plants of Citrus, Cashew, Guava & Mango have been propagated during the year 2018.



Planting material produced in Central Institute of Horticulture Nagaland

(iii) Technology Demonstrations

The Institute has established a number of demonstration plots of fruit crops, vegetables, spices, flowers and medicinal plants in its campus in Medziphema. Around 16 nos. of on-farm demonstrations have been established during the



Strawberry cultivation

year 2018 and 4 nos. of off-farm demonstrations have been established in Tuensang and Pfuersero districts of Nagaland and Ukhrul district of Manipur.

Under protected structures, the Institute has taken up cultivation of cucumber, musk melon, carnation, capsicum, tomato and other flowers in 2018.



Cultivation of organic cabbage

(iv) Skill Development

Skill development courses accredited by ASCI are regularly conducted for the farmers and unemployed youth of the region. All together,

83 persons have been trained in 2018-19 through 5 skill trainings on Floriculture-Protected Cultivation and Gardener and 19 unemployed youth have been trained through 3 months course in PHM and Value Addition.



Practical classes and assessment of skill development course for gardeners & floriculturist-protected cultivation



(v) Agri Business Promotion

To promote the products of the farmers, 9 nos. of agri business promotional events like buyers sellers meet, exhibition, entrepreneurship development programme and farmers

awareness programme have been organized for the farmers of the region. CIH, Nagaland has also participated in a number of exhibitions and workshops during the year 2018.



Buyers sellers meet



Exhibition cum sale programme

(vi) Post Harvest Management

Under post harvest, the farmers and unemployed youth have been trained to prepare value added products like Carambola squash, Carambola jam, Kiwi squash, Gooseberry jam, Gooseberry

RTS, Wild apple candy sweet, Wild apple candy spicy, Gooseberry digestive Wild apple chutney, Hog plum pickle, Assam Lemon RTS, Pineapple squash, Pineapple jam, Ginger candy, Roselle jam, Ginger ale, Bael squash.



Value added products



Trainees preparing products

(vii) Nursery Accreditation

During the year 2018-19, nine (9) horticultural nurseries in Arunachal Pradesh, Assam,

Manipur, Mizoram & Nagaland have been accredited by CIH.



Assessment of nursery by expert team



Issue of certificates to nurserymen

(viii) Publication

A number of publication materials have been prepared during the year which includes impact document on skill development courses, training

manual, booklet on nursery accreditation and certification, impact document of CIH, Nagaland, extension folders and annual report.



Publications of CIH, Nagaland released by dignitaries during important events

5.6 Area, Production & Productivity of Horticulture Crops

The comparative details of area, production and productivity of various horticulture crops

during 2018-19 (1st Advance Estimate) with reference to 2004-05 viz. pre and post NHM Scenario are given in the following **Table 3**.

Table 3: Pre and Post NHM Scenario: Area, Production & Productivity of Horticulture Crops

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

Crop	Area			Production			Productivity		
	2004-05	2017-18	2018-19*	2004-05	2017-18	2018-19 *	2004-05	2017-18	2018-19*
Fruits	5049	6506	6530	50867	97358	96754	10.07	14.96	14.82
Vegetables	6744	10259	10436	101246	184394	187474	15.01	17.97	17.96
Flowers	118	324	339	659	2785	2858	5.58	8.60	8.43
Aromatic & Medicinal crops	131	720	717	159	866	889	1.21	1.20	1.24
Plantation crops	3147	3744	3762	9835	18082	17991	3.13	4.83	4.78
Spices	3150	3878	4086	4001	8124	8590	1.27	2.09	2.10
Others	106			172	105	113		0.00	0.00
Total	18445	25431	25870	166939	311714	314669	9.09	12.26	12.16

*1st Advance Estimates of Horticulture crops 2018-19- DAC&FW

The wide and varied nature of 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 25.87 million ha (m. Ha.) at present by registering increase of about 28% as compared to 20.20 m. ha in 2007-08. However, with a production of about 314.67 million MT, horticulture production has witnessed an increase of about 49% during

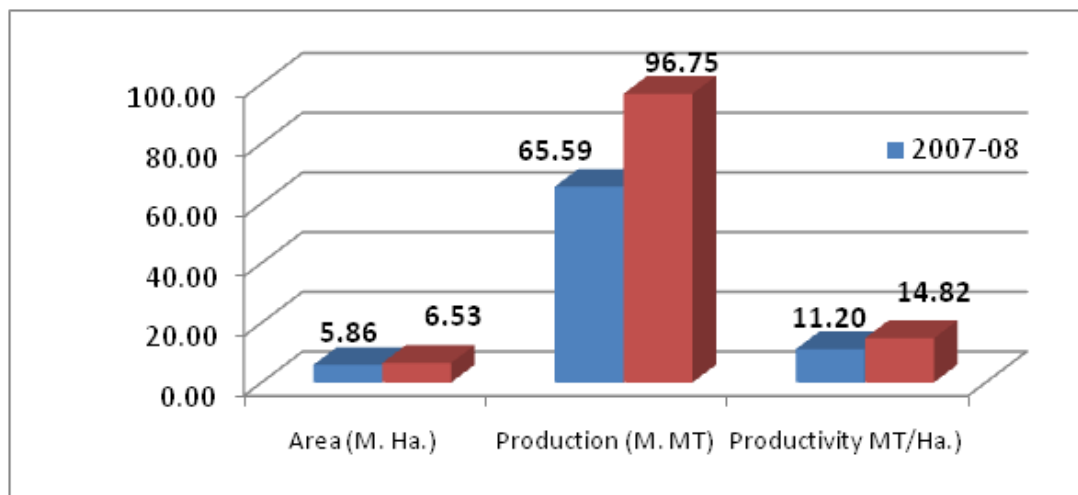
the period 2007-08 to 2018-19 (1st Advance Estimate).The significant feature is that there has been improvement of productivity of horticulture crops, which increased by about 16.32% during this period.

Area, Production & Productivity of Horticulture crops during past 11 years are given in **Table 4**.

Table 4: Area, Production & Productivity of Horticulture Crops

Year	Area	Production	Productivity
2007-08	20.20	211.23	10.45
2008-09	20.66	214.72	10.39
2009-10	20.88	223.09	10.69
2010-11	21.83	240.53	11.02
2011-12	23.24	257.28	11.07
2012-13	23.69	268.85	11.35
2013-14	24.20	277.35	11.46
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	25.43	311.71	12.26
2018-19(1stAd.Est.)	25.87	314.67	12.16

The area under fruit crops during 2018-19 (1st Advance Estimate) is 6.53 m Ha, with a total production of 96.75 m MT. During the Period (2007-08 to 2018-19 (1st Advance Estimate), production of fruits increased by about 48%, while the area increased by about 11.49% (2007-08 to 2018-19 (1st Advance Estimate)). Comparative details of area, production and productivity of fruit crops are given in **Figure 1**.

Figure 1: Area, Production & Productivity of Fruits

*2018-19 (1st Advance Estimate)

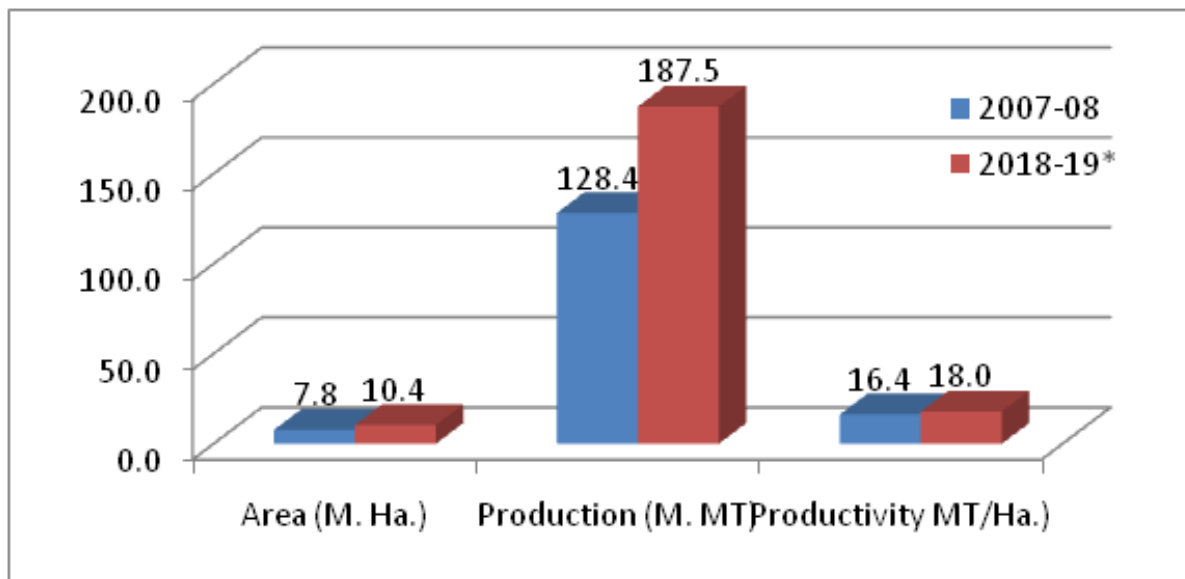
India has retained its status as the second largest producer of fruits in the World. The country is first in the Production of fruits like Mango, Banana, Sapota, Pomegranate and Aonla.

Vegetables are an important crop in horticulture sector, occupying an area of 10.44 million ha as on 2018-19 (1st Advance Estimate) with total production of 187.47 million tonnes with average productivity of

17.96 tonnes/ha. In fact, vegetables constitute about 59.15% of horticulture production. During the period 2007-08 to 2018-19 (1st Advance Estimate), area and production of

vegetables increased by 32.98% and 45.95% respectively. The comparative details are depicted in the **Figure 2**.

Figure 2: Area, Production & Productivity of Vegetables



*2018-19 (1st Advance Estimates)

India continued to be second largest producer of vegetables after China. India is the leader in production of vegetables like peas and okra. Besides, India occupies the second position in production of brinjal, cabbage, cauliflower and onion and third in potato and tomato in the world. Vegetables such as potato, tomato, okra and cucurbits are produced abundantly in the country.

Interventions in horticulture in the country have led to increase per capita availability of fruits from 158 gm/person/day in 2007-08 to 198 gm/person/day in 2017-18. Similarly, per capita availability of vegetables has increased from 309 gm/person/day in 2007-08 to 372 gm/person/day in 2017-18.

India has also made remarkable advancements in production of flowers, particularly cut flowers, which have a high potential for exports. Floriculture during 2018-19 (1st Advance Estimate) covered an area of 0.34 million ha with a production of 2.86 m. MT of flowers.

There has been phenomenal growth in cut flower production, which is finding place in export market.

India is the largest producer, consumer and exporter of spices and spice products, the total production of spices during 2018-19 (1st Advance Estimate) was 8.59 m. MT from an area of 4.06 m. ha.

5.7 Success Stories:-

1. Mizoram

Name of farmer	Mr. M. Lalremsiama
Name of farmer's father	Saphmingthanga
Village	Lengpui
Mandal	Reiek
District	Mamit
Name of the crop	Tomato & Chilli
Technology Adopted	Protected Cultivation under Green House

Sl. No.	Cultivation Practices	By Normal Practice	By Adopting Technology (Specify)
1	Total cost of cultivation	1,80,000/-	2,20,000/-
2	Yield in tons	7.2	13.0
3	Cost/Ton (Rs.)	40,000/-	80,000/-
4	Methodology for marketing of produce	Supply to whole sale and retailed market	Supply to whole sale and retailed market
5	Net Income (Rs.)	1,08,000/-	8,20,000/-



The income of beneficiaries have gone up from Rs. 1,08,000/ to Rs. 8,20,000/ though the total cost of cultivation & Cost/Tonnes has increased simultaneously.

2. Nagaland

Plastic Mulching – The Future of Pineapple Cultivation.

Name of the Farmer	Shri Letthang Misao
Name of Farmer's Father	Shri Khupjadeh
Village	Molvom
Mandal	Medziphema
District	Dimapur
Name of the Crop	Pineapple
Technology Adopted	High Density Planting with Plastic Mulching

Sl. No.	Cultivation Practices	By Normal Practice	By adopting Technology (Specify)
1.	Total Cost of Cultivation	₹170000/ha	₹ 227000/ha
2.	Yield in Tonnes	40 MT/Ha	60 MT/Ha
3.	Cost/Ton (₹)	10000/-	10000/-
4.	Methodology for Marketing of Produce	Direct Sale at Farm Gate and also in the Local Market	Direct Sale at Farm Gate and also in the Local Market
5.	Net Income (₹)	230000/-	373000/-



Pineapple Cultivation With Plastic Mulch; Inset : Shri. LetthangMisao

The beneficiary has been benefitted by adopting technology under high density planting with

plastic mulching. His income has increased from Rs. 2,30,000/- to Rs. 3,73,000/- though cost of cultivation has gone up.

3. Telangana

Name of the Farmer	MatangiAnjaiah
Name of Farmer's Father	Bhoomaiah
Village	Thimmapur
Mandal	Thimmapur
District	Karimnagar
Name of the Crop	Green Chilli
Technology Adopted	Protected Cultivation - Plastic Mulching under MIDH & Drip irrigation under PDMC
Area in Ha.	0.60 Ha.

Sl. No	Cultivation Practices	By Normal Practice	By Adopting Technology
1	Total Cost of Cultivation	95,000	80,000
2	Yield in Tons	10.5	15
3	Cost/Ton (Rs.)	20,000	20,000
4	Methodology for marketing of produce	Local Market	Local Market
5	Net Income (Rs.)	1,15,000	2,20,000



By adopting practices under protected and drip irrigation, the income of the farmer has increased from Rs. 1,15,00/- to Rs. 2,20,00/-, notably the total cost of cultivation has decreased.

4. Uttar Pradesh

Name of the Farmer	Kailash NathTripathi
Name of Farmer's Father	KrishanjivanTripathi
Village	Jagdishpur Urflahuradewa
Mandal/Block	Semriyawa
District	SantKabir Nagar
Contact N0	9936188132
Name of the Crop	Banana TC-G9, Area-4.0 hac.
Technology adopted	Banana TC-G9

Sl. NO	Cultivation Practices	By normal Practice	By Adopting Technology (Specify)
1	Total cost of cultivation	395000.00	385000.00
2	Yield in Tons	235	325
3	Cost/Ton (Rs.)	1680.00	1184.00
4	Methodology for marketing of produce	Local Marketing	Outer Marketing (Fruit mandi)
5	Net Income (Rs.)	1680000.00	2260000.00



Farmer has adopted technology of tissue culture for banana plantation which has resulted in his net income of Rs. 22,60,000/- though the total cost of cultivation & Cost/Tonnes have decreased.



Farmer has adopted technology of tissue culture for banana plantation which has resulted in his net income of Rs. 3,21,000/- though the total cost of cultivation & Cost/Tonnes have decreased.

5. Uttar Pradesh

Name of the Farmer	Nagendra Maurya
Name of Farmer's Father	Jitan Prasad
Village	Totaha
Mandal/Block	Santha
District	SantKabir Nagar
Contact No.	9935148372
Name of the Crop	Banana TC-G9, Area-0.5 ha.
Technology adopted	Banana TC-G9

SI. NO	Cultivation Practices	By normal Practice	By Adopting Technology (Specify)
1	Total cost of cultivation	62000.00	56000.00
2	Yield in Tons	32	40
3	Cost/Ton (Rs.)	1937.00	1400.00
4	Methodology for marketing of produce	Local Marketing	Outer Marketing (Fruit mandi)
5	Net Income (Rs.)	208000.00	321000.00

5.8 Directorate of Arecanut and Spices Development, Calicut

The Directorate of Arecanut and Spices Development (DASD) is a subordinate office under Ministry of Agriculture, Government of India, entrusted with the responsibility of development of Spices, Arecanut, Betel vine and Aromatic plants at National level. The Directorate monitors the development programmes implemented by the states in spices under MIDH.

5.8.1 The mandate of the Directorate

- Assessment of the developmental needs of the crops entrusted to it.
- Formulation of Central Sector / Centrally Sponsored Schemes and implementation of the same either directly or through the State Governments, Agricultural Universities etc.
- Monitoring the implementation of Central Sector / Centrally Sponsored Schemes and coordinating the development activities.
- Rendering technical assistance to State Governments and other agencies on

commodity development programmes.

- Collection and compilation of statistics of area, production, export, import, prices etc. and dissemination of the same to the Central and state Governments and other agencies.
- Keeping liaison with the research institutes and extension agencies and acting as a two-way channel in the transfer of technology.
- Undertaking the publicity and propaganda works relating to the commodities.
- Assisting the Central and State Governments on all matters relating to the development of the commodities.

5.8.2 Schemes implemented by the Directorate

(i) Planting Material Production Programme

The NHM/MIDH programmes on spices implemented in different States such as area expansion, replanting/rejuvenation etc. requires a sizeable quantity of quality planting materials of the respective spices crop. Non-availability of quality planting materials of high yielding varieties is identified as a major constraint in achieving the desired productivity of these crops as conceived in the Mission. Quite a good number of varieties of various spices and aromatic crops have been evolved in various research centres. However, for want of basic infrastructure and adequate funds, the required quantum of nucleus planting material are not being generated so that it can be made available for large scale multiplication and distribution to the farmers. In order to improve the situation, the Directorate had taken up the production of nucleus planting material in association with the SAUs and ICAR Institutes in different states of the country. The planting materials produced are made available

for further multiplication and distribution to the farmers. Establishment of nursery infrastructure facilities and upgradation of existing facilities are also done under this programme. To regulate the quality of planting material produced in public and private nurseries, the directorate is undertaking nursery accreditation programme.

(ii) Establishment of Frontline Demonstrations

To promote adoption of high yielding/disease tolerant/resistant varieties and advanced production/management technologies evolved for different spices and aromatic crops, assistance is provided to SAUs/ ICAR institutes for demonstration of these technologies. 100 percent assistance is provided for promotion of different technologies like organic farming, micro irrigation of spices, varietal demonstrations etc.

(iii) Innovative Programmes

Project based pilot programmes on proved technologies from SAUs/ ICAR institutes are supported by the Directorate based on the feasibility of the proposals. These technologies on successful demonstration are recommended for larger scale adoption at farmers fields.

(iv) Skill Development Training

The objective of the scheme is to enable and mobilize a large number of unemployed youth to take up outcome-based skill training. The scheme offers meaningful, industry relevant, skill-based training to enable youth to get wages or self employment leading to increase earnings and/or improved working conditions such as getting formal certifications for informal skills. The schemes have training durations for 200 hours for fresh entrants. The Directorate is implementing such 200-hour training modules for skill sets like Gardener/

coriander cultivator/chilli cultivator etc. The facilities and expertise of KVKs, State Agricultural Universities and authorized training centres are utilized for imparting skill training for selected job roles. The skill trainings and evaluation of the trainees are done as per the guidelines provided in ASCI National Occupational Standards.

(v) Transfer of Technology Programmes

New technologies in crop production developed at various Central Research Institutes and State Agricultural Universities can be effectively utilized in the field, only if the farmers are given required training in employing these technologies. In order to popularize the high yielding varieties and scientific technologies available from Research Institutes among the extension workers of the State Departments and Progressive farming community on the cultivation of Arecanut, spices, medicinal and aromatic plants, National Level Seminars @ Rs 5 lakhs/event, State level Seminars @ Rs 3.00 lakhs/event, District level Seminars @ Rs 2.00 lakhs/event and Farmers training @ Rs. 75000 Rs./training are implemented by the Directorate as per the cost norms provided in the operational Guidelines of the MIDH.

(vi) Collection and Compilation of data related to mandate crops.

Collection and compilation of reliable data are essential to assess the demand and supply of spices and arecanut and to address the problems and constraints in this sector. Since inception, the Directorate had been assigned with collection and compilation of statistics of area, production, export, import and prices etc. of various spices and arecanut and dissemination of the same.

(vii) Promotion and Publicity

In order to disseminate the information on innovations and newer technologies to a

larger audience of progressive farmers and researchers, Directorate brought out several publications on mandatory crops in English, Hindi and vernacular languages and have also participated in various exhibitions.

5.8.3 Major Achievements of DASD during 2018-19

During the year 2018-19, the directorate had an outlay of Rs. 13 crores for development and promotion of spices, arecanut, aromatic crops and betelvine. Following are the major activities of the Directorate in 2018-19

- **Planting Material Production Programme**

The Directorate is directly involved in the production and distribution of quality planting material of high yielding varieties of spices and technology transfer programmes in association with State agricultural Universities and Central Institutes across the country. Planting material production programmes worth Rs. 6 crores was implemented during the year. More than 850 tonnes of seeds/rhizomes and 30 Lakhs of seedlings of various spices were produced and distributed under this programme.

- **Accreditation of Spice Nurseries**

DASD is engaged in accreditation of nurseries to improve the quality of planting material disbursed through various nurseries across the nation. About 48 nurseries are recognised under DASD accreditation programme till date. Accreditation norms for large cardamom nurseries was prepared by DASD in consultation with an expert committee and released by the Horticulture Commissioner.

- **Upgradation of Spice Nurseries**

Under the programme ‘Upgradation of spice nurseries’, financial assistance was given for improving the infrastructure facilities of spices nurseries established at different State Agri Universities to meet accreditation norms.

- **Establishment of Nursery Infrastructure**

Nursery infrastructure facilities for spices are established at 5 different SAUs under this programme, during 2018-19. Assistance is also provided for establishing five nurseries exclusive for large cardamom (One nursery in each district) under state department farms in Sikkim state for ensuring availability of quality disease free planting material to the farmers.

- **Skill Development Trainings**

Skill based certificate trainings on selected agri -based job roles are being provided to unemployed rural youth. About 750 youth were trained and certified under this programme during last two years (2017-18 & 2018-19)

- **Innovative Programmes**

- Innovative technologies such as single bud planting and protray method of nursery raising in ginger and turmeric had been promoted by the directorate. Special programme on micro-rhizome production has been undertaken in association with Kerala Agri University and Indian Institute of Spices Research to promote disease free seed material in these crops.

- Participatory mode rehabilitation programme for pepper gardens was implemented in two panchayaths of Kannur district in Kerala (Cheruthazham &

Kuttiyattur Panchayaths). This programme has resulted in significant increase in productivity and litre weight of pepper in the project area.

- A project on varietal authenticity and purity identification in Black Pepper is initiated at IISR, Calicut to develop a foolproof varietal authentication method using morphological, chemical and molecular markers.

- Hi-Tech boroj structure for quality planting material production of betelvine in protected structure with micro irrigation system is established in Odisha.

- **Seminar/Farmers Training Programmes**

One national level Seminar, five state level seminars , 17 district level seminars and 129 farmers training programmes were conducted by the directorate during the year. Around 10,000 farmers were given training on different aspects of cultivation, management, post harvest management and processing of spice crops.

- **Frontline Demonstrations**

250 units of Demonstrations were laid across the country on advanced technologies in spice cultivation.

- ❖ **Collection and Compilation of data related to Spices**

- ❖ Estimates on area and production of various spice crops and arecanut were collected from all the State Depts concerned and compiled to arrive estimates at National level. The same has been disseminated to different National/State level agencies engaged in research and planning.

- ❖ To improve the crop estimation procedure, the Directorate in association with Horticulture Statistics Division organized a

- Training cum workshop for nodal officers of SHOSA (State Horticulture Statistics Authority) to apprise them on the current system of collection of horticulture statistics and their roles and duties in the same.
- ❖ Conducted quick surveys in the major pepper growing States like Kerala, Karnataka and Tamil Nadu to find out the likely production of black pepper during the ensuing crop season 2018-19.
- **Publicity Activities**
 - ❖ Participated in national/state level exhibitions/programmes in connection with development of spices across the country.
 - ❖ 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.
 - ❖ Publications in English/Hindi and vernacular languages have been released for development of spices.

Photographs on DASD activities 2018-19



Horticulture Commissioner, Dr. BNS Murthy releasing guidelines for model sucker nursery in large cardamom



Interactive session at SHOSHA training held at ICAR-CCARI,Goa



Launching of nursery upgradation programme, held at UAHS Shimoga, Karnataka



Quick survey for predicting pepper production in 2018-19



Bush pepper HDP established at CCARI, Goa

5.9 Directorate of Cashewnut and Cocoa Development, Kochi

The Directorate of Cashewnut and Cocoa Development functioning at Kochi is the subordinate office of the Department of Agriculture, Cooperation & 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 development programmes of cashew and cocoa in the country and monitor the implementation of development programmes formulated and executed by the State Governments under Mission for Integrated Development of Horticulture. The DCCD will also act as a nodal agency for accreditation of existing cashew/cocoa nurseries and issue recognition. The formation of this Directorate was a breakthrough in the holistic development of these two versatile horticulture crops.

5.9.1 Major Schemes

- **New Plantation Development- 2nd and 3rd year maintenance**

The main objective of the programme is to develop new plantations with clones of high yielding varieties of cashew and hybrid seedlings of Cocoa in the farmer's field. This programme improves the production and productivity of cashew and cocoa in our country and contributes significantly for the upliftment of rural agrarian economy especially from marginal and degraded land. Financial assistance @ Rs.20,000 per ha for meeting the expenditure on planting materials and cost of materials

for INM/IPM in three installments in 60:20:20 subject to survival rate of 75% in 2nd year and 90% in 3rd year. The 2nd and 3rd year maintenance of the cashew/cocoa plantations established during 2016-17 and 2017-18 is undertaken during the current financial year.

- **Replanting of Cashew Senile Plantation**

This programme envisages to remove the old senile cashew plantations and replanting with high yielding cashew grafts by which our domestic production and productivity of cashewnut can be increased. The pattern of assistance will be as per MIDH guidelines i.e. 40% of the cost subject to Rs.20000/- per ha in three installments in 60:20:20 subject to survival rate of 75% in 2nd year and 90% in 3rd year. The 2nd and 3rd year maintenance of the cashew replanted during 2016-17 and 2017-18 is undertaken during the current financial year.

- **Cashew Productivity Improvement Programme through High Density Planting**

The objective of the programme is to improve the production and productivity of cashew in an unit area by high density planting technique. High density planting (HDP) is a technique which is capable of increasing the productivity per unit area by accommodation more number of plants per unit area. During 2018-19, the Directorate proposes to implement 2nd year maintenance of cashew HDP established during the year 2017-18

- **Accreditation of Cashew/Cocoa Nurseries**

Production and distribution of good quality grafts/ hybrid cocoa seedlings is the most important thrust area identified

for plantation development. The DCCD will also act as a nodal agency for accreditation of existing cashew/cocoa nurseries for ensuring the quality of planting materials.

- **Publicity for Crop Promotion**

This programme is intended to take up intensive publicity measures for promotion of cashew and Cocoa by dissemination of latest productive technologies to the farming community and other target groups coming under the fold of cultivation, processing, marketing and export by organizing District level seminar, state level seminar, fairs on cashew and cocoa in various states and also national and international seminar/conference.

- **HRD in Cashew and Cocoa**

The objective and focus of this programme is to bridge the gap of knowledge and skill, of both officers and extension workers engaged in implementation of cashew and cocoa development programmes under NHM and farmers/entrepreneurs or unemployed women on cashew and cocoa farming and processing. The programme provides appropriate training to the farmers in various aspects of cashew and cocoa farming consisting of nursery management, management of diseases, canopy management, improved production technologies, post harvest management and processing, drying and storage, preparation of primary and value added products.

5.9.2 The Salient Achievements under the Scheme during 2018-19

- Plantation maintenance activities in an area of 2358 ha under cashew and 2333 ha

under cocoa established during 2016-17 and 2017-18 under new plantation programme is completed in the states of Andhra Pradesh, Karnataka, Kerala and Tamil Nadu by providing financial assistance under MIDH. This has resulted in the significant increase in cashew production and productivity in the country.

- Under replanting programme, maintenance works has been done in the plantations replanted in the year 2017-18 and 2016-17 with high yielding varieties in an area of 2005 ha in the states of Odisha, Goa, Karnataka and Tamil Nadu.
- The Directorate has established 64 ha of High density cashew plantations with 400 nos cashew grafts per ha in a spacing of 5 m× 5 m in Gadag district of Karnataka with the guidance of K.H Pattil Krishi Vigyan Kendra, Hulkoti. The 2nd year maintenance works of these plantations has been completed in the current monsoon season.
- Forty two cashew/cocoa nurseries in the states of Andhra Pradesh, Karnataka, Kerala, Maharashtra, Odisha and Tamil Nadu has been accredited by the Directorate based on the assessment made by the expert team constituted for the production and distribution good quality cashew grafts and cocoa hybrid seedlings. This ensures quality of planting materials and increases the productivity of plantation in the country.
- As part of publicity and crop promotion activities, one National level seminar, 3 field days and 30 district level seminars on cashew and cocoa has been organized in various states in association with State Agricultural Universities, KVK's, Corporations and ICAR institutes.

- Under the HRD programme, one National level trainings, 18 farmers training, 2 exposure visit and 18 cashew apple utilization training has been conducted in association with SAU's and ICAR institutes.
- Under the HRD programme, 1000 farmers, 50 officials and entrepreneurs trained on cocoa and cashew farming practices in association with SAU's and ICAR institutes.
- Around 450 unemployed women were trained on preparation of value added edible products from cashew apple under training programme on cashew apple utilization.
- The preparation of an Android App on Cashew Cultivation is in final stage. This will narrow the gaps in knowledge and skill, both managerial and technical to all the people involved in the cashew and cocoa sector.
- The DCCD has started DBT payment to the beneficiary farmers through PFMS portal.
- The Directorate has prepared citizen/client charter in line with performance monitoring and evaluation system and sevottam guidelines to place in the website.

Chapter 6

National Food Security Mission (NFSM)

6.1 National Food Security Mission was launched in 2007-08 to increase the production of rice, wheat and pulses by 10, 8 and 2 million tonnes, respectively by the end of 11th Plan through area expansion and productivity enhancement; restoring soil fertility and productivity; creating employment opportunities; and enhancing farm level economy. The Mission was continued during 12th Plan with new target of additional production of 25 million tonnes by the end of 12th Plan. Beyond 12th Plan (2017-18 to 2019-20), the programme has been decided to continue with new targets to achieve 13 million tonnes of additional foodgrains production comprising of Rice – 5 million tonnes, Wheat- 3 million tonnes, Pulses- 3 million tonnes and Nutri-cum-Coarse Cereals (Maize & Barley) - 2 million tonnes by 2019-20.

6.2 The basic strategy of the Mission is to promote and extend improved technologies of package of practices of crops through various types of demonstrations (FLDs/Cluster) distribution of HYVs seeds, production of seeds, distribution of micro-nutrients/ soil ameliorants/ integrated nutrient management/integrated pest management, improved resource management tools/ machineries /implements, efficient water application devices along with capacity building of farmers and local initiatives; award for best performing districts etc.

6.3 Beyond 12th Plan, NFSM is being implemented in identified districts of 29 states of the country. **NFSM-Rice** is implemented in 194 districts of 25 states, **NFSM-Wheat** in 126 districts of 11 states, **NFSM- Pulses** in

638 districts of all 29 States, **NFSM-Coarse Cereals** in 269 districts of 27 states except Goa and Kerala. **NFSM-Nutri-Cereals** is being implemented in 202 districts of 14 states.



6.4 Monitoring & Evaluation at National level: A three-tier monitoring mechanism was inbuilt in NFSM at National, State and District levels. At National level, NFSM-General Council (GC) under the chairmanship of Union Agriculture and Farmers Welfare Minister was constituted to oversee the implementation of NFSM and take policy decisions for mid-term corrections. National Food Security Mission- Executive Committee (NFSMEC) under the chairmanship of Secretary (AC & FW) periodically reviewed the State Action Plans and the progress of the programme of each state. National Level Monitoring Teams (NLMTs) reconstituted for monitoring the National Food Security Mission activities in respect of NFSM States. Each team is comprised of experts in the field of rice, wheat, pulses and nutri-cereals as per requirement, and the respective Directors of the Crops Development Directorates of Ministry of Agriculture and Farmers Welfare as Coordinator. Altogether, there are eight (8) National Level Monitoring Teams (NLMTs).

6.5 At state level, the monitoring is undertaken by 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.

6.6 The Mid-Term Evaluation and the Impact Evaluation study of NFSM for 11th Plan and 12th plan were conducted by the independent agencies to assess the impact of the programme in increasing the production and productivity of foodgrain crops. The finding of impact evaluation for XII Plan under NFSM is as under;

- The Impact Evaluation Study Team strongly recommended for the continuation of NFSM, as it has the potential of achieving the set goals of increased food production and benefitting the farming community with higher yields and income.
- A separate mission for millets may be constituted in view of reduction in its area and growing awareness of nutritional benefit of millets.
- Ensure PMTs in place for desired results and impacts (Majority NFSM districts have not engaged). It is recommended that for proper monitoring of the scheme and to enable transfer of technology to farmers, provision of consultants and technical assistants at state and district levels may be provided in PMT. If needed, qualification and experience should also be relaxed as per rule. Also a provision for accountant and computer operator must be provided in PMT in view of implementation of DBT.

- Enhance research support dove tailing farmer's needs-Crop(s)/location specific as also there is need to enhance FLD's funding by at least Rs.1000 per ha.
- Funding for Plant Protection chemicals, Bio-pesticides and weedicides need enhancement upto Rs. 1000 per ha due to increase in prices. This can also be addressed in local initiatives
- Encourage post-harvest, value addition at farm/rural level to reduce post harvest losses and improve rural economy and employment by organizing farmers into FIGs, CIGs, FPOs and Farmer Federations.
- Use of micronutrient and lime should be promoted in accordance with the soil health card being provided to the farmers.

6.7 Funding pattern: The programme is being implemented on 60:40 sharing basis between GOI and state and 90:10 sharing basis for North Eastern States and 3 Himalayan States from 2015-16.

6.8 Interventions achievement during 2017-18: Recommended agronomic practices have been encouraged through various demonstrations of rice, wheat, pulses & coarse cereals in 18.00 lakh ha area. Nearly, 11.98 lakh quintals of high yielding varieties/hybrids rice, wheat, pulses and Coarse Cereals have been distributed. 19.67 lakh ha area has been treated with soil ameliorants (Micronutrients/ Gypsum/Lime/ Bio-fertilizers) and 27.72 lakh ha area has been covered under Integrated Pest Management (IPM). Nearly 3.26 lakh improved farm machineries including pumpset & mobile raingun have been distributed. 0.23 lakh ha area has been covered under sprinkler system, 287.05 lakh metres water carrying pipes have been distributed. About 12089 cropping systems based trainings were conducted for capacity building of farmers.

6.9 Special Focus on Pulses:

(a) A programme on Additional Area coverage of Pulses: During Rabi/Summer 2018-19, the programme has been implemented with an allocation of Rs.296.03 crores (GOI Share) to increase production of rabi/ summer pulses through area expansion of rabi Pigeonpea, Gram, Pea and Lentil and Greengram and Blackgram during summer. The additional allocation for implementation of the above said programme has been made to 15 states covered under NFSM pulses.

(b) Inter-cropping of Pulses with Sugarcane: During the year 2018-19, a new programme has been initiated under NFSM with the objective of increasing pulses production in the country i.e., “National Food Security Mission (NFSM) - Intercropping of Pulses with Sugarcane” in 12 States and 3 Central Agencies involved in training & demonstrations namely IISR, Lucknow, DoSD, Lucknow & SBI Coimbatore. The total allocation during 2018-19 is Rs. 5.55 crore (Central share).

(c) Targeted Rice Fallow (TRFA): During 2016-17, the TRFA was implemented in 15 districts of 6 states. During 2017-18, the scheme has been extended to 40 districts and 4000 village with a view to cover 15.00 lakh ha under pulses (12.00 lakh ha) oilseeds (3.0 lakh ha) with support for cluster demonstrations, minikit distribution and training to the farmers etc. according to the report an area of 10.72 lakh ha were covered under pulses (9.13 lakh ha) and oilseeds (1.60 lakh ha) in rice fallows covering 43 districts and 3739 villages. The additional area coverage resulted a production of 9.04 lakh tonnes of pulses and oilseeds as against the production target of 10.00 lakh tonnes. During 2018-19, the area targeted to cover 18.65 lakh ha under pulses and oilseeds with an additional production of 1.35 million tonnes.



6.10 Production of Foodgrain: The production of foodgrain has increased during XI Plan and XII Plan, the increase in production during 2016-17 and 2017-18 is as under;

Crop	2016-17	2017-18*	% Increase
Rice	109.7	112.91	2.93
Wheat	98.51	99.7	1.21
Pulses	23.13	25.23	9.08
Nutri-cum-Coarse Cereals	43.77	46.99	7.36
Total	275.11	284.83	3.53

*4th advance estimates, DES

6.11 New Initiatives for Pulses:

- Increase in number of districts from 468 of 16 States in the year 2012-13 to 638 districts of 29 states of the country in 2016-17 under revamped NFSM-Pulses.
- Increase in incentive to Central and State seed producing agencies for certified seed production from Rs. 25/- per kg to Rs. 50/- per kg;
- Increase in assistance for distribution of certified seeds of pulses to the farmers i.e. from Rs. 25/- per kg. to Rs. 50/- per kg;
- Increase in the cost norms of Cluster demonstrations and cropping system based demonstrations from Rs. 7500/- to Rs. 9000/- per ha and from Rs. 12500/- to Rs. 15000/- per ha respectively;

- Increase in Minimum Support Price (MSP) of Tur (Arhar) from Rs. 5450/- per quintal to Rs. 5675/- per quintal, Moong from Rs. 5575/- per quintal to Rs. 6975/- per quintal, Urad from 5400/- per quintal to Rs. 5600/- per quintal, during Kharif 2018-19;
- Organising Frontline Demonstrations at farmers' fields by Indian Council of Agricultural Research (ICAR) Institutes, State Agricultural Universities (SAUs).
- Distribution of seed minikits of pulses free of cost for popularization of newer varieties amongst the farmers;
- Created 150 seed hubs at ICAR institutes, SAUs and KVKs to ensure availability of seeds of pulses;
- Increase in additional breeder seed production of pulses through twelve centres of ICAR and SAUs;
- Creation of buffer stock for pulses;
- Promotion of pulses in Targeted Rice Fallow (TRFA) in Eastern States; and

6.12 New initiatives taken for increasing production and productivity of **Nutri-Cereals from 2018-19 onwards:**

- ❖ Breeder seed production of nutri-cereals.
- ❖ Creation of seed hubs under consideration.
- ❖ Incentive for certified seed production.
- ❖ Distribution of seed minikits.
- ❖ Strengthening/creation of Center of Excellences.
- ❖ Publicity of nutri-cereals through electronics, print media and road show etc.
- ❖ Inclusion of nutri-cereals products in various social sector schemes.
- ❖ 2018 declared as National Year of Nutri-Cereals.
- ❖ Organizing workshop at National, State and District levels.

6.13 Zaid/ Summer Campaign:

Apart from regular conferences on Kharif and Rabi seasons, for the first time the Government has organized a National Conference on Agriculture for Zaid/ Summer Campaign-2019 at Pusa New Delhi on 24.01.2019 with the objective to focus on potential crops grown in Zaid/Summer season across the country and to ensure availability of critical inputs to the farming community during Zaid/Summer season for increasing the foodgrains production and enhance farm economy.

Chapter 7

National Food Security Mission (Oilseeds & Oilpalm)-NFSM (OS&OP) Erstwhile scheme “National Mission on Oilseeds and Oil Palm (NMOOP)”

7.1 Overview

Oilseed cultivation is undertaken across the country in about 26.00 million ha, covering 72% under rainfed areas and producing around 30.00 million tonnes of oilseeds. Nine oilseeds are the primary sources of vegetable oil in the country. Among nine major oilseeds Soybean (39%), Groundnut (26%) and Rapeseed-Mustard (24%), contribute more than 88% of total oilseeds production in the country. However, in terms of vegetable oil production Rapeseed-Mustard, Soybean and Groundnut contribute 31%, 26% and 25%, respectively. Area, production and Yield of Oilseeds crops during 2012-13 to 2018-19 are given below:

Table:1 Area, Production and Yield of Oilseed Crops in India

Year	Area (Million ha)	Production (Million tonnes)	Yield (Kg/ha)
2012-13	26.48	30.94	1168

2013-14	28.05	32.74	1167
2014-15	25.59	27.51	1074
2015-16	26.08	25.25	968
2016-17	26.17	31.27	1194
2017-18	24.64	31.30	1270
2018-19	25.52	31.50	1234

India is heavily dependent on imports to meet its edible oil requirements and is the largest importer of vegetable oils in the world followed by China and USA. Of all the imported edible oils, share of palm oil is about 60% followed by soybean oil with a share of 25% and sunflower oil (12%). Import growth in respect of edible oils during the last decade was about 174%. The import figure of edible oils during 2017-18 reveals that India imported a total of 15.35 million tonnes of vegetable oils costing Rs. 74996 crore. The per capita consumption which was 15.80 kg per person per annum during 2012-13 increased to 19.30 in 2017-18 (Table-2)

Table:2 Demand and Supply of Vegetable Oils in India

Year	Total domestic demand	Domestic availability	Import	Import (%) of total domestic demand	Value of import (Rs Cr)	Per capita availability (kg/yr)
2012-13	19.82	9.23	10.81	54.54	53562	15.80
2013-14	21.06	10.08	10.98	52.14	44038	16.80
2014-15	21.71	8.95	12.71	58.54	64894	18.30
2015-16	24.04	9.19	14.85	61.77	68677	19.10
2016-17	24.75	10.75	14.00	56.57	73048	18.75
2017-18	25.88	10.52	15.35	59.31	74996	19.30

Source: Department of Sugar & Vegetable Oils; DG, CI&S, Dept of Commerce, Kolkata

In view of the aforesaid background Oilseeds Division is mandated with the objective of increasing production and productivity of oilseeds and area expansion under oil palm & TBOs for enhancing domestic availability of edible oils.

7.2 Major Schemes and Objectives

In view of encouraging cultivation of oilseeds including Oil Palm and Tree Borne Oilseeds (TBOs), the Govt. of India implemented National Mission on Oilseeds and Oil Palm (NMOOP) a Centrally Sponsored Scheme comprising of three Mini Mission (MM) one each for Oilseeds (MM-I), Oil Palm (MM-II) and TBOs (MM-III) from 2014-15 to 2017-18. NMOOP scheme is implemented on sharing of expenditure between Central and State Government in the ratio of 60:40 for general category of states, and 90:10 for North Eastern and Himalayan states. However, few interventions like purchase of breeder seeds by both state and central seed agencies, supply of seed minikits to the farmers through central seed agencies, development of seed infrastructure at SAUs/KVKs farms, Front Line / Cluster Demonstrations through ICAR/KVKs, R&D activities and Kisan Mela etc. are supported with 100% Central assistance.

As per direction of the Expenditure Finance Committee (EFC) the NMOOP scheme has been subsumed with National Food Security Mission (NFSM) and interventions related to erstwhile NMOOP are taken as the sub-components of NFSM- Oil seeds & Oil palm, comprising of three sub-missions of NMOOP namely NFSM-Oilseeds, NFSM-Oil palm and NFSM-Tree Borne Oilseeds from 2018-19.

7.3 Road Map

Considering the growing domestic demand for edible oils, the staggering deficiency and the cost to the exchequer on account of imports, the urgency of scaling up the oilseeds production in the country does not need over-emphasis. It has now been planned to achieve a production of 45.64 million tonnes from nine annual oilseed crops by 2022-23, expecting an additional production of about 15.58 million tonnes over and above the 30.06 million tonnes production during (QE 2016-17). Thus, the availability of total vegetable oil from domestic production of nine annual oilseed crops would be about 13.69 mts by 2022 (at 30 per cent recovery) as against the current annual output of about 7.0 mts. Status and anticipated area, production and yield of oilseed crops in India is as below:

Table:3 Status and anticipated area, production and yield of oilseed crops in India

Crop	Quinquennium (QE) ending 2016-17			Year 2022		
	Area (m. ha)	Production (m. tons)	Yield (tons/ha)	Area (m.ha)	Production (m. tons)	Yield (tons/ha)
Soybean	11.38	11.94	1.05	12.50	18.75	1.50
Groundnut	4.99	7.39	1.47	5.72	9.72	1.70
R & M	6.19	7.39	1.19	7.47	11.95	1.60
Sunflower	0.59	0.44	0.75	0.97	0.87	0.90
Safflower	0.16	0.08	0.53	0.27	0.22	0.80
Sesame	1.75	0.77	0.41	1.97	1.18	0.60
Niger	0.26	0.08	0.32	0.32	0.16	0.50
Castor	1.06	1.80	1.70	1.40	2.45	1.75
Linseed	0.28	0.14	0.49	0.57	0.34	0.60
Total	26.67	30.06	1.13	31.20	45.64	1.46

The vegetable oil availability from secondary sources such as coconut, cotton seed, rice bran, solvent extracted oil (SEO) and tree & forest origin has been estimated at 5.22 million tonnes by 2022. Consequently, the anticipated vegetable oil availability (primary + secondary + oil palm) would be around 17.03 million tonnes including the possible reduction in imports to the tune of about 15 per cent from the present 67 per cent by 2022. This would be an impressive achievement of reduction in import burden vis-à-vis present status of import.

7.4 Strategies

The strategies for enhancing the productivity (and profitability) of oilseed based production system have been prepared for annual oilseeds and for oil palm in the country. The interventions/ strategies proposed in oilseeds are time tested with scale neutrality that can be implemented for enhancing the productivity of oilseeds based production system with necessary institutional support and handholding. The proposed strategies categorized under three situations are as follows:

- i. Increasing seed production and distribution of newly released varieties.
- ii. Low cost technologies with high impact on productivity resulting in higher income.
- iii. Technologies with high impact that involve reasonable investment with high return on investment (ROI), with emphasis on eco-friendliness, high input use efficiency and
- iv. Strategies with emphasis on quality improvement and value addition leveraging technologies with a bearing on the employment through skill/ entrepreneurship development.

The newer opportunities to explore non-traditional seasons and regions for crops are also projected that have proven success for area expansion and integration into major cropping systems.

7.5 Programmes of NFSM (OS&OP) during 2018-19:

NFSM (OS&OP) programme is being implemented in 28 states with NFSM-Oilseeds in 27 states, NFSM-Oilpalm in 12 states and NFSM-TBOs (Tree Borne Oilseeds) in 10 states involving 5 Central seed producing agencies and 6 need based R&D projects through 5 R&D institutions with Budgetary Estimate (BE) of Rs.400 crore.

The programme wise salient features are given below:

7.5.1 NFSM-Oilseeds:

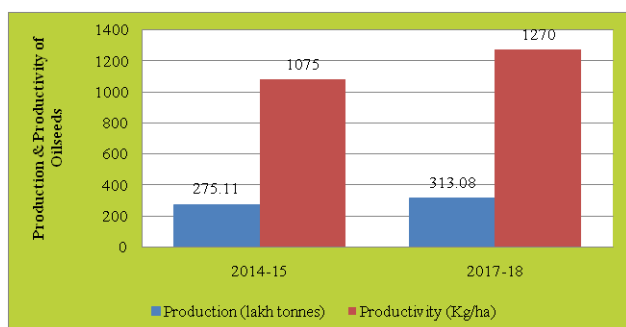
Under this Mission, financial assistance is being provided for Seed Components (production & distribution of certified seeds, seed hubs and minikits.); Inputs (Plant protection equipments, bio-pesticides, distribution of micro-nutrients, bio-fertilizers, improved farm implements, pipes, sprinklers, seed storage bins, seed treatment drums) and Transfer of Technology through Block demonstrations, Frontline Demonstrations (FLDs), Cluster Frontline Demonstrations (CFLDs), Training of Farmers and Extension Workers etc. The scheme is being implemented through State Department of Agriculture. NFSM-Oilseeds is also supporting ICAR institutes for undertaking FLDs on oilseeds crops and ICAR-KVKs for organizing cluster demonstration on oilseeds.

(A) The major Interventions and Initiatives under NFSM-Oilseeds during 2018-19 are as under:

The major interventions targeted under oilseeds

programme during the year 2018-19 are as follows:

- Approx. 6.29 lakh qtls of seed production of oilseed crops
- More than 2.26 lakh qtls of certified seed distribution
- More than 20.91 lakh seed minikit distribution
- 2.15 lakh ha block demonstrations
- 0.68 lakh ha FLD & CFLDs
- 3756 farmers & officers training
- Supply of soil ameliorants over an area of 2.90 lakh ha.
- Supply of PP chemicals/ bio-pesticides/ weedicides/ micronutrients over an area of 2.45 lakh ha
- Distribution of 1.08 lakh farm implements / equipments
- Distribution of 5774 sprinklers and 85.26 lakh mt water carrying pipes
- Oilseeds production of 31.31 million tonnes has been achieved during 2017-18 which is the highest during past four years of implementation of the programme.
- Average yield of 1270 kg/ha of oilseeds has been achieved during 2017-18, which is the highest ever.



(B) Seed Production, Minikits and FLDs during 2018-19:

In order to encourage the adoption of newly released varieties and improved agro-techniques in oilseed crops support is provided under NFSM-Oilseeds to Central Agencies viz. NSC, KRIBHCO, HIL (include NFL), NAFED and IFFDC for procurement of breeder seed (B/S), production of foundation seed (F/S) and production of certified seed (C/S) and supply of seed minikits (Kharif/Rabi/Summer) for Aspirational District under Krishi Kalyan Abhiyan and Targeting Rice Fallow Areas (TRFA) during 2018-19. In addition, support is also provided for conduct of Front Line Demonstrations (FLDs) through ICAR/SAUs network during Kharif-2018 and Rabi 2018-19.

A total of 4,54,700 qtls of various categories of seeds (B/S,F/S,C/S) were produced. Seed minikits of 8 oilseeds crops totalling 20,90,655 nos. (Including TRFA & Aspirational District) and 19,86,098 nos. were distributed during Kharif-2018 & Rabi 2018-19, through Central Seed Producing Agencies.

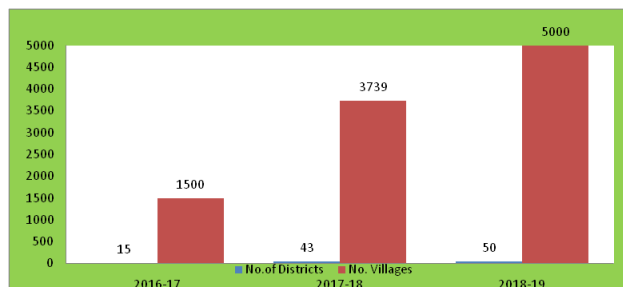
A total of (7610 FLDs) 3145 FLDs on improved varieties and agro-techniques of six oilseeds crop (Groundnut, Soybean, Castor, Niger, Sesame and Sunflower) and 4465 FLDs on 7 oilseeds crops (Groundnut, Rapeseed-Mustard, Linseed, Sesame, Safflower, Sunflower and Castor) during Kharif-2018 and Rabi 2018-19 respectively, were conducted through ICAR-AICRP network. During Kharif/ Rabi/ Summer 2018-19, a total of 60500 cluster FLDs have been planned through 545 KVKs of ICAR in different states covering (Groundnut, Soybean, Rapeseed-Mustard, Sunflower, Safflower, Linseed, Sesame, Niger and Castor) Kharif/Rabi/Summer 2018-19 Oilseeds.

About 545 no of ICAR-KVKs are involved in organizing FLDs and cluster demonstration on oilseeds during 2018-19.

(C) Targeting Rice Fallow Areas (TRFA) in six Eastern States:

A new sub-scheme under RKVY was launched in 15 districts of 6 Eastern states in Rabi, 2016-17 for utilization of rice fallows for cultivation of pulses and oilseeds. A project to cover 4.5 million ha area @ 1.5 million ha area every year for 3 years i.e. 2017-18 to 2019-20 targeting Rice fallow areas in six Eastern states namely Assam, Bihar, Chhattisgarh, Jharkhand, Odisha and West Bengal. During 2018-19, covering 50 districts and 5000 villages in these states has been implemented under NFSM –Oilseeds with a production target of 3.08 lakh tn of oilseeds.

No. of Districts and Villages under TRFA in six Eastern States



(D) Alternate Crop Plan to combat Wheat Blast:

A special project 'Alternate Crop Plan to Combat Wheat Blast' has been approved for West Bengal state during 2018-19 in 8 districts of West Bengal to replace wheat by oilseeds and pulses over an area of 1.92 lakh ha.

7.5.2 NFSM-(Oil Palm)

National Food Security Mission–Oil Palm (NFSM-OP) is dedicated to oil palm area expansion and productivity enhancement.

During 2018-19, NFSM-OP is being implemented in 13 states. But Andhra Pradesh, Karnataka, Tamil Nadu, Orissa and Mizoram are the major oil palm growing states.

Under NFSM-Oil palm, financial assistance is being provided to the farmers @ 85% cost of the planting material and @ 50% cost of the other components like maintenance cost of new plantations for four years, installation of drip irrigation systems, diesel/electric pump-sets, bore-well/water harvesting structures/ponds, inputs for inter-cropping in oil palm (during gestation period), construction of vermi-compost units and purchasing of machinery & tools etc.

R&D: 100% support is being provided to ICAR-Indian Institute of Oil Palm Research (IOPR), Pedavegi, Andhra Pradesh for Research & Development on oil palm.

Major interventions of NFSM-Oil palm during 2018-19 are as follow:

- ❖ Additional area coverage of oil palm plantation of 27000 ha.
- ❖ About 66,148 ha are under maintenance and intercropping.
- ❖ Coverage of 8555 ha under drip irrigation
- ❖ Distribution of 449 pump sets & 784 bore wells.

All these developmental efforts have resulted in area expansion under oil palm from 8585 ha in 1991-92 to 3.31 lakh ha by the end of 2017-18. Similarly, the Fresh Fruit Bunches (FFBs) production and Crude Palm Oil (CPO) have increased from 21,233 MT and 1,134 MT respectively (1992-93) to 16.25 lakh and 2.70 lakh MT respectively during the year 2017-18.

NFSM-Oil Palm



7.5.3 NFSM-Tree Borne Oilseeds (TBOs)

Assistance under NFSM-TBOs is provided to promote various TBOs namely Simarouba, Neem, Jojoba, Karanja, Mahua, Wild apricot, Cheura, Kokum, Tung and Olive having capability to grow and establish in varied agro-climatic conditions as well in the waste land of the country.

The interventions under NFSM-TBOs are integrated development of nurseries & plantation on the wasteland, maintenance of TBOs plantation, incentives for undertaking intercropping with TBOs, Research and Development, distribution of pre-processing, processing and oil extraction equipment, training of farmers, training of extension workers and local initiatives/contingency.

During 2018-19, NFSM-TBOs programme is being implemented 10 (ten) states i.e Arunachal

Pradesh, Chhattisgarh, Jammu & Kashmir, Madhya Pradesh, Maharashtra, Meghalaya, Mizoram, Rajasthan, Tamil Nadu, Tripura, Uttar Pradesh and West Bengal with plantation with plantation of TBOs in 3800 ha

7.6 Research & Development (R&D) projects under NFSM-Oilseeds & Oil-palm during 2018-19

A total number of eleven (11) R&D projects i.e five on oilseeds and six on oilpalm, have been approved with an outlay of Rs. 277.89 lakhs for 2018-19 to ICAR/ SAUs/ NSC on 100% funding by Govt. of India.

7.7 Budget Allocation:

During 2018-19, against the Budgetary Allocation of Rs.350.00.crore an amount of Rs. 341.23 crore has been released to the programme

implementing States, Central Agencies and R&D Institutions as detailed below:

(Rs. in crore)

NFSM (OS&OP)	Allocation (2018-19)	Release of fund
A. States	250.00	242.54
i. NFSM-Oilseeds		178.06
ii. NFSM-Oilpalm		60.12
iii. NFSM-TBOs		4.36
B. Central agencies/ R&D institutions	100.00	98.69
Total	350.00	341.23

7.8 Implementation of Direct Benefit Transfer (DBT) – an initiative under NMOOP:

Notification for implementation of Direct Benefit Transfer (DBT) for NMOOP, has been published vide SO 1343(E) dated 24th April, 2017. NMOOP-DBT portal has been created to facilitate the NMOOP implementing states for updating the beneficiary details. The DBT-NMOOP portal is used by the NMOOP implementing states for uploading of the DBT linked beneficiary details.

7.9 Fund flow (%) under SCSP and TSP:

The release of fund under NFSM (OS&OP) programme is made to the states with category wise break-up for SC/ST with specific instruction in the release letter that the funds earmarked for SC/ST category cannot be diverted for General category. Even while conveying the re-validation of previous year's unspent balance to the states, it is specifically mentioned for category-wise (SC/ST) break-up of amount that is to be utilized by the state.

7.10 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 for implementing the NMOOP programme.

7.11 Extension Activities:-

The Division is also organizing Kisan Mela, Seminar, Workshop, Brainstorming session, exhibition for mass awareness of NMOOP programme and activities among the stakeholders including farmers. The details of events during 2018-19, are as follow:

- Organization of National Seminar of Vegetable Oil at, PJTSAU Hyderabad to discuss the Roadmap of Vegetable Oil Sector.
- Organization of National Seminar on Oilseeds at DGR Junagarh in April 2018.
- Organization of National Kisan Mela on Soybean at Betul, IGKV Jabalpur in September, 2018.
- National Workshop of TRFA at Raipur in September 2018.
- National Kisan Mela on Groundnut at ICAR-DGR, Junagarh in October, 2018.
- Participation in Krishi Khumbh Mela 2018 at IISR Lucknow in October, 2018 to showcase NFSM (OS&OP) schemes.
- Launching of NFSM website including NFSM (OS&OP) by Secretary DAC&FW in July, 2018.
- FAO- TRFA Study Workshop at Raipur in January, 2019
- Organization of National Kisan Mela on Rapeseed-Mustard at Bharatpur in February 2019

- Organization on National Kisan Mela on Sunflower at KVK Nimpith, West Bengal in March 2019.
- DD Kisan Programme on Reapseed-Mustard in February, 2019 and on TBOs in March, 2019.
- During the year 2018-19 six R&D projects were sanctioned to ICAR/SAUs on oilseeds and oil palm to demonstrate to latest technologies, new varieties and state specific needs
- The Division in consultation with ICAR-IIOPR, has initiated to Reassess the Oil Palm Potential Area in the country
- The Division in consultation with ICAR-IIOPR and Oil palm stake holders has developed recommended package and practices for White fly incidence in Oil palm plantation.
- Parliamentary Standing Committee (Agriculture) reviewed the Oilseeds promotion programmes in November 2018.

7.12 Policy Initiatives:

- The Division in consultation with CACP has prepared “FFBs Price Fixing Mechanism and Policies” to provide MSP of Oil palm crops. The report is under submission to Cabinet Secretariat.
- PMO office reviewed the Oilseeds and Oil Palm promotion policy in July 2018.
- The Division in Consultation with Trade Division DAC&FW and Ministry of Commerce is maintaining proper import duty structure of oilseeds and vegetable oils to safeguard the interest of the farmers.

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Chapter 8

National Mission for Sustainable Agriculture (NMSA) & Pradhan Mantri Krishi Sinchayee Yojana (PMKSY)

8.1 Overview

National Mission for Sustainable Agriculture (NMSA) is one of the eight Missions outlined under National Action Plan on Climate Change (NAPCC) and aims at promoting sustainable agriculture by devising appropriate adaptation strategies/dimensions. During 12th Five Year Plan, these strategies/dimensions were embedded and mainstreamed into Missions/Programmes/Schemes of Department of Agriculture, Cooperation & Farmers Welfare (DAC&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, and 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 is envisaged as one of the eight Missions outlined under National Action Plan on Climate Change (NAPCC), NMSA aim at promoting Sustainable Agriculture through climate change adaptation measures. The major thrust is enhancing agriculture productivity especially in rainfed areas focusing on integrated farming, soil health management, and synergizing resource conservation.

From the year 2018-19, NMSA is being implemented as submission/sub-umbrella scheme under Umbrella Scheme of 'Green Revolution-Krishonnati Yojana'. The Centrally

Sponsored and Central Sector Schemes of NMSA are as under:

A) Centrally Sponsored Schemes

- Rainfed Area Development (RAD)
- Sub Mission on Agro Forestry (SMAF)
- Soil Health Management (SHM)
- Paramparagat Krishi Vikas Yojana (PKVY)

B) Central Sector Schemes

- Soil and Land Use Survey of India (SLUSI)
- National Rainfed Area Authority (NRAA)
- Mission Organic Value Chain Development in North Eastern Region(MOVCDNER)
- National Centre of Organic Farming (NCOF)
- Central Fertilizer Quality Control and Training Institute (CFQC&TI)

8.2 Rainfed Farming System

Food grain production in the country accrues from approximately 140.13 million hectare of cultivated land. Of this, 68.38 million hectare is irrigated and the remaining area of about 71.74 million hectare is under rainfed conditions. 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 larger share in the overall production of food grains

in the country. In view of this, 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, appropriate farming systems etc.

8.2.1 Per Drop More Crop Component of Pradhan Mantri Krishi Sinchayee Yojana (PMKSY-PDMC)

Department of Agriculture, Cooperation & Farmers Welfare is implementing Per Drop More Crop component of Pradhan Mantri Krishi Sinchayee Yojana (PMKSY), which is operational from 2015-16 in the country. PDMC (Per Drop More Crop) mainly focuses on water use efficiency at farm level through precision/micro irrigation. Besides promoting precision irrigation (Drip and Sprinkler Irrigation System) and better on-farm water management practices to optimize the use of available water resources, this component also supports micro level water storage or water conservation/management activities as Other Interventions (OI) to supplement source creation.

Per Drop More Crop mainly focuses on water use efficiency at farm level through precision/Micro Irrigation (MI) (Drip and Sprinkler Irrigation). Besides promoting precision irrigation and better on-farm water management practices to optimize the use of available water resources, this component also supports gap filling interventions as Other Interventions like micro level water storage or water conservation/management activities to complement and supplement the drought proofing measures

8.2.2 Achievements under PMKSY-PDMC

During 2018-19, an area of 7.87 lakh ha has been brought under Micro Irrigation (MI) till 26.02.2019 and the total area covered under PMKSY-PDMC since inception period is 32.46 lakh ha. As on 26.02.2019, an amount of Rs.

2556.14 crores has been released to the States for implementation of the programme during the current year. An amount of Rs. 8923.18 crore has been released to States from 2015-16 to 2018-19 (26.02.2019) under PMKSY-PDMC. During the year 2017-18, an area of 10.48 lakh ha was brought under Micro Irrigation (MI), which is the highest ever coverage in a year so far.

8.2.3 Rainfed Area Development (RAD)

RAD is being implemented as a component of National Mission for Sustainable Agriculture (NMSA) from 2014-15. RAD adopts an area based approach for development and conservation of natural resources through promoting Integrated Farming System (IFS). IFS focuses on multi-cropping, rotational cropping, inter-cropping, mixed cropping practices with allied activities like horticulture, Livestock, fishery, apiculture etc. To enable farmers not only in maximizing the farm returns for sustaining livelihood, but also to mitigate the impacts of drought, flood or other extremes weather events. The benefits of Integrated Farming System (IFS) is as under-

- ❖ Increasing agricultural productivity of rainfed areas in a sustainable manner by adopting appropriate farming system based approaches
- ❖ To minimize the adverse impact of possible crop failure due to drought, flood or un-even rainfall distribution through diversified and composite farming systems.
- ❖ Enhancement of farmer's income and livelihood support for reduction of poverty in rainfed areas.

8.2.4 Achievements under RAD Scheme –

During 2018-19, an area of 58374 ha has been brought under RAD till 26.02.2019 and the total area covered under NMSA-RAD

since inception period is 3.71 lakh ha. As on 26.02.2019, an amount of Rs. 187.73 crore has been released to the States for implementation of the programme during the current year. An amount of Rs. 1094.62 crore has been released to States from 2014-15 to 2018-19 (26.02.2019) under RAD.

Natural Resource Management

8.3 National Bamboo Mission (NBM)

The restructured National Bamboo Mission (NBM) has been launched in April, 2018.

8.3.1 Objectives of the restructured National Bamboo Mission are:

- i) To increase the area under bamboo plantation in non forest Government and private lands to supplement farm income and contribute towards resilience to climate change as well as availability of quality raw material requirement of industries. The bamboo plantations will be promoted predominantly in farmers' fields, homesteads, community lands, arable wastelands, and along irrigation canals, water bodies etc.
- ii) To improve post-harvest management through establishment of innovative primary processing units near the source of production, primary treatment and seasoning plants, preservation technologies and market infrastructure.
- iii) To promote product development keeping in view market demand, by assisting R&D, entrepreneurship & business models at micro, small and medium levels and feed bigger industry.
- iv) To rejuvenate the under developed bamboo industry in India.
- v) To promote skill development, capacity building, awareness generation for

development of bamboo sector from production to market demand.

- vi) To realign efforts so as to reduce dependency on import of bamboo and bamboo products by way of improved productivity and suitability of domestic raw material for industry, so as to enhance income of the primary producers.

NBM 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, skill development and brand building initiative in a cluster approach mode. 10 major commercially important bamboo species namely *Bambusa tulda*, *B. bambos*, *B. balcooa*, *B. cacharensis*, *B. polymorpha*, *B. nutans*, *Dendrocalamus asper*, *D. hamiltonii*, *Thyrostachys oliveri*, *Melocannabaccifera* have been identified so as to have market ready plantations.

The scheme is being implemented in non-forest Government land and private farmers field & 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, Telangana, Gujarat, Tamil Nadu, Kerala, Uttar Pradesh & Himachal Pradesh.

Revised Estimates under the restructured mission for the year 2018-19 is Rs. 146.50 crores. During 2018-19 an amount of Rs. 146.35 crore (as on 28.02.2019) has been released to the States / Agencies

8.3.2 List of Technical Support Groups under NBM

- Indian Council for Forestry Research & Education (ICFRE), Dehradun

- Kerala Forest Research Institute, Peechi, Kerala
- Cane and Bamboo Technology Centre, Guwahati, Assam

8.3.3 Physical Progress

- So far 115 Bamboo Treatment Units, 397 Nurseries for quality planting material, 509 Product Development / Processing Units, 129 Infrastructure Projects for Promotion and Development of Bamboo Markets and an area of 17531 ha for bamboo plantation, as per the Annual Action Plans received from States and Institutes for 2018-19 have been approved.

8.3.4 Other Initiatives taken

1. Exposure visits for NBM States

- 11th-12th August 2018, Indore - overview of objectives of NBM and road map of Madhya Pradesh; visit to commercial tissue culture planting material production unit; visit to Dewas which is a hub for manufacture of machinery and tools
 - 19th-20th Nov 2018, Bengaluru– Indian Plywood Industries Research Training Institute (hands on work on bamboo composites; Institute of Wood Science Technology (tissue culture planting material); National Institute of Design (innovations in design)
- A nursery of 20 Bamboo species has been established at the **Rashtrapati Bhawan**

3. Agreement with Export Promotion Council for Handicrafts

4 States of NER namely Assam, Arunachal Pradesh, Tripura and Mizoram for skill development of artisans with the objective of production of export quality products.

4. Skill Development - Convergence with Sector Skill Councils

Discussions with Construction, Furniture, Handicrafts & Agriculture Sector Skill Councils as well as Bamboo and Cane Development Institute, Agartala & Forest Research Institute for convergence of Qualification Packs & Structured skill development. There are no job roles for example in regard to fine sliver maker, stick maker, bamboo turner, bamboo carpenter etc

5. Institutes Identified for Skilling

- Cane and Bamboo Technology Center has set up one Hi-Tech Nursery at Krishi Vigyan Kendra, Piprakothi, Motihari, Bihar and seedlings of 7 commercially important bamboo species have been raised. A Common Facility Centre (CFC) and Bamboo Treatment Centre are also being set up. An awareness campaign benefitting about 300 farmers was organized last month and about 12000 bamboo seedlings distributed among farmers.
- Indian Plywood Industries Research and Training Institute (IPIRTI), Bengaluru
- ICFRE Institutes – Jorhat, Dehradun, Coimbatore, Bengaluru
- Cane and Bamboo Development Institute, Agartala
- Cane and Bamboo Technology Centre, Guwahati
- Industrial Design Centre, IIT Mumbai
- National Institute of Design (NID), Bengaluru
- Kerala Forest Research Institute (KFRI)
- Training Centre of Maharashtra Bamboo Development Board

6. Construction Sector

All major user organisations including Railways, AAI, CPWD, NBCC, M/o RD, WDRA, M/o Defence, etc have been advised to enhance use of bamboo in construction projects. A stakeholder consultation with these agencies as well as BIS, Central Building Research Institute, Roorkee, architects and manufacturers was done to see the gaps in certification, and promote use.

7. Strengthening Agarbatti Sector

Indian Institute of Foreign Trade (IIFT) has been commissioned to carry out a detailed and systematic study on the dominance of import of bamboo and trade imbalance, including various tariff and non tariff measures. The potential of exports from India (products and destination) will also be indicated.

Meeting to discuss issues related to reduction in import of Agarbatti was held under the chairmanship of Secretary (AC&FW) with D/o Commerce, industry and Agarbatti Manufacturer's Association to devise appropriate strategy.

8. Research & Development

- i. Draft protocol for accreditation of bamboo nurseries & certification of planting material is in the process of finalization
- ii. ICFRE has identified base material for increasing the production and productivity of bamboo. R&D project by the way of multiplication through Tissues Culture is being undertaken by ICFRE Institutes.
- iii. Kerala Forest Research Institute is working on promoting indigenous supply of raw material for preparation of jigget

9. NITI Aayog Events

NBM was focused in the Chintan Shivir organised by NITI Aayog on 3-4 Nov 2018 at Agartala

NITI Forum for NER held on 4th December 2018, at Guwahati recommended for Development of the value chain of bamboo in synergy with National Bamboo Mission.

8.4 Sub-Mission on Agroforestry (SMAF)

The Sub-Mission on Agroforestry (SMAF) has been launched in 2016-17 to encourage and expand tree plantation on farm land, with the motto of "Har Medh Par Ped", along with crops/ cropping system. The Sub-mission has the following broad objectives:

- ❖ To encourage and expand tree plantation in farm land
- ❖ To ensure availability of quality planting material
- ❖ To popularise various Agroforestry practices/models
- ❖ To create database, information and knowledge support in the area of agroforestry.
- ❖ To provide extension and capacity building support to agroforestry sector.

The scheme is being implemented in the States which have liberalized transit regulations for selected tree species. At present scheme is being implemented in 21 States namely i.e. Meghalaya, Mizoram, Nagaland, Andhra Pradesh, Bihar, Chhattishgarh, Gujarat, Haryana, Himachal Pradesh, Jharkhand, Jammu & Kashmir, Karnataka, Kerala, Madhya Pradesh, Maharashtra, Odisha, Punjab, Rajasthan, Tamil Nadu, Telangana and Uttar Pradesh. Agroforestry helps in creating additional source of income to farmers and in carbon sequestration.

Under the Mission, multipurpose tree species with short, medium and long term returns are encouraged, so that farmers may get additional income at regular intervals. These would include fruits, fodder, medicinal, timber species. Several new forward linkages have been established including tree borne oil seeds for production of biofuel and with Central Silk Board for silk woven host species.

8.4.1 Financial Progress:

For implementation of the programmes an amount of Rs.1848.00 Lakh has been released to the States / Agencies during 2018-19 upto 26.02.2019.

8.4.2 Physical Progress:

96 nos. nurseries and 7250 Ha of plantation have been approved to respective states under SMAF. The major species being planted include sandal wood, casuarina, poplar, eucalyptus, sissoo, Melia etc.

Nursery



Agroforestry (Mizoram)



Agroforestry (Karnataka)

Block plantation



Agroforestry (Himachal Pradesh)



Agroforestry (Rajasthan)



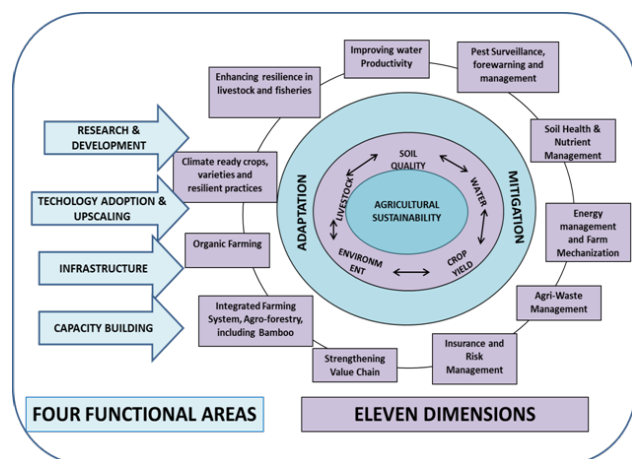
8.5 Climate Change

National Mission on Sustainable Agriculture (NMSA) is one of the 8 Missions launched under the National Action Plan on Climate Change (NAPCC) in 2008. The Mission aims to evolve and implement strategies to make Indian agriculture resilient to climate change. The program interventions in NMSA are Rainfed Area Development (RAD), Soil Health Cards, Paramparagat Krishi Vikas Yojana (PKVY), Mission Organic Value Chain Development for North Eastern Region (MOVCDNER), National Rainfed Area Authority (NRAA), Soil Land Use Survey of India (SLUSI), National Bamboo Mission (NBM) and Sub-Mission on Agroforestry (SMAF). Details of these are given by the respective Program Divisions.

Many National and International developments have taken place since the launch of NMSA. The understanding on the impact of climate change on Indian agriculture has improved and promising

adaptation and mitigation strategies have been identified, which can help the farmers to cope with climate change. However, agriculture in India as elsewhere globally continues to face challenges posed by climate variability including aberrant monsoons, heat waves, extreme weather events and degradation of natural resources. Climate resilience is being promoted through the research & technologies being developed by ICAR and disseminates by programmatic interventions of DAC&FW and DAHD&F.

The NMSA Strategy document, revised for the period 2018 has adopted an integrated holistic approach focusing more on vulnerable regions, deploying the best bet technologies and practices for adaptation and mitigation and empowering farmers through capacity building and financial support. The implementation strategies are designed with a time frame up to 2030. Eleven key priority areas have been identified for programmatic interventions which can minimize the impact of climatic change and reduce the risk. Each of these priority areas has to be analysed in the context of four functional areas, viz., Research and Development, Technology adoption, Infrastructure and Capacity Building for identifying adaptation and mitigation measures in a multi-dimensional and cross sectoral matrix



NMSA Strategy Document (2018-2030)

The programmatic interventions in these four functional areas covering eleven priority items will effectively address adaptation and mitigation needs of complete value chain from production to marketing in agriculture and allied sectors.

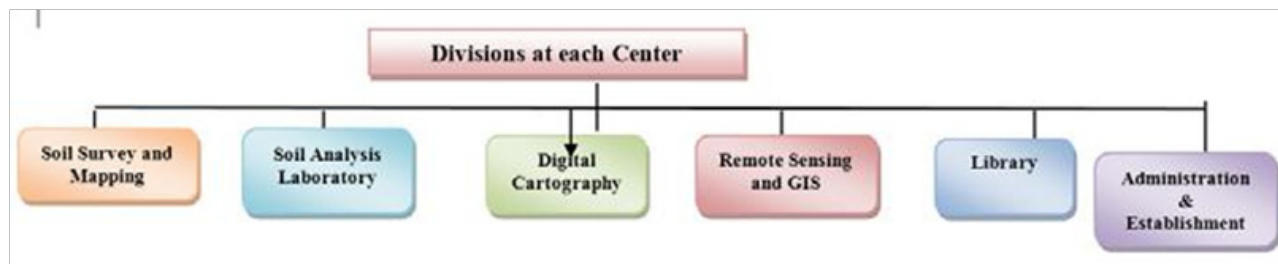
Divisions also participated and represented the Ministry as a Member of Indian Delegation in the 24th Conference of Parties (COP) to the United Nations Framework Convention on Climate Change held between 2nd and 14th December 2018 at Katowice, Poland.

8.6 Soil and Land Use Survey of India (SLUSI)

Soil and Land Use Survey of India (SLUSI), an apex organization in the country established in 1958 deals with soil survey and land resource mapping in the country. It is a subordinate field organization under Department of Agriculture, Cooperation and Farmers Welfare, Ministry of Agriculture and Farmers Welfare.

The SLUSI is a primarily engaged in conducting soil survey of different intensities in order to provide 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 database. It operates soil survey activities from Headquarters at New Delhi through seven Centres located at Noida, Kolkata, Nagpur, Bengaluru, Hyderabad, Ahmedabad and Ranchi.



SLUSI has generated database for priority categorization in **253.15 million ha.** areas and **17.25 million ha** area in **Detailed Soil Survey** under priority sub/micro watersheds of Rainfed districts of various states in 1: 4,000 to 15,000 scale (Presently on 1:10,000 scale) using cadastral maps/ Satellite Data / aerial photographs the country. Similarly, SLUSI has also carried out Soil Resource Mapping (SRM) on 1:50,000 scale in area of **130.27 million ha** areas in 264 districts of the country on consultancy mode, funded by Department of Space, Government of India.

SLUSI is actively involved in capacity building and updating knowledge of officers of State Governments involved in different developmental programs viz. PMKSY-Watershed Development Component (WDC) Program, agriculture, horticulture, forestry, soil & water conservations and rural development etc.

As a core component of National Mission for Sustainable Agriculture (NMSA) by Department of Agriculture, Cooperation & Farmers Welfare revised its activities of soil data base generation with special reference to

Soil Health Management and had validation work for 13 States of the Country i.e. Bihar, Haryana, Gujarat, Jharkhand, Karnataka, Kerala, Maharashtra, Madhya Pradesh, Rajasthan, Tripura, Telangana, Uttar Pradesh & West Bengal and the results submitted to the INM Division, DAC&FW.

SLUSI has completed the work of detailed soil data base generation for development of crop plan in completed command areas of 18 irrigation projects so far out of 99 irrigation projects under PMKSY (AIBP) and had played active role in coordinating among the stake holders namely State Agriculture, Irrigation Departments and universities. Presently, the monitoring in 18 completed irrigation projects i.e. Maddigedda (Andhra Pradesh), Warna (Maharashtra), Dongargaon (Maharashtra), Upper Indravati (Odisha), Rukra-Tribal (Odisha), Extension of Kandi canal Stage 2 (Punjab), Rehabilitation of Ist Patiala Feeder & Kotla Branch (Punjab), Maniyari Tank (Chhattisgarh), Kharung projects (Chhattisgarh); Sri Rameswar Irrigation project (Karnataka); Singhpur (Madhya Pradesh), Mahuar (Madhya Pradesh), Sagad (Madhya Pradesh); Bawanthadi (IS) (Maharashtra), Lower Panzara (Maharashtra); Gollavagu (Telangana), Rallivagu (Telangana) and Mathadivagu (Telangana) are being carried out. The organization is taking up the DSS field work of the remaining 81 projects during 2018-19.

During 2018-19 SLUSI had completed consultancy projects on Land reclamation work, Bhadra CADA, Shimoga, Karnataka State, SRM of Mallapuram District, Kerala State Land Use Board and Soil nutrient Estimation of forests of North Bengal Plains, West Bengal State and had published **5 reports** of Priority delineation Survey, 27 reports of Detailed Soil Survey and 16 reports of Soil Resource Mapping.

SLUSI has also developed the digital Micro-watershed atlas (MWS) of the country with unique code at **1:50 K scale** which will provide platform for the planners in designing location specific development plans under various agricultural and rural development programs in the country. The physical target of 60.00 lakh ha in PMKSY/Rainfed districts have been fixed, of which 18.82 lakh ha area has been completed and remaining to be achieved by the end of this year.

SLUSI has also generated revenue of Rs. 65.98 lakhs through various consultancy projects and Rs. 10.50 Lakh through sale of soil, micro-watersheds data.

8.7 National Rainfed Area Authority (NRAA)

National Rainfed Area Authority (NRAA) was established as an attached office of DAC&FW on 3rd November, 2006. Dr. Ashok Dalwai (IAS) is leading the organization as its Chief Executive Officer (CEO).

NRAA is an 'Advisory Body' for policy and programme formulation and monitoring of programmes/activities relating to integrated development of degraded/rainfed areas. Rainfed areas that dominate the agricultural system of the country, are described by arid and semi-arid tracts to high rainfall region. NRAA has also been given additional mandate to provide technical inputs in planning and implementation of Pradhan Mantri Krishi Sinchayee Yojna (PMKSY) in the rainfed areas for rain water conservation, watershed development, etc. and their management.

NRAA principally functions as Knowledge Repository for rainfed agriculture to initiate drought proofing of 150 most vulnerable rainfed districts, NRAA was allocated Rs. 10.00 crore during 2018-19.

Some Major Activities undertaken during the year 2018-19 are:

- A total of 24 districts spread across three states, namely, Karnataka, Andhra Pradesh and Rajasthan were selected for preparation of comprehensive drought proofing strategy.
- State level and district level meetings were organized in Andhra Pradesh, Karnataka and Rajasthan for deliberation on drought proofing action plans. The action plan of 8 out of 24 identified districts have been prepared and shared with the states for their feedback and suggestion. The work in respect of the remaining 16 district is under progress and will be completed by December 2018.
- The process of piloting drought proofing strategies in selected clusters of these districts has begun. Various training programmes are being organized for sensitizing district officials on climate resilience agriculture and comprehensive planning.
- With a view to building domain knowledge, six of NRAA's newly recruited Young Professionals/Officials were deputed to attend a 5 days training-cum-orientation programme on Integrated Farming and Conservation Agriculture at IAFSR, Modipuram.
- Brain Storming Workshop was organized on 11th-12th December, 2018 to deliberate on the definition of rainfed agriculture; delineate and prioritize 150 critically drought prone districts, and finalization of strategic plan in sync with recommendation of Doubling Farmers' Income (DFI) Committee; and firm up content for knowledge portal on agriculture.

8.8 Integrated Nutrient Management

It is endeavour of this Ministry to promote the balanced use of fertilizers in conjunction with Organic Fertilizers, Bio-fertilizers, green manures etc. In order to achieve this objective

INM Division has been assigned with the following tasks:

8.8.1 Assessment of requirement of Fertilizers: Department of Agriculture, Cooperation & Farmers Welfare organizes Zonal Conferences to assess the requirement of fertilizers of States before each cropping season namely Kharif (1st April to 30th September) & Rabi (1st October to 31st March), in consultation with representatives of State Governments, Department of Fertilizers, Lead Fertilizer Suppliers, Fertilizer Association of India (FAI) and ICAR etc. This assessment is made based on the initial requirements projected by State Governments/UTs and they arrive at the requirements of fertilizers on the basis of requirements of NPK nutrients, Consumption pattern, Gross Cropped Area, Irrigated Area etc.

8.8.2 Availability of Fertilizers

A weekly audio-visual conference is jointly organized by this Ministry and Department of Fertilizers with all the States to monitor availability of fertilizers as per the monthly allocation plan prepared by Department of Fertilizers.

8.8.3 Quality Control of Fertilizers

The Government of India declared the Fertiliser as essential Commodity under the Essential Commodities Act, 1955 and promulgated the Fertiliser Control Order, 1985 (FCO). Under the Order, Government is empowered to control Price, Distribution, Quality etc of fertilises. Government of India notified the MRP at Rs 242 per 45 Kg bag on 1st March, 2018. The specifications of various fertilizers are specified in Fertiliser Control Order, 1985. It is mandatory for every manufacture/dealer to manufacture/sell the fertiliser of the specification specified under the order. At present there are 82 Fertiliser

Quality Control testing laboratories including four Central laboratories in the country. The State Governments are primarily responsible for ensuring availability of good quality of fertilisers to farmers as per FCO specification.

Assessment of Fertilizers

To ensure adequate availability of fertilizers, Department of Agriculture, Cooperation and Farmers Welfare conducts Zonal Conferences with all the States for every Kharif and Rabi season in order to assess the requirement of fertilizers in all the States. After consultation with States, Department of Fertilizers and Lead Fertilisers suppliers etc., the total requirement for each State is assessed for the season.

Therefore, the States prepare month-wise requirement and the same is forwarded to the Department of Fertilisers. A monthly supply plan based on the month-wise requirement is

made by Department of Fertilisers for all States. The supply movement is jointly monitored by DAC&FW and Department of Fertilisers with the States through weekly Video Conference

- (a) **Kharif 2018 Season** Requirement of major fertilizers viz, Urea, DAP, MOP, Complexes and SSP for Kharif 2018 season was assessed at 158.00 Lakh Metric Tonnes (LMT), 49.18 LMT, 20.25 LMT, 49.73 LMT and 26.25 respectively.
- (b) **Rabi 2018-19 Season:** Requirement of major fertilizers viz, Urea, DAP, MOP, Complexes and SSP for Rabi 2018-19 season was assessed at 162.74 Lakh Metric Tonnes (LMT), 50.46 LMT, 17.28 LMT, 52.19 LMT and 29.80 LMT respectively.

Consumption of Chemical Fertilizers:- Consumption of major chemical fertilizers along with N,P,K nutrients since 2001-02 is given below:-

(lakh tonnes)

Year	Urea	DAP	MOP	Complex	Nitrogen (N)	Phosphate (P)	Potash (K)	Total (N+P+K)
2001-02	199.17	61.81	19.93	49.63	113.10	43.82	16.67	173.60
2002-03	184.93	54.73	19.12	48.10	104.74	40.19	16.01	160.94
2003-04	197.67	56.24	18.41	47.57	110.77	41.24	15.98	167.99
2004-05	206.65	62.56	24.06	55.08	117.13	46.24	20.61	183.98
2005-06	222.97	67.64	27.31	66.94	127.23	52.04	24.13	203.40
2006-07	243.37	73.81	25.86	67.99	137.73	55.43	23.35	216.51
2007-08	259.63	74.97	28.80	65.70	144.19	55.15	26.36	225.70
2008-09	266.49	92.31	40.78	68.05	150.90	65.06	33.13	249.09
2009-10	266.74	104.92	46.34	80.25	155.80	72.74	36.32	264.86
2010-11	281.12	108.70	39.31	97.64	165.58	80.50	35.14	281.22
2011-12	295.65	101.91	30.29	103.95	173.00	79.14	25.75	277.90
2012-13	300.02	91.54	22.11	75.27	168.21	66.53	20.62	255.36
2013-14	306.00	73.57	22.80	72.64	167.50	56.33	20.99	244.82
2014-15	306.10	76.26	28.53	82.78	169.46	60.98	25.32	255.76
2015-16	306.35	91.07	24.67	88.21	173.72	69.79	24.02	267.53
2016-17	296.14	89.64	28.63	84.14	167.35	67.05	25.08	259.49
2017-18	298.94	92.94	31.58	85.96	169.58	68.54	27.79	265.91

FERTILIZER (INORGANIC, ORGANIC AND MIXED) (CONTROL) ORDER, 1985

In order to make available large variety of Fertilizers to the Farmers as per their soil requirement, different grades of fertilizers are notified under FCO Schedule-I (Part-A). At present 11 Straight Nitrogenous Fertilizers, 5 Straight Phosphatic Fertilizers, 5 Straight Potassic Fertilizers, 2 Sulphur Fertilizers, 19 NPK Complex Fertilizers and 15 NP Complex Fertilizers, 28 customized Fertilizers, 25 Fortified Fertilizers, 6 Water Soluble Fertilizers and 22 Micronutrients are notified under FCO. The provision of tolerance limit in plant nutrient and in Physical Parameters for various fertilizers is given in FCO Schedule-I (Part B).

In order to encourage use of organic and bio-fertilisers namely Rhizobium, Azotoacher, Azospirillum, phosphate, Solubilizing Bacteria, Potash mobilizing Bacteria (KMB), Zinc Solubilizing Bacteria (ZnSB), Myconhizera Acetobacter and Consortia of bio-fertilisers have been incorporated in FCO, 1985. Generalised specifications of organic manures and bio enriched organic manure namely City compost, vermin compost, phosphate Rich organic manure (PROM), Organic manure, Bone meal Raw and Bone meal steamed are notified under FCO Schedule IV. Besides this, specification of Non-edible, De-oiled cake fertilizers is notified under FCO Schedule V.

8.8.4 Major Schemes and its Objectives

- (i) Soil Health Card & Soil Health Management scheme
- (ii) Paramparagat Krishi Vikas Yojana (PKVY)
- (iii) Mission Organic Value Chain Development for North Eastern Region (MOVCDNER)

Besides, the INM is also looking after the Establishment matters of two attached

Institutes viz. National Centre for Organic Farming (NCOF), Ghaziabad and Central Fertilizers Quality Control and Training Institute, Faridabad.

8.8.4.1 Soil Health Card (SHC) scheme

Soil Health Card Scheme was launched by Hon'ble PM on 19.02.2015 at Suratgarh, Rajasthan. The scheme has been introduced to assist State Governments to issue soil health cards to all farmers in the country. Soil health card provides information to farmers on nutrient status of their soil along with recommendation on appropriate dosage of nutrients to be applied for improving soil health and its fertility.

Soil status is to be assessed regularly in a cycle of every 2 years. In all 253 lakh soil samples are to be collected and tested to generate 12 crore soil health cards for distribution to the farmers.

Scheme objectives:

- (i) To issue Soil Health Cards every 2 years, to all farmers of the country, so as to provide a basis to address nutrient deficiencies in fertilization practices.
- (ii) To strengthen functioning of Soil Testing Laboratories (STLs) through capacity building, involvement of agriculture students and effective linkage with Indian Council of Agricultural Research (ICAR) / State Agricultural Universities (SAUs).
- (iii) To diagnose soil fertility related constraints with standardized procedures for sampling uniformly across states and analysis and design fertilizer recommendations.
- (iv) To develop and promote soil test based nutrient management for enhancing nutrient use efficiency.
- (v) To build capacities of district and state level staff and of progressive farmers

for promotion of nutrient management practices.

(vi) To create additional soil/ fertilizer sample testing facilities through setting up/ strengthening of labs under SHM schemes.

Soil Health Card Portal:

Soil Health Card Portal has been developed for registration of soil samples, recording test results of soil samples and generation of Soil Health Card (SHC) along with fertilizer recommendations. This is a single, generic, uniform, web based software accessed at the URL www.soilhealth.dac.gov.in. It is a workflow based application with following major modules; (i) Soil Sample Registration (ii) Test Result Entry by Soil Testing Labs (iii) Fertilizer Recommendations based on General Fertilizer Recommendations (GFR) (iv) Soil Health Card generation along with fertilizer recommendation and micronutrient suggestions (v) MIS module for monitoring progress.

It promotes uniform adoptions of codes e.g. Census Codes for locations. The system has samples tracking feature and provides alerts to farmers about sample registration and generation of Soil Health Card through SMS and E-mail.

Soil Health Card Portal aims to generate and issue Soil Health Cards based on General Fertilizer Recommendations provided by State Governments. Based on test results, these recommendations are calculated automatically by the system. Micronutrients status is also provided by the system.

The system envisages building up a single national database on soil health for future use in research and planning.

Progress of Soil Health Card scheme

i. Fund Release:

(Rs in crore)

Year	Funds released
2014-15	23.89
2015-16	96.44
2016-17	133.66
2017-18	147.44
Total	401.43

ii. Physical Progress:

- Cycle-I (2015-17). As on 06.03.2018, against the target of 253 lakh soil sample, 100% soil samples have been collected and 250.03 lakh (i.e. 99%) samples tested. Against the target of 1073 lakh soil health cards, 1060.67 lakh (i.e. 99%) cards have been distributed to farmers.
- Cycle-II. The 2nd Cycle of the scheme started from 1st May 2017. As on 06.03.2018, against the target of 127.31 lakh soil sample collection for the year 2017-18, 115.72 lakh samples have been collected and 81.46 lakh samples tested. Against the target of 626.96 lakh soil health cards, 158.88 lakh cards have been distributed to farmers.

8.8.4.2 Soil Health Management (SHM) Scheme

As soil test based application of fertilizers is essential to improve soil health and productivity, the Government is promoting Integrated Nutrient Management (INM) i.e. soil test based balanced and judicious use of chemical fertilizers, bio-fertilizers and locally available organic manures like Farm Yard Manure, Compost, Vermi Compost and Green Manure to maintain soil health and its productivity.

Under the Soil Health Management scheme there is provision to set up new static Soil

Testing Laboratories (STLs) and new Mobile Soil Testing Laboratories besides strengthening of existing laboratories to enable them to undertake micro-nutrient testing. The year wise

numbers of STLs sanctioned under the scheme are given in table below:-

Sl. No	Component / year	2014-15	2015-16	2016-17	2017-18	2018-19	Total
1.	New Static STLs	10	93	302	1	5	411
2.	New Mobile STLs	69	8	9	8	6	100
3.	Strengthening of existing STLs	7	262	75	163	141	648
4.	Mini soil testing labs	-	-	5612	3140	-	8752
5.	Village level soil Testing labs	-	-	-	1	1561	1562
	Total	86	363	5998	3313	1713	11473

Apart from above, other components under this scheme are promotion of micronutrients and setting up/strengthening of Fertilizer Quality Control Laboratories.

Fund Release under SHM scheme:

(Rs in crore)

Year	Funds released
2014-15	62.98
2015-16	44.39
2016-17	95.50
2017-18	42.18
2018-19	71.67
Total	316.72

It is proposed to conduct the Impact Evaluation of the programme for assessing efficacy and overall performance of the programme implementation during the year 2014-15 onwards in terms of objectives. It is expecting that the findings of the study will provide outcome and shortcomings to facilitate corrections, if any, to implement the scheme in subsequent years. A copy of operational Guidelines of Soil Health Card (SHC) and Soil Health Management (SHM) is available at <http://agricoop.nic.in>

8.8.4.3 Paramparagat Krishi Vikas Yojana (PKVY)

A. Objectives of the Paramparagat Krishi Vikas Yojana (PKVY):

- 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.
- To sustainably produce chemical free and nutritious food for human consumption.
- To protect environment from hazardous inorganic chemicals by adoption of eco-friendly low cost traditional techniques and farmer friendly technologies.
- 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;
- f) To make farmers entrepreneurs through direct market linkages with local and national markets.
1. Parampragat Krishi Vikas Yojana (PKVY) is the first comprehensive scheme launched as a Centrally Sponsored Programme (CSP) from 2015-16, which now has been revised for next 3 years. The scheme is implemented with a 90:10 (GoI: State Govt.) funding pattern in 8 NE states and 3 hilly states of J& K, Himachal Pradesh, and Uttarakhand, 100% in Union Territory and 60:40 funding pattern in remaining states of the country. The new guidelines of the scheme has been uploaded in the website www.agricoop.nic.in
 2. The scheme PKVY is implemented by the State Government on per hectare basis for 500-1000 hectare area in each cluster. A group of farmers having a total area of 20 hectare as far as possible in contagious patch within a village. The farmer within a group can avail benefit to a maximum of 2 ha. and the limit of assistance is Rs.50,000 per hac., out of which 62% i.e., Rs. 31,000 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. The target of an area of around 4 lacks ha is proposed to be covered in the coming 2 years which is double the area covered in last three years.
 3. The components of the scheme are as follows:
 - a) Programme implementation through support agencies for handholding and capacity building of farmers in the cluster and Regional Councils as certification endorsing agency are well defined.
 - b) PGS Certification through Regional Councils
 - c) Incentive to farmers through DBT
 - d) Value addition, marketing and publicity
 - e) Enough flexibility is provided to the States to pick up the activities, input as per their requirement.
 4. Status of Scheme/ Achievement: Total amount allocated for the scheme 2015-16 to 2018-19 is Rs 1307 crore and fund released Rs 786.41 crore till date. Total 11891 clusters have been formed during the period 2015-16 to 2017-18. Under PKVY scheme 237820 hectares of land has been converted into organic farming land and 3,94,550 farmers have been benefited. The details are given at **Annexure 8.1**.
 5. Certification mechanism under PKVY: In order to promote domestic organic market growth and also to enable small and marginal farmer to have easy access to organic certification, a decentralized organic farming certification system called Participatory Guarantee System – India (PGS-India) is implemented by the Department of Agriculture and Cooperation.
 6. Participatory Guarantee System of India is a quality assurance initiative that is locally relevant, emphasizes the participation of stakeholders, including producers and consumers and operates outside the frame of third party certification. PGS-INDIA Web Portal has been launched and has the following features:

- i. Online facility for Registration; Approval; Documentation; Record of inspection; and Certification Transparency in certification process.
- ii. Creation of a database of organic producers; area under PGS Certification
- iii. Traceability of organic products
 - ❖ No. of Regional Council registered- 374 nos
 - ❖ No of Local Groups registered - 8947 nos
 - ❖ Nos of farmers online registered/ benefitted- 281339 nos (approx.)
 - ❖ The State implementing agency- Either Agriculture Deptt. / Horticulture Deptt.

B. Target & Achievements

The target of an area of around 4 lakhs ha is proposed to be covered in the coming 2 years which is double the area covered in last three years.

- Total 20,000 (20 ha each) new clusters allocated to the states.
- Total fund released during 2018-19 is Rs 266.60 crore including fund released Rs. 206.46 crore for 18,368 new clusters for (20 ha each) for 3.67 lakh ha area.
- The status of PGS India is as under:
 - a) Nos of Regional Council registered 326 nos
 - b) Nos of Local Groups registered 13703 nos
 - c) Nos of farmers online registered/ benefitted - 383863 nos (approx.)

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

Realizing the potential of organic farming in the North Eastern Region of the country, Ministry of Agriculture and Farmers Welfare has launched a **Central Sector Scheme entitled “Mission Organic Value Chain Development for North Eastern Region”** for implementation in the states of Arunachal Pradesh, Assam, Manipur, Meghalaya, Mizoram, Nagaland, Sikkim and Tripura, during 2015-16 to 2017-18.

The scheme aims at development of certified organic production in a value chain mode to link growers with consumers and to support the development of entire value chain starting from inputs, seeds, certification and creation of facilities for collection, aggregation, processing, marketing and brand building initiative. The scheme was approved with an outlay of Rs. 400 crore for three years.

The assistance is provided for cluster development, on/off farm input production, supply of seeds/ planting materials, setting up of functional infrastructure, establishment of integrated processing unit, refrigerated transportation, pre-cooling/cold stores chamber, branding labeling and packaging, hiring of space, hand holdings, organic certification through third party, mobilization of farmers/ processors etc. Under this scheme, an area of 50,000 ha have been targeted to be covered under organic farming in North Eastern Region of the country during the period of three years i.e. from year 2015-16 to 2017-18.

A. Major Components of MOVCDNER:

1. Value Chain Production
2. Value Chain Processing
3. Value Chain Marketing
4. Value Chain Support Agencies

B. Physical and Financial Progress report of MOVCDNER scheme

An amount of Rs. 125 crore was allocated to the north eastern states during 2015-16, Rs. 100 crore during 2016-17, Rs 100.00 crore during 2017-18 and Rs. 160 .00 for 2018- 19 and funds release an amount of Rs. 112.16 during 2015-16, Rs.47.63 crore during the year 2016-17, Rs.66.22 crore for the year 2017-18 and Rs.126.25 crore have been released to eight states.

Under the scheme “Mission Organic value Chain Development for North Eastern Region” there is a target to form 100 Farmers Producer Companies (FPCs) which would cover 2500 Farmers Interest Groups (FIGs), 50000 ha area and 50000 farmers. Against this target, 2469 FIGs have been formed covering an area of 45918 Ha and 48918 farmers in eight North-Eastern states so far 100 Farmers Producer Companies have been registered.



8.9 Success Stories

A. Organic Farming Authority of Jharkhand (OFAJ)



Name of Farmer:- Mithilesh Kumar Mahto

1. Parentage :- Late Ganesh Mahto
2. Age :- 35 Years

3. Village :- Murramkala
4. District :- Ramgarh
5. State :- Jharkhand
6. Land Holding :- 3 Acre
7. Altitude :- N 2336872 E 8532300
8. Detail Introduction of farmer :- Mithilesh Mahto S/O Late Ganesh Mahto, Village:- Murramkala, Block:- Ramgarhi, District Ramgarh, Jharkhand
9. Name of the FPC/FPO:- PKVY MURRAMKALA (Eko Guarantee Division of Encon)

10. Achievement of Farmers:-

- Increased the knowledge and skills: The farmers were enabled with knowledge and skills to grow organic crops, organic pest management and organic soil management.
- Improved the farm infrastructure: The farmers have developed their vermin composting tanks, drums for herbal pest control inputs.
- Access to markets: Started a weekly farmers market in Ranchi.

11. Major crops grown :- Bottle gourd, Tomato, Capsicum, Brinjal

12. Certification Status:- C2

13. Details of intervention following assistance provided to the beneficiary under MOVCDNER/PKVY: PKVY is cluster based programme to encourage the farmer for promoting organic farming. Under this program:

- ❖ Groups of farmers would be motivated to take up organic farming. Fifty or more farmers will form a cluster

having 50 acre land to take up the organic farming under the scheme.

- ❖ In this way during three years – throughout India - 10,000 clusters will be formed covering 5.0 lakh acre area under organic farming. There will be no liability on the farmers for expenditure on certification.
- ❖ Every farmer will be provided Rs. 20,000 per acre in three years for seed to harvesting of crops and to transport produce to the market.
- ❖ Organic farming will be promoted by using traditional resources (Jiwamrit, Bijamrit, Bramhashtra, Tonic-Shaktivardhak, Ghanamrit, Nimashtra, Agniashtra etc.) and the organic products will be linked with the market.
- ❖ It will increase domestic production and certification of organic produce by involving farmers

14. Where do you sell your produce?

A weekly organic farmers' market has been organized by Eko Guarantee along with the cluster members. This market is providing a avenue for the sale of organic vegetables, frutis, spices, pulses and cereal crops.

15. What kind of packaging Material used by the Farmers?

Farmers are at present selling their products without packing material. We are in the process for developing packing material and logo for PKVY farmers.

16. Does organic farming beneficial for you

- ❖ We have been able to commercialize our organic produce and able to get special market presence of our organic produce.

- ❖ Our produce is now pesticide free and is making a contribution to consumer health.

- ❖ Our farm incomes have been increased since we are able to sell directly to consumers without middlemen and realise premium for our organic produce.

- ❖ Our farm input costs have been reduced since we are now trained and skilled to produce on-farm inputs. This has resulted in the profitability of our farms.

17. Any Increment in income after implementation of scheme?

- ❖ Our farm incomes have increased since the cost of inputs have been reduced since we are making our own farm inputs for soil management and pest management. This has resulted in almost 80% cost reduction.

- ❖ We are able to sell our organic produce directly to customers with a premium for our organic produce – this has resulted in about 30% increase of our farm produce prices.

18. Any other Related information?

- Eko Guarantee is now in the process of developing packing material for the farmer clusters. We have developed a brand dedicated to the marketing of organic produce. The brand is known as “Milawat Free”

- Eko Gurantee has completed the soil testing and are now in the process of sample testing.

B. Onion a Success Story



Name of the farmer: Sundhen Muduli

1. Parentage: W/o- Eshwar Muduli
2. Age : 42 years
3. Village : Pedisil in Dasmantpur block
4. District: Koraput
5. State: Odisha
6. Land holding (Ha): 1.4 hac.
7. Detail introduction of farmer:

Sundhen Muduli is a PKVY beneficiary. She is holding 4.00 acres (1.6hac.) of land includes

two acres of upland, one acre of middle land and 1.00 acre of low land. She has converted 2 acres of land into Organic farming. In uplands she is cultivating Millets, pulses, oilseeds and in low land she is cultivating Paddy in organic way of cultivation. In middle lands she has been cultivating only one crop in Kharif season with varieties of vegetables like, Cabbage, Cauliflower, Brinjal, Tomato, Onion, Chilly, Beans, ladies finger etc. in organic way. In Rabi season the upland and middle land are not used due to lack of irrigation facilities. She is fully depending on natural water resource and rain water. From the very beginning, she has been using only cow dung compost for farming. The farm output at that period was barely sufficient for her to feed her family. Economic benefits from these vegetables were also negligible. They were not in a position to afford chemical pesticides to protect their crops against common diseases. After PKVY intervention she has used 0.50 acres of land for onion cultivation .50 acres of land for vegetable cultivation. In her farm she is using Handi Khoto, Cow dung Compost, Panchagabya etc. She also has taken some training to prepare the organic fertilizers and pesticides through PKVY program from the Resource Organisation "Agramee". Last year she had cultivated 50 acres of land for vegetables cultivation like, Brinjal, Cully flower, Cabbage, Tomato, Beans, Chilly, and Maize etc. with another 50 acres of land used for Onion cultivation. She has cultivated all crops and vegetables in organic way of farming. She can now effectively prevent pest attacks using organic pesticides prepared by her. She has got hand hold supports from "Agramee" Staffs on preparation of Organic pesticides and fertilizers. She stores her onion in a traditional way ensuring long life. All the onions was tied and hanged from roof in the kitchen. Onions will be exposed to small amount of smoke and this will protect it from insect attacks and will also increase its shell life. The onions keeping

in the photograph is an organic product.

8. Name of the FPC/FPO: Dashamantapur Cashew Development Processing & Marketing Producer Company Ltd.

9. Achievements of Farmers:

This not only stabilized her farm but also increased the output significantly. She has earned a profit of Rs. 15000/- only from onion cultivation and Rs. 10,000/- from vegetable cultivation. Before PKVY program she was cultivating that land in traditional way only using cow dung compost so, the output was very less. It was very difficult to manage her family in a low budget income. After PKVY intervention her source of income increased. Her two kids are studying in district school.

10. Family Members: 05 members including 2 girl child & 1 boy

11. Major crops grown: Brinjal, Cully flower, Cabbage, Tomato, Beans, Chilly as vegetables. Maize, Finger Millets, Kandula, Alsi, Mustard, Kangu and Koshla etc as Millets, Pulses and Oil seeds.

12. Certification Status: Eligible for Organic Green Certificates. (Second year continuing)

13. Detail of intervention: following assistance provided to the beneficiary under MOVCDNER/PKVY:

- Rs. 6000/- provided for organic farming.

- Three days residential training on Organic farming & preparation of Organic fertilizers and Organic Pesticides. (Handi Khato, Cow dung Compost, Panchagabya, Jivamruta, Bijamruta)

- Exposure visit to PRAYAS, Organic farms and group discussion with Organic farmers for transmission of technology.

- Vermi-Compost pit

- Dhanicha seeds

14. Where do you sell your produce? Local markets

15. What kind of packaging material used by the farmers? Gunny bags

16. Does organic farming beneficial for you? Yes

17. Any increment in income after implementation of scheme? Yes income increased. It is two times than before.

18. Any other related information? Irrigation is the main constraint in the way of farming. It should be shorted out on a priority basis. Without proper irrigation facilities Organic farming not possible. For better livelihood and food security of Tribal people, it's necessary they should stand in their own strength. It will possible when we strengthen them especially in farming. PKVY program is the best example for tribal development.

Chapter 9

National Crop Insurance Programme (NCIP)

Agriculture Insurance

9.1 Keeping in view the risks involved in agriculture and to insure the farming community against various risks, 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, States, farming community etc.

The total funds released by Government of India during last 5 years under various schemes for crop insurance are as under:

(Rs. crore)

Plan/ Year	Expenditure
2013-14	2551.52
2014-15	2598.35
2015-16	2982.47
2016-17	11054.63
2017-18	9419.79
2018-19	11426.00*

* as on 01.03.2019

9.2 Brief details of the Crop Insurance Schemes being implemented in the Country are given below:

9.2.1 Pradhan Mantri Fasal Bima Yojana (PMFBY)

After detailed discussions with various stakeholders including State Governments, representatives of farmers' organizations, Government of India had formulated the new Crop Insurance Schemes viz. Pradhan Mantri Fasal Bima Yojana (PMFBY), which

is being implemented in various States/Union Territories of the country from Kharif 2016. The Scheme is being implemented through 18 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 all Kharif crops and 1.5% for all Rabi crops. In case of annual commercial and horticultural crops, the maximum premium to be paid by farmers is only 5%. The premium rates to be paid by farmers are very low and balance of actuarial premium is being borne by the Government, to be shared equally by State & Central Government, to provide full insured amount to the farmers against crop loss on account of natural calamities. There is no upper limit on Government subsidy.

Earlier, there was a provision of capping the premium rate which resulted in low claims being paid to farmers. This capping was done to limit Government outgo on the premium subsidy. This capping has now been removed and farmers will get claim against full sum insured without any reduction. Further, the sum insured has been equated to Scale of Finance.

Efforts are being made to make the scheme technology driven with the primary objective to reduce the delays in claim payment to farmers. Capturing of CCEs data on smartphones/CCE Agri App and its realtime transfer on National Crop Insurance Portal has been made mandatory from Kharif 2017 and the States have to provide an evidence of having conducted CCEs before Government of India share in subsidy is released.

Remote sensing will be used to rationalize the number of Crop Cutting Experiments (CCEs) at unit area level. 9 pilot studies on use of innovative technology in CCEs have been entrusted by the Department which are being coordinated by the Mahalanobis National Crop Forecast Centre (MNCFC).

For effective implementation, an integrated National Crop Insurance Portal has been developed to integrate all the stakeholders on a single platform on real time basis. This has also enabled access to individual farmer-wise detailed data. Further, it has been decided to obtain the Aadhar number of insured farmers, details of land records for de-duplication. In addition, Direct Transfer of Benefits (Claims) to farmers account has been initiated from Kharif 2018 season.

Revised Operational Guidelines

With a view to ensure better transparency, accountability and timely payment of claims to the farmers, Government has comprehensively revised the Operational Guidelines of the scheme recently which have become effective from 01.10.2018 and, inter-alia, include the following :

- i) Provision of 12% interest rate per annum to be paid by the Insurance Company to farmers for delay in settlement claims beyond 10 days of prescribed cut off date for payment of claims.
- ii) State Government has to pay 12% interest rate for delay in release of State share of Subsidy beyond three months of prescribed cut off date/submission of requisition by Insurance Companies.
- iii) Increased time for change of crop name for insurance - upto 2 working days prior to cut-off date for enrolment instead of earlier provision of 1 month before cut off date.
- iv) Time for intimation of loss due to localized calamities and post-harvest losses has been

increased from 48 hours to 72 hours.

- v) Stratified grievance redressal mechanism viz. District Level Grievance Redressal Committee (DGRC), State Level Grievance Redressal Committee (SGRC).
- vi) Detailed plan for publicity and awareness - 0.5% of Gross premium per company per season earmarked for the purpose.
- vii) Detailed Standard Operating Procedures (SOPs) for settlement of claims under localized calamities, post harvest losses, mid-season adversity and prevented sowing and redressal of disputes regarding yield data including add on features.
- viii) Inclusion of perennial crops and add-on coverage for damage by wild animals on pilot basis.

9.2.2 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 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 adversely the crop production. It has the advantage to settle the claims within shortest possible time. Under WBCIS, actuarial rates of premium was charged. Recently the scheme has further been restructured on the basis of premium structure and administrative lines of PMFBY and available in the country from Kharif 2016 as Restructured WBCIS.

Coverage under PMFBY & RWBCIS

During 2016-17 (i.e. Kharif 2016 and Rabi 2016 seasons), about 577 lakh farmer enrolments were provided crop insurance for a sum of Rs. 2,03,360 crore and during 2017-18 (i.e. Kharif 2017 and Rabi

2017-18 seasons) about 519 lakh farmer enrolments were provided crop insurance for a sum of Rs. 2,07,435 crore under PMFBY & RWBCIS. State-wise coverage details under PMFBY and RWBCIS during 2017-18 are given below:

Sl. No.	States	Farmers Insured	Area Insured	Sum Insured	Gross Premium	Approved Claims	Farmers Benefitted wrt Paid Claims*
		In lakhs		In Rs. Crore			In lakhs
1	A & N Islands	0.004	0.002	0.470	0	-	-
2	Andhra Pradesh	18.38	21.70	11,504	1,341	581	6.10
3	Assam	0.57	0.43	265	12	1	0.01
4	Bihar	22.59	21.28	9,949	1,016	405	1.09
5	Chhattisgarh	14.75	22.27	6,928	382	1,381	6.44
6	Goa	0.01	0.00	4	0	0	0.00
7	Gujarat	17.62	26.58	12,433	3,261	1,053	4.19
8	Haryana	13.54	19.32	12,249	452	870	3.14
9	Himachal Pradesh	3.82	1.11	771	78	51	1.18
10	Jammu & Kashmir	1.52	1.53	485	41	10	0.26
11	Jharkhand	11.98	3.01	1,517	217	42	1.17
12	Karnataka	16.10	18.35	8,689	1,775	850	6.60
13	Kerala	0.56	0.48	304	26	10	0.37
14	Madhya Pradesh	71.42	125.96	45,592	4,982	5,682	20.16
15	Maharashtra	101.34	58.58	19,484	4,228	3,258	53.28
16	Manipur	0.09	0.19	50	2	0	0.02
17	Meghalaya	0.03	0.03	27	1	0	0.00
18	Odisha	18.92	14.15	7,632	855	1,773	7.56
19	Rajasthan	86.41	95.34	21,500	2,572	1,771	24.54
20	Sikkim	0.01	0.00	3	0	-	-
21	Tamil Nadu	14.92	12.66	7,702	1,444	1,231	4.24
22	Telangana	10.07	9.79	6,959	644	528	3.55
23	Tripura	0.12	0.03	21	1	1	0.03
24	Uttar Pradesh	53.25	46.66	20,352	1,388	371	5.77
25	Uttarakhand	2.22	1.16	860	68	39	0.66
26	West Bengal	40.60	18.72	12,157	701	248	4.45
	Grand Total	520.83	519.36	207,435	25,487	20,156	154.81

* Tentative data

9.2.3 Coconut Palm Insurance Scheme (CPIS)

The Coconut Palm Insurance Scheme (CPIS) is implemented since the year 2009-10 in the selected areas of Andhra Pradesh, Goa, Karnataka, Kerala, Maharashtra, Orissa and Tamil Nadu. The scheme has also been continued during 2017-18 and 2018-19. Since inception of the scheme 57.25 lakh palms of 1.24 lakh growers for a sum insured of Rs. 506 crore have been covered. Against premium of Rs. 3.26 crore, claims of Rs. 4.40 crore have been paid to about 0.09 lakh farmers.

9.2.4 Unified Package Insurance Scheme (UPIS)

Unified Package Insurance Scheme has also been approved for implementation in selected 45 districts on pilot basis from Kharif 2016 to provide financial protection & comprehensive risk coverage of crops, assets, life, and student safety to farmers. The Pilot includes seven sections viz., crop Insurance (PMFBY/WBCIS), Loss of Life (PMJJBY), Accidental Death & Disability (PMSBY), Student Safety, Household, Agriculture implements & Tractor. Crop Insurance Section is compulsory. However, farmers can choose atleast two section from the remaining. Through UPIS, farmers may be able to get all requisite insurance products for farmers through one simple proposal/ application Form.

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Chapter 10

Agricultural Credit

10.1 Government has taken many policy initiatives for strengthening of farm credit delivery system for providing credit at lower rates of interest to support the resource requirements of the agricultural sector. The emphasis of these policies has been on providing timely and adequate credit support to farmers with particular focus on small and marginal farmers and weaker sections of society to enable them to adopt modern technology and improved agricultural practices for increasing agricultural production and productivity. The policy essentially lays emphasis on augmenting credit flow at the ground level through credit planning, adoption of region specific strategies and rationalization of lending policies and procedures and bringing down the rate of interest on farm loan.

10.2 Policy Initiatives for Increasing the Flow of Credit

Government has initiated several measures to galvanize the institutional credit system to make them more responsive to the needs of farmers. Some of the important measures initiated in this regard are as under:-

10.2.1 Agriculture Credit: Target and Achievement

Agricultural credit flow has increased consistently over the years and it reached Rs.11,68,503 crore against the target of Rs.10,00,000 crore during 2017-18. Target for the year 2018-19 has been fixed at Rs.11,00,000 crore and against this target the disbursement till 31st December, 2018 has been Rs.9,33,365 crore.

10.2.2 Interest Subvention Scheme (ISS)

The Government since 2006-07 has been implementing the Interest Subvention Scheme under which short-term crop loans upto Rs.3 lakh for a period of one year are provided by the lending institutions to farmers at concessional interest rates of 7% per annum, which in case of timely repayment gets reduced to 4% per annum.

Further, in order to discourage distress sale by farmers and instead to encourage them to store their produce in warehouses, the benefit of ISS has been extended to Small and Marginal Farmers (SMFs) having Kisan Credit Card for a further period upto six months post harvest on the same rates as available to crop loan against negotiable warehouse receipt for keeping their produce in warehouses accredited by Warehousing Development Regulatory Authority (WDRA).

To provide relief to farmers affected by natural calamities, the interest subvention on crop loan continues to be available to banks for the first year on the restructured amount. Such restructured loans may attract normal rate of interest from the second year onwards as per the policy laid down by the Reserve Bank of India (RBI) vide their Master Directions dated 3rd July, 2017.

However, with a view to provide relief to the farmers **affected due to severe natural calamities**, the Government during current financial year has decided that an interest

subvention of 2% per annum will be made available to banks for first three years/entire period (subject to a maximum of five years) on the restructured loan amount. Further, in all such cases, the benefit of prompt repayment incentive @ 3% per annum shall also be provided to the affected farmers. **The grant of such benefits in cases of severe natural calamities shall, however, be decided by a High Level Committee (HLC) based on the recommendation of Inter-Ministerial Central Team (IMCT) and Sub Committee of National Executive Committee (SC-NEC).**

Funds released to RBI/NABARD, the implementing agencies of the scheme, for settling the claims under the Scheme during the last five years are as under:

(Amount in Rs. crore)

2014-15	2015-16	2016-17	2017-18	2018-19
6,000	13,000	13,397.13	13,045.72	11,495.66 (as on 31.03.2019)

The Interest Subvention Scheme for lending short term crop loans upto Rs. 3 lakh per annum at concessional interest rates with modified provisions will continue for a period of two years i.e. 2018-19 and 2019-20. Further, the benefit of interest subvention and prompt repayment incentive has also been extended to farmers pursuing the activities of animal husbandry & fisheries to meet their working Capital needs.

10.3 The Kisan Credit Card (KCC) Scheme is aimed at providing adequate and timely credit support from the banking system under a single window to the farmers for their cultivation & other needs. Presently there are about 6.95 crore active KCCs, the Government with a view to bring more farmers under the institutional credit fold,

has reviewed existing KCC Scheme and has simplified the procedure to avail institutional credit through KCC. The major key initiatives in this regard are highlighted as under:-

- a) A simplified KCC application form (in regional languages) will be used by Banks for issue of new KCCs to farmers.
- b) For issue of new KCCs, the banks may collect following documents from the applicants:-
 - **Proof of identity:** Self attested copy of Voter ID Card/ Driving Licence / PAN Card / Aadhaar Card / Passport / Photo Ids issued by Govt. authority etc.
 - **Proof of Residence:** Recent telephone bill / electricity bill / property tax receipt (not older than 2 months) / Voter's ID Card / Aadhaar Card / Passport / Certificate issued by Govt. Authority / Local Panchayat / Municipality etc.
 - Applicant's recent **Photograph** (2 copies) not older than 6 months.
 - **Particulars of Land Records.**
- c) Under KCC scheme, for sanction of credit limit of upto Rs. 3 lakh, the prevailing processing, inspection, ledger folio charges and other service charges have completely been waived off.
- d) On timely repayment, the short term crop loans upto Rs. 3.00 lakh and loans for animal husbandry & fisheries will be provided at a concessional interest rate of 4% per annum.
- e) The RBI vide its notification dated 07.02.2019 has raised the limit for collateral free agricultural loans from existing level of Rs. 1 lakh to Rs. 1.60 lakh.

- f) Farmers already having KCC and pursuing the activities of Animal husbandry & Fisheries will be provided a sub credit limit within the existing credit limit of Rs.3.00 lakh with benefit of 2% interest subvention and 3% prompt repayment incentive.
- g) Animal husbandry and fisheries farmers not having KCC will be issued new KCCs with benefit of 2% interest subvention and 3% prompt repayment incentive upto credit limit of Rs.2.00 lakh per annum.
- h) Banks will issue new KCCs within 15 days of submission of the duly completed application form by the farmers.

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Chapter 11

Agricultural Marketing

11.1. Overview

Agriculture sector needs structured and functional markets, preferably in vicinity of farmers, to drive growth, employment, remunerative prices and economic prosperity in rural areas of the country. Enabling mechanism are also required to be put in place for procurement of agricultural commodities directly from farmers' field and to establish effective linkage between the farm production, the retail chain and food processing industries. In order to remove restrictive and monopolistic practices of present marketing system, to reduce the intermediaries in supply chain, to reduce wastages by way of promoting integrated supply and value chain and to benefit farmers through access to global markets, reforms in agricultural markets have to be an ongoing process. Agriculture sector needs competitive and well- functioning markets for farmers to sell their produce. There is a need to enhance private sector investment in development of post- harvest marketing infrastructure for which various schemes are also implemented.

The Government has been playing an important role in developing Agriculture Marketing system in the country. Agricultural Marketing Division of Department of Agriculture, Cooperation & Farmers Welfare (DAC&FW) is entrusted with implementation of policy and programme relating to Agricultural Marketing. Agricultural Marketing Division through its policies and programmes is working towards providing structured and functional markets preferably in vicinity of farmers, removing restrictive and monopolistic practices of present agricultural marketing system, reducing the intermediaries in supply chain, mitigate the

uncertainty in prices of agri commodities and marketing and providing remunerative prices to farmers for their produce.

11.2 Agricultural Marketing Reforms

Objective:

Sustainable growth and development of agriculture and allied sectors directly affect well-being of farmers and rural people at large, their prosperity and employment and also forms an important resource base for a number of agro-based industries and agro-services. With coordinated and integrated efforts made by policy makers, agricultural scientists and more so by farmers, the food grain production has gone up substantially and growth of horticulture crops has surpassed even the food grains production and productivity. Considering this, present government has made a paradigm policy shift from merely ensuring food security to nutritional and price security. For facilitating better value of the produce by the farmers, accessible, competitive, efficient and barrier free markets with adequate marketing infrastructure and real time market information is being considered instrumental to supplement the Government's effort towards doubling of farmers' income in a time bound manner. In order to realise the same, reforms in agricultural marketing sector is considerate important. In order to develop an efficient, competitive, transparent and barrier free markets with adequate post-harvest and marketing infrastructure and real time market information, Marketing Division is pursuing with comprehensive reform agenda including closely working with the States to reform their APMC Acts & promote contract farming.

Achievements

(a) Since the circulation of model APMC Act in 2003, Division has been vigorously pursuing with the States to adopt its provisions. So far, 22 States/ UTs have by and large adopted the major suggestions of model APMC Act, 2003, though many of the States have made cosmetic reforms leading to no noticeable ground level development. However, States, like Maharashtra, Gujarat, Karnataka, Rajasthan and Madhya Pradesh, have not only amended their marketing laws and put in place conducive atmosphere but have also made reform linked noticeable progress.

(b) In order to make model APMC Act, 2003 more holistic, comprehensive and farmers friendly, Marketing Division in consultation with NITI Aayog and States formulated and released model Act “The --- State/ UT Agricultural Produce and Livestock Marketing (Promotion & Facilitation) Act, 2017”, popularly called model APLM Act, in April, 2017. The essence of the model APLM Act, 2017 is to provide complete freedom to the cultivators and livestock rearers to sell their produce, livestock and its product to the buyers and through the marketing channel of their choice offering the better bid. Apart from above, the model legal framework of 2017 would attract the investment from private sector in developing post-harvest and marketing infrastructure. The model Act, inter-alia, provides for declaration of whole State as one unified market, warehouses/silos/ cold storages as market sub-yards, rationalization of market fee and commission charges. Arunachal Pradesh, Uttar Pradesh and Chhattisgarh have adopted the model APLM Act, 2017 while Punjab has adopted partially. Other States are at varied stages in the process of adoption.

To actualize the implementation of model APLM Act, 2017, Government has constituted a committee under the chairmanship of Dr. Ashok Dalwai, CEO, NRAA with members

from States of Karnataka, Maharashtra, Assam, Uttar Pradesh, Haryana and Madhya Pradesh to formulate model APLM Rules. The committee is in the process of deliberation and consultation to formulate the same.

(c) De-regulation of marketing of Fruits & Vegetables – Fruits & vegetables being perishable crops need different set of markets and marketing system with optimal supply chain with reduced intermediation and adequate marketing infrastructures including cold storages & cold chain. Existing system of marketing through network of APMC markets is attributed towards high post-harvest losses, long intermediation in supply chain and low return to the farmers. In order to address this issue, Department has been advocating with the States to provide complete freedom to the farmers as well as buyers and investors to invest in development of marketing infrastructure and supply chain outside the market yards so as to facilitate emergence of various channels of marketing. In addition to these, APMC Market should also be available as one of the alternative choices to the farmers. Till now, 17 States (Andhra Pradesh, Madhya Pradesh, Arunachal Pradesh, Himachal Pradesh, Jharkhand, Delhi, West Bengal, Odisha, Rajasthan, Chhattisgarh, Gujarat, Maharashtra, Haryana, Karnataka, Assam, Nagaland, Meghalaya) have moved in this direction, though in varied forms.

(d) With the objectives of enhancing farmers accessibility to number of markets & buyers offering the competitive bids in transparent manner, promote quality based trading and also to ensure better price discovery, Department launched Scheme of National Agriculture Market (e-NAM) in April, 2016. So far 585 regulated wholesale markets (APMCs) have been integrated to the e-NAM platform by 31st March, 2018 and another 415 markets are to be integrated by 31st March, 2020. DMI, an attached office of DAC&FW, has formulated

and uploaded, tradable parameters for 114 commodities.

(e) Considering the importance of integrating farmers including fruits and vegetable growers with agro-industries with the objectives to mitigate market and price uncertainties, reduce post-harvest losses and create rural employment, Department formulated and released a model Act; “The ---State/UT Agricultural Produce and Livestock Contract Farming & Services (Promotion & Facilitation) Act, 2018”. The model Act not only provides the facilitative legal eco-system for contract farming but also for services all along the agri. food value chain starting from pre-harvest, harvest and post-harvest including marketing. Tamil Nadu and Punjab have legislated a separate contract farming Act. Division is pursuing with the States to adopt the same.

(f) As per Union Budget Announcement, 2018-19, Government has announced to develop and upgrade existing 22,000 Gramin haats into Gramin Agricultural Markets (GrAMs) to work as centers of aggregation and for direct purchase of agricultural commodities from the farmers. These GrAMs are to be linked to electronic National Agricultural Market (e-NAM). In these GrAMs, physical infrastructure is being strengthening using MGNREGA and other Government Schemes. The Government has approved an Agri-Market Infrastructure Fund (AMIF) with a corpus of Rs. 2000 crore for developing and upgrading agricultural marketing infrastructure in the 22000 Gramin Haats and 585 Agriculture Produce Market Committee (APMC) Markets. DAC&FW has circulated Guidelines on ‘Operation and Management of GrAMs’ to all States to facilitate and promote better management in GrAMs. Further, DAC&FW has requested States to exempt the GrAMs from State APMC regulations. DAC&FW has also circulated

Scheme guidelines for AMIF to be set up with NABARD to all States to guide them to avail loan at concessional rate of interest. Apart from above, in order to identify the location, type and nature of haats, their periodicity, arrivals of produce etc., DAC&FW through its attached office of DMI is undertaking questionnaire based survey of these haats and so far survey of more than 11,000 rural haats have already been completed.

11.3 Integrated Scheme for Agricultural Marketing (ISAM):

- (a) Marketing Division is also implementing ongoing Central Sector Schemes from XII Plan, which have been integrated into a new scheme viz. the Integrated Scheme for Agricultural Marketing (ISAM) w.e.f. 01.04.2014. During 2017-18, National Agriculture Market Scheme popularly known as e-NAM scheme has also been made part of it.
- (b) The ISAM has six sub-schemes namely
 - (i) Agricultural Marketing Infrastructure (AMI)
 - (ii) Marketing Research and Information Network (MRIN)
 - (iii) Strengthening of Agmark Grading Facilities (SAGF)
 - (iv) Training, Research and Consultancy through Choudhary Charan Singh National Institute of Agricultural Marketing (NIAM)
 - (v) Agri-business Development through Venture Capital Assistance (VCA) and Project Development Facility
 - (vi) National Agriculture Market (e-NAM).

The first three sub schemes are implemented by Directorate of Marketing & Inspection (DMI), the fourth sub scheme by CCS National Institute of Agriculture Marketing (NIAM), Jaipur, while the fifth and sixth sub schemes are implemented through Small Farmers Agri-Business Consortium (SFAC), New Delhi.

11.3.1 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.

The AMI sub-scheme of ISAM was sanctioned for the XII plan Period (2012-17). The scheme had been stopped after 05.08.2014 for new projects of General category and after 31.01.2016 for new projects of SC/ST/NER category.

Now the Government has re-launched the scheme w.e.f. 22.10.2018 with certain modifications for the period coterminous with 14th Finance Commission i.e. upto 2019-20 with the following objectives:

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 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, labelling 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

Under the AMI sub-scheme, there are two components (i) Storage Infrastructure (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 value chain. AMI sub scheme is a back ended capital subsidy scheme and subsidy provided on capital cost of the project to develop agricultural marketing infrastructure and storage infrastructure including Infrastructure for development/upgradation to Rural Haats as Gramin Agricultural Market (GrAMs), Common Facilitation Centre for FPOs, marketing infrastructures in market yards, Infrastructure for direct marketing, Mobile infrastructure for post-harvest operations including reefer vans, Stand-alone cold storages up to 1000 MTs, Integrated Value Chain (IVC) Projects up to primary processing stage etc.

The scheme is demand driven, credit linked with provision of back-ended subsidy. The scheme is also reform linked for non-storage infrastructure projects of State/UT agencies and allowed under the scheme for those States/Union Territories that have undertaken following reforms in their respective APMC Acts (i) direct marketing; (ii) contract Farming; (iii) setting up of wholesale market for agricultural and allied produce in private and cooperative sector, (iv) e-trading; (v) unified single trading license

valid across the State/UT and (vi) single point levy of market fee across the State/UT.

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:

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.

- Subsidy pattern under the Scheme including Women Farmers and entrepreneurs are as follows:

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. However in respect of women farmers/ entrepreneurs irrespective of the category, the rate of subsidy admissible is 33.33%. The detail of subsidy pattern is as under:

For Storage Infrastructure Projects:

Category	Rate of Subsidy (on capital cost)	Subsidy ceiling		
		50- 1000 MT in Rs./MT	More than 1000 MT and up to 10,000 in Rs./MT	Maximum ceiling (Rs. Lakhs)
A) North Eastern States, Sikkim, UTs of Andaman & Nicobar and Lakshadweep Islands, hilly* areas	33.33%	1333.20	1333.20	133.20
B) In other Areas				
1. For Registered FPOs, Panchayats, Women , Scheduled Caste (SC)/ Scheduled Tribe (ST) entrepreneurs or their cooperatives**/ Self-help groups	33.33%	1166.55	1000.00	100.00
2. For all Other categories of beneficiaries	25%	875/-	750/-	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.

For Infrastructure Projects Other than Storage (Non-Storage) Infrastructure Including Farmer-Consumers Market and Development and Upgradation of Rural Haats/RPMs into GrAMs

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
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
2. For all Other categories of beneficiaries	25%	25.00

* 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.

Mini Oil expeller for extraction of edible from indigenous oilseeds (viz. Mustard seed, vegetable oil (as per FSSAI but without refining) Sesame seed, Ground nut, Linseed, Mahua,

Safflower, Nigerseed Oil, Coconut, Almond and Olive only) and Mini Dal mill for primary processing of pulses, which includes cleaning, grading, sorting, splitting, packaging and labelling for promoting direct marketing, are also eligible.

Infrastructure for setting up of Common Facilitation Centre by FPOs/FPCs is eligible under the scheme.

Further, infrastructure projects other than storage (non-storage) Infrastructure including farmer-consumers market and development and up-gradation of rural haats/RPMs into GrAMs) are also eligible under the scheme.

Achievement/Progress of the Scheme:

Since inception of scheme up to 31.12.2018, a total number of 38,954 storage infrastructure projects (Godowns), with storage capacity of 65.49 million MT were sanctioned under the scheme and subsidy of Rs.2949 crore has been released. Similarly, 18,564 other marketing infrastructure projects have also been sanctioned and subsidy of Rs.1811 crore has been released so far.

11.3.2 Marketing Research & Information Network (MRIN)

Under the MRIN scheme an E-Governance Portal has been developed for connecting the Farmers to their Markets “It is advantageous to have a network down to the mandi level to begin with. This can be progressively extended to villages and household level. Presently, electronic connectivity provided to 3355 markets in the country. More than 300 commodities and 2000 varieties are reported on daily basis on agmarknet portal. 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:-

- Financial support for organizing training, research, awareness and sensitization campaign to state govt. organization.
- Provision of financial incentive @ Rs 1000/- per month to the Marketing Personnel & for uploading data in the portal for more than 20 days in a month.

Dissemination of Mandi Information:

Latest Mandi Price information is disseminated from the Agmarknet portal through Agmarknet portal (<http://agmarknet.gov.in>), Agrimarket App, Kisan Suvidha App, UMANG App, DD Kisan Channel etc.

Success Stories:

Based on the usage of mandi information by different stakeholders from open data portal

with the data access provided from Agmarknet Project under Marketing Research & Information Network(MRIN) scheme of ISAM is recently received Platinum Award under

Open Data Champion category in the Digital India Award 2018. Agmarknet Project received Platinum Award under Open Data Champion category of Digital India Award 2018.



Agmarknet Project received Platinum Award under Open Data Champion category of Digital India Award 2018.

11.3.3 Strengthening of Agmark Grading Facilities (SAGF):

a) 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, General Grading and Marking Rules, 1988 (as amended up to 2009) and specific commodity Rules notified by DMI, Department of Agriculture, Cooperation 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 224 agricultural commodities have been notified so far 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. The commodities are from group of Vegetables, cereals, pulses, oilseeds, vegetable oils, ghee, spices, honey, creamery butter, wheat, atta, besan, etc.

b) Mandatory Agmark certification : Food Safety and Standards (Prohibition and Restriction on Sale) Regulations 2011 & Food Safety and Standards (Packaging

and Labelling) Regulations, 2011 have prescribed compulsory Agmark certification for eight (8) food products i.e. Blended Edible Vegetable Oil, Fat Spread, Honey dew, Carbia Callosa, Kangra Tea, Til Oil (Sesame Oil) obtained from white sesame seeds grown in Tripura, Assam and West Bengal, Ghee having less Reichert value than that specified for the area where such ghee is sold and Light black pepper.

- c) Export: European Union has notified vide commission regulation No 1580/2007 dated 21 December 2007, Agricultural Marketing Adviser 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 29 private commercial labs to issue Certificate of Agmark Grading (CAG) for fruits and vegetables (Okra, grapes, pomegranate and onions etc) for export.
- d) Implementation & Monitoring: The Agmark certification scheme is implemented by 11 Regional Offices, 27 Sub Offices, 11 Regional Agmark Laboratory, a Central Agmark Laboratory through QC division at Head Office Faridabad.
- e) Agmark online certification: In order to fulfil Hon'ble Prime Minister's Digital India dream, 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. On 26.09.2018, Hon'ble Union Minister of Agriculture and Farmers Welfare Shri Radha Mohan Singh has launched the online software on agmarkonline.dmi.gov.in web portal for Agmark Certification.

- The software sends SMS/ emails to the applicants/officers/users at relevant stages. Through the Agmark online system, certificate of authorisation (domestic), permission of printing press, permission of laboratories (domestic) and services related to laboratory information management system are provided online.

11.3.4 CCS National Institute of Agricultural Marketing (NIAM):

Objectives

- To conduct research on long term projects, policy formulation, prepare status papers, conduct case studies in specific to marketing problems.
- To impart training to various levels of personnel of organizations involved in agricultural marketing activities such as State agricultural marketing board(SAMB), Co-operative marketing, Commodity Boards, Input agencies, progressive farmers, traders, entrepreneurs. To help them develop bankable projects for creation of market infrastructure & integrated value chain.
- To offer consultancy services to state and Central Departments, public-sector undertaking, co-operative etc in preparation of Master plans for States.

- To develop promising human resources by providing long term structured courses in agricultural marketing.
- To cover a wide information network in the country in agricultural marketing to evolve efficient, innovative and competitive marketing process.
- To develop as a centre for excellence in the filed of agricultural marketing by establishing adequate.

Achievements

(i) Establishment of Ten Centres

In order to cater to the emerging areas in Agriculture Marketing through training, research and consultancy NIAM has established ten academic centres. The Centres are headed by senior faculty members. The name of the Centres are as follows :-

1.	CCS NIAM Centre for Policy, Reforms and Programmes
2.	CCS NIAM Centre for Innovation, Entrepreneurship and Skill Development
3.	CCS NIAM Centre for Agriculture Marketing Planning and Development
4.	CCS NIAM Centre for ICT and e-NAM
5.	CCS NIAM Centre for Public Private Partnership
6.	CCS NIAM Centre for Institution Building
7.	CCS NIAM Centre for Monitoring and Evaluation
8.	CCS NIAM Centre for Agri Logistics
9.	CCS NIAM Centre for Agri Business Management & Education
10.	CCS NIAM Centre for International programmes

(ii) Post Graduate Diploma in Management (Agribusiness Management) PGDM (ABM):

The Post Graduate Diploma in Management (Agribusiness Management) PGDM (ABM) is a two year residential program approved by All India Council for Technical Education (AICTE). The admission to the course has been made through CAT. For the session 2018-19, 59 students have taken admission to the 18th batch of PGDABM. 100% placement of the 2017-18 batch was achieved by CCS NIAM.

(iii) Training, Research and Consultancies Activities:

Training is the core mandate of NIAM through which it reaches out to the vast array of stakeholder across the States. In 2018-19, 105 training programmes have been designed for different crops and sectors out of which 98 programmes have been completed. There are 39 progremmes to be organized in North East.

(a) Banner Programmes are flagship programmes of CCS NIAM organized in partnership with reputed organizations such as National Institutes, Agricultural Universities and SAMETIs in different states. The Programme aims at sensitizing officials of Department of Agricultural Marketing and allied departments on various developmental programmes launched by Ministry of Agriculture and Farmers Welfare. The Programme also focus on addressing marketing issues around a state specific dominant crop or sector. Eight such programmes will be conducted covering all the public and private stakeholders in Agricultural Marketing. Eight such programmes conducted covering all the public and private stakeholders in Agricultural Marketing will be done in 2018-19.

- (b) Krishi Gyan Deep Knowledge series Lectures aims at absorbing and disseminating most successful experiences in Agricultural Marketing to all the important stakeholders in the Country. Prominent professional leaders in Agricultural Marketing will be invited to share their experiences at CCS NIAM, Documented through films and disseminated to all the stakeholders in the Country through cost effective IT Platforms. The stakeholders covered through dissemination are officials of Department of Agricultural Marketing, Allied Departments, Marketing Boards, Department of Agricultural Marketing/ Agri Business /Agriculture Economics of Agricultural Universities, NGOs, Corporates, students, Researchers & Scientists. Twelve Programmes are planned. So far 06 Krishi Gyan Deep Knowledge Series Lectures have been done.
- (e) Facilitator Development Programme (FDP) aims at developing well trained professionals in the field of Agricultural Marketing. Facilitators are professionals working in different parts of the Country, for different organizations, available to CCS NIAM for carrying out academic activities whenever required. This ensures maximum use of available knowledge resources for the benefit of farmers in a cost and time effective manner. Two FDP are planned in current year.
- (f) Refresher Programme aims at updating the latest trends in Agricultural Marketing to officials working in public sector CCS NIAM provides a national platform for Agricultural Marketing professionals of Agricultural Universities annually to exchange views and refresh knowledge.



- (c) CCS NIAM accords high priority for organizing training Programmes to farmers and extension functionaries of North Eastern States. Thirty Nine Programmes are being conducted in North Eastern States.
- (d) CCS NIAM being a National Institute is organizing Forty one Training Programmes throughout the country addressing different dimensions of Agricultural Marketing. These Programmes are mostly organized with partner Institutions thus ensuring synergetic impact.
- (g) Kisan Business School is an action research which is NIAM's initiative for enhancing farmers' income. KBS aims at educating farmers on modern production, processing and marketing activities so that the income is enhanced. Commodity specific knowledge and skills are imparted to farmers by expert institutions in all the critical stages. Kisan Business School research will focus on commodities like banana, wheat, dairy, maize, potato, poultry, fisheries etc.
- (h) Research projects on policy issues like e-NAM, marketing reforms, developing gram rural markets, agmarknet, agriculture marketing extension etc. will be conducted in the year 2018-19.
- (i) Research Internship programme has been initiated by taking young interns to work on contemporary issues in research in agriculture marketing.

Research: During the year 2018-19, 10 research projects are in progress.

Consultancy

- (j) As a lead agency with WDRA, CCS NIAM is conducting ten awareness programmes for farmers and traders. Management programmes for warehouse operators and managers are also being conducted to bring information about warehouse management.
- (k) Project with CAZRI – ICAR has been sanctioned to work on capacity building of farmers and community in a water shed area for better marketing practices and opportunities for better livelihood.

(iv) International Training Programmes

CCS NIAM has conducted International Training Programme under Feed the Future (FTF) India Triangular Programme sponsored by USAID. The programme was attended by 30 executives of 7 countries of Africa & Asia from 1st October to 15th October, 2018.



Group Photo with DG MANAGE, Director, Food Security, USAID, Development Assistance, USAID and DG CCS NIAM

11.3.5 Formation of Farmer Producer Organization (FPO) :

Objectives

The purpose of the project is to collectivize farmers, especially small producers, at various levels across several states, to foster technology penetration, improve productivity, enable improved access to inputs and services and increase farmer incomes, thereby strengthening their sustainable agriculture based livelihoods.

Achievements

Small Farmers Agri-business Consortium (SFAC) was mandated by Department of Agriculture, Cooperation and Farmers Welfare, Ministry of Agriculture and Farmers Welfare, Govt. of India, to support the State Governments in the formation of Farmer Producer Organizations (FPOs). The initiative which started in 2011-12 under the two Central Sector Schemes for Vegetable Initiative for Urban Clusters (VIUC) and Integrated Development of 60,000 Pulse Villages in Rainfed Areas has expanded in its scope and covers special FPO projects being taken up by some State Governments under general RKVY funds as well as under the National Demonstration Project under the National Food Security Mission (NFSM) and Mission for Integrated Development of Horticulture (MIDH).

As on 28th February, 2019, a total of 760941 farmers have been mobilized and 120515 farmers are under mobilization. so far 783 FPOs have been registered and 114 FPOs are under the process of registration.

11.3.6 Equity Grant and Credit Guarantee Fund Scheme for Farmer Producer

Companies:

a) Equity Grant Fund :

SFAC is also implementing Equity Grant and Credit Guarantee Fund Scheme for Farmer Producer Companies to increase their equity capital and leverage institutional borrowing from banks. Equity Grant Scheme enables registered farmer producer companies to access matching equity grant up to a maximum limit of Rs.15.00 lakhs per FPC from SFAC.

SFAC has sanctioned Equity Grant to 417 Farmer Producer Companies (FPCs) amounting to Rs. 25.10 Crore. The performance of Equity

Grant Scheme from 2014-15 to 2018-19 is as under:

Si. No.	State	No. of Equity Grant Sanctioned	Total Amount
1	Andhra Pradesh	8	35.16
2.	Bihar	11	35.35
3	Chhattisgarh	1	10.00
4	Gujarat	6	44.96
5	Haryana	8	56.05
6	Karnataka	59	544.88
7	Kerala	1	6.85
8	Madhya Pradesh	50	212.65
9	Manipur	3	23.16
10	Maharashtra	65	367.68
11	Odisha	4	23.54
12	Rajasthan	7	38.71
13	Tamil Nadu	56	406.96
14	Telangana	4	22.01
15	Tripura	1	8.44
16	Uttar Pradesh	76	388.08
17	Uttarakhand	1	10.00
18	West Bengal	56	275.77
	Total	417	2510.25

b) Credit Guarantee Fund :

The Credit Guarantee Fund has been set up with the primary objective of providing a Credit Guarantee Cover to Eligible Lending Institutes providing loans to Farmer Producer Companies (FPCs) without collateral up to Rs. 1.00 crore.

SFAC has sanctioned Credit Guarantee to 43 FPCs for Rs.17.87 crores w.e.f 2014-15 to 2018-19 (upto 15.02.2019) with details as under:

State-wise sanctioned project — Credit Guarantee Fund scheme from 2014-15 to 2018-19 (upto 15.02.2019)

Si. No.	Bank-wise	No. of cases	C.G. cover sanctioned
1.	Gujarat	3	37.40
2.	Haryana	3	62.05
3.	Rajasthan	2	61.2
4.	Madhya Pradesh	10	599.11
5.	Tamil Nadu	17	665.24
6.	Maharashtra	5	201.45
7.	Kerala	1	63.75
8.	Karnataka	2	96.9
	Total	43	1787.10

11.3.7 Venture Capital Assistance (VCA)

Objectives

- (i) To facilitate setting up of agribusiness ventures in close association with banks.
- (ii) To catalyse private investment in setting up agribusiness projects and thereby providing an assured market to producers for increasing rural income and employment.
- (iii) To strengthen backward linkages of agribusiness projects with producers.
- (iv) To assist farmers, producer group/companies and agriculture graduates to enhance their participation in the value chain.

Progress

SFAC is implementing a Central Sector Scheme of Venture Capital Assistance (VCA) to qualifying projects which promote linkages with farmers for procurement of their produce as raw material and provides employment in rural areas. The Scheme is implemented through banks & provides 26% of the promoters' capital or Rs. 50.00 lakhs whichever is lower as soft loan to the agriprenours.

Total VCA Sanctioned/disbursed Rs. 706.64 Cr. to 2415 agri-business projects; Total Project Value: Rs.8384.43 Cr benefitting approximately

1.83 lakh farmers; generating employment of 97226 persons.

The performance of Venture Capital Assistance Scheme since inception to 2018-19 (up to 15.02.2019) is as under:

Plan Project	Venture Capital Assistance (Rs. in crore)	Total Project Cost (Rs in crore)	C.G. cover sanctioned
X Plan (2002-2007)	23.86	262.51	103
XI Plan (2007-2012)	120.17	1461.03	409
XII Plan (2012-2017)	336.34	4062.09	1111
2017-2018	128.48	1385.30	460
2018-2019 up to 15.02.2019	97.79 706.64	1213.50 8384.43	332 2415
Total	706.64	1	63.75

11.3.8 National Agriculture Market (e-NAM)

Objectives

- (i) To integrate markets first at the level of the States and eventually across the country through a common online market platform, to facilitate pan - India trade in agricultural commodities;
- (ii) To streamline marketing / transaction procedures and make them uniform across all markets to promote efficient functioning of the markets;
- (iii) To promote better marketing opportunities for farmers / sellers through online access to more buyers / markets, removal of information asymmetry between farmer and trader, better and real-time price discovery based on actual demand and supply of agricultural commodities, transparency in auction process, prices commensurate with quality of produce, online payment etc. that contribute to marketing efficiency;
- (iv) To establish quality assaying systems for quality assurance to promote informed bidding by buyers; and

- (v) To promote stable prices and availability of quality produce to consumers.

Scheme Brief

- a) Cabinet Committee on Economic Affairs approved the Central Sector Scheme for Promotion of National Agriculture Market through Agri-Tech Infrastructure Fund (ATIF) for implementation during 2015-16 to 2017-18 on 1st July, 2015 by Department of Agriculture, Cooperation and Farmers' Welfare (DAC&FW) through Small Farmers' Agribusiness Consortium (SFAC).

Accordingly, Department of Agriculture, Cooperation and Farmers' Welfare (DAC&FW), Ministry of Agriculture & Farmers Welfare has mandated Small Farmers' Agribusiness Consortium (SFAC) to act as the Lead Promoter of e-NAM. Under the Scheme, a pan India electronic trading portal is being deployed in selected regulated wholesale markets in reformed NAM, common quality parameters have been developed for 124 commodities. E-NAM platform is deployed for markets in those States which have provided e-trading facility, unified trading license and single point levy of market fee in their marketing regulation.

b) The markets are approved for integration based on the Detailed Project Reports (DPRs) received from respective States. Department of Agriculture, Cooperation & Farmers' Welfare (DAC&FW), Government of India is meeting expenses on development and customization of Software and providing the same free of cost to the States. DAC&FW is also providing one time grant subject to the ceiling of Rs.75.00 lakh per market for providing IT hardware, Internet, Quality assaying facility, cleaning, grading & packaging facilities and bio-composting units in e-NAM markets.

Achievements

Under the ambitious National Agriculture Market (e-NAM) project, 585 whole sale regulated markets (APMCs) of 16 States and 02 Union Territories have been integrated with e-NAM portal by 31st March 2018. Department has vigorously engaged itself with the States to strengthen and upgrade the IT, Quality assaying and cleaning / sorting /packaging infrastructure, promote online payment for farmers to reap its benefits. Inter-state trade has been started in 09 States. So far, 653 FPCs/ FPOs have been registered on e-NAM Portal.

As on 15.03.2019, a total of 1.55 crore farmers/ sellers, 68429 commission agents and 122171 traders/buyers have been registered on e-NAM portal. Trading of 24288397 ton agri-commodities having trade value of Rs. 64923 crore have been recorded on e-NAM portal.

Funds have been released to States for related infrastructure for integration of 220 markets with e-NAM platform beyond 585 markets.

Success Stories

Inter-State Trade

The Prime Minister's flagship program e-NAM has recently achieved another milestone by

commencing inter-State trade between mandis of two different States. Earlier trade used to happen either within the APMC or between two APMCs situated within same state. The very first Inter State transaction in tomatoes has been carried out between trader of Bareilly e-NAM APMC of Uttar Pradesh and farmer of Haldwani e-NAM APMC of Uttarakhand.

31 e-NAM mandis of Eleven states/ UT namely, Uttar Pradesh, Uttarakhand, Andhra Pradesh, Telangana, Rajasthan, Gujarat, Maharashtra, Madhya Pradesh, Chandigarh, Himachal Pradesh & Haryana have participated in inter-state trade on e-NAM.

Rajasthan is the first State to start inter-State trade with more than one State, establishing trade link with Gujarat, Maharashtra, Haryana, Uttar Pradesh, Andhra Pradesh & Madhya Pradesh through e-NAM.

Till 15th March, 2019, inter-state trade of 447.9 MT worth Rs. 32.05 Lakh has been recorded in 18 commodities (which include vegetables, pulses, cereals, oilseeds, spices etc.).

The intensive efforts made to strengthen e-NAM platform digitally and make it more user friendly associated with efforts to bring in change management has yielded results in better utilization of e-NAM platform by farmers and other stakeholders and is gaining recognition. The digitally e-NAM has been awarded prestigious The Hindu Business Line: Change Maker- Digital Transformation Award 2019 on 15.03.2019.

11.4 National Centre for Cold-chain Development (NCCD)

National Center for Cold-chain Development (NCCD) is an autonomous body under the Department of Agriculture, Cooperation and Farmers Welfare registered under Societies

Registration Act, 1860. It was provided one time grant of Rs. 25 crore by the Government for establishing a corpus of the same amount. The Centre works in collaboration with cold chain industry and stakeholders to serve as centre of excellence for development of cold chain in India by way of promotion and diffusion of scientific and technical knowledge relating to development of integrated cold chain in India.

The aims and objectives of NCCD include recommending standards and protocols for cold chain infrastructure / building to harmonize with international standards, to suggest indicative guidelines for preparation of project reports for investor / entrepreneurs, to undertake and coordinate research and development work required for development of cold chain industry, to undertake and coordinate human resource development and capacity building, to launch publicity campaign to educate the stakeholders, recommend policy framework related to development of cold chain and to facilitate and foster development of multimodal transportation facilities for perishable agricultural, horticultural and allied commodities.

NCCD prepared Guidelines and minimum System Standards for Implementation in Cold-chain Components in 2014 and conducted a Study on All-India Cold-chain Infrastructure Capacity. NCCD has conducted 183 workshops on entrepreneur development for fruit ripening chambers through its members since 2014 imparting training to 6180 individuals. 38 three-day residential courses on cold chain technology for government officers and private stakeholders since 2014. NCCD conducts awareness programmes to increase awareness of government schemes for cold chain development. 23 such programmes were conducted through member institutions of NCCD since 2016.

NCCD has also been conducting training workshops for NABARD, NCDC, APEDA and States on Cold chain. NCCD was co-opted as knowledge partner by the Committee on Doubling of Farmers Income. NCCD also assists in formulating and rationalizing schemes and provides inputs on cold chain related areas to organizations such as NITI Aayog, Ministry of Food Processing Industries, Ministry of Environment, Forest and Climate Change, Department of Consumer Affairs etc.

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Chapter 12

Agricultural Cooperation

12.1 Overview

The Cooperative Sector has been playing a significant role in the area of disbursing agricultural credit providing market support to farmers, distribution of agricultural inputs and imparting cooperative education and training etc. The basic objective of the Cooperation Division is to design long term and short term strategies for reducing economic disparities between the down-trodden rural people and the rural rich as well as regional imbalances, including rural and urban differences. The Cooperation Division is implementing one Central Sector Plan Scheme in the country during the 12th Five Year Plan viz. Central Sector Integrated Scheme on Agriculture Cooperation having two sub-components (i) Assistance to NCDC programmes for development, including assistance to Multi-State Cooperative Societies and (ii) Assistance for Cooperative Education & Training.

This Department also implements Multi State Cooperative Societies Act, 2002 under which multi-state cooperative societies are registered. It is an Act to consolidate and the law relating to Cooperative Societies, with objects not confined to one state and serving the interest of members in more than one state, to facilitate the voluntary formation and democratic functioning of cooperatives as people's institutions based on the self-help and mutual aid and to enable them to promote their economic and social betterment and to provide functional autonomy to them. Therefore, the co-operative societies registered under the MSCS Act are functioning as autonomous organizations accountable to their members.

Under the umbrella scheme of “Pradhan Mantri Annadata Aay Sanrakshan Abhiyan” (PM-AASHA), this Department is implementing Price Support Scheme (PSS), Price Deficiency Payment Scheme (PDPS), and pilot Private Procurement and Stockist Scheme (PPSS). Under this, States / UTs are offered to choose either of PSS and PDPS in a given procurement season with respect to particular oilseeds crop for the entire State. The pulses and copra are procured under PSS. Only one scheme i.e. PSS or PDPS will be made operational in one State with respect to one commodity.

12.2 Amendment to the Constitution in respect of Cooperatives:

Amending the State Cooperative Societies Acts in tune with the provisions of the 97th amendments in the Constitution will not only ensure autonomous and democratic functioning of the cooperatives, but also ensure accountability of management to the members & other stakeholders and also enhance public faith in these institutions. The Constitutional amendment provides for a maximum period of one year from the date of its commencement to amend the state laws relating to cooperative societies, if required, to make them consistent with the provisions of the amendment. So far 17 States, viz. Arunachal Pradesh, Assam, Bihar, Chhattisgarh, Gujarat, Haryana, Karnataka, Kerala, Madhya Pradesh, Mizoram, Odisha, Rajasthan, Tripura, Uttar Pradesh, West Bengal, Tamil Nadu and Maharashtra have amended their State Cooperative Societies Acts in consonance with the constitution (97th Amendment) Act, 2011. However, in the

meantime certain provisions of the Constitution (97th Amendment) Act, 2011 have been struck down by the Hon'ble High Court of Gujarat at Ahmedabad vide order dated 22.4.2013 in WP (PIL) No.166 of 2012. The Union of India has filed SLP No. 25266-25267 on 12.7.2013 before the Hon'ble Supreme Court against the aforesaid order and the case is pending before the Supreme Court for its disposal.

12.3 Major Schemes and Objectives:

12.3.1 Assistance to NCDC Programmes for Development of Cooperatives

The "Central Sector Integrated Scheme on Agricultural Cooperation" (CSISAC) is being implemented through National Cooperative Development Corporation (NCDC). The main objective of this component is to assist the cooperative societies through NCDC for modernization, expansion and diversification and to provide share capital and margin money etc. The following activities are undertaken under this component:-

(i) Marketing, Processing, Storage, Consumer, Weaker Section Programmes of Cooperatives, Computerization of PACS, DCBs and SCBs and T&P Cell Scheme for strengthening Management of State Cooperative Federations and office of RCS (subsidy on tapering basis).

To provide financial assistance for improving the economic conditions of cooperatives, remove regional imbalances and to speed up cooperative development in Agricultural Marketing, Processing, Storage, Computerization and Weaker Section Programmes, the Government provides assistance to NCDC for financing the activities of agro-processing, marketing of foodgrains and input supply, plantation/horticultural crops, development of weaker sections such as tribal cooperatives, dairy, poultry, livestock, fisheries, handloom

coir, jute sericulture cooperatives etc., and computerization of cooperatives.

(ii) Assistance for Cotton Development including Ginning and Pressing and Establishment of New and Modernization / Expansion / Rehabilitation of Existing Cooperative Spinning Mills :

The basic objective of the scheme is to help cotton growers fetch remunerative price for their produce through value addition besides ensuring supply of quality yarn at reasonable rates to the decentralized Weavers. Under this component, financial assistance is being provided to the cooperative spinning mills for share capital participation, modernization / expansion of existing mills, rehabilitation of sick cooperative spinning mills, margin money assistance to cooperative spinning mills and State Cotton Federations, besides for setting up of new and modernization of existing cotton ginning and pressing units.

(iii) Integrated Cooperative Development Projects in selected districts (ICDP)

The scheme aims to promote overall development of selected districts in the country through cooperative efforts in agriculture and allied sectors including fisheries, poultry, handloom and rural industries etc.; strengthen cooperative network; promote business development plans by forging effective linkage with credit and other institutional structure in the area; develop PACS as multi-purpose entities and modernization of management of Cooperatives.

12.3.2 Assistance to Cooperative Education and Training

i) Cooperative Education

Implementation of a special scheme for intensification of Cooperative Education

and field projects in the cooperatively under developed areas/states by National Cooperative Union of India (NCUI) for spreading general awareness about the cooperative institutions, their working, business development activities, socio development activities like health care, family welfare, drinking water facilities, etc. and development of participation of women in the socio-economic activities. Approved activities like implementation of educational programmes for women, youth, minority community through the State Cooperative Unions, convening of Indian Cooperative Congress and other Conferences, Seminars etc. for cooperative development, international promotional activities, running of cooperative data bank, for publication of books, journals, etc. for the promotion of cooperative activities are also undertaken.

ii) Cooperative Training by National Council for Cooperative Training (NCCT) and Vaikunth Mehta National Institute of Cooperative Management (VAMNICOM)

Providing training to middle level and senior level personnel of the cooperatives and State Govt. officials by NCCT

iii) Assistance to Junior Cooperative Training Centres (JCTCs)

JCTCs are primarily meant for providing training to the personnel of the base level cooperative organizations.

iv) Assistance to Centre for International Cooperation and Training in Agriculture Banking (CICTAB)

The CICTAB is located at VAMNICOM, Pune, conducts training courses/workshop/seminars on various aspects of agriculture banking, promotes technical cooperation amongst sub region countries of SAARC

like Bangladesh, Nepal, Sri Lanka and India.

12.3.3 Scheme under Umbrella Scheme of PM-AASHA implemented by DAC&FW

The umbrella scheme of “Pradhan Mantri Annadata Aay Sanrakshan Abhiyan” (PM-AASHA), this Department is implementing Price Support Scheme (PSS), Price Deficiency Payment Scheme (PDPS), and pilot Private Procurement and Stockist Scheme (PPSS). Under this, States / UTs are offered to choose either of PSS and PDPS in a given procurement season with respect to particular oilseeds crop for the entire State. The pulses and copra are procured under PSS. Only one scheme i.e. PSS or PDPS will be made operational in one State with respect to one commodity. Further, States have the option to roll out Private Procurement and Stockist Scheme (PPSS) on pilot basis in district / selected APMC(s) of district involving the participation of private stockist. The brief of PSS, PDPS and PPSS are as under:-

- i) PSS:-** This scheme is implemented at the request of the concerned State Govt. which agrees to exempt the procured commodities from levy of mandi tax and assist central nodal agencies, in logistic arrangements, including gunny bags, working capital for state agencies, creation of revolving fund for PSS operations, etc. as required under the scheme guidelines. Procurement of these commodities are undertaken by Central Nodal agencies at Minimum Support Price (MSP) announced by the Govt. as and when prices fall below the MSP as well as compliance of State Govt. to PSS guidelines.
- ii) PDPS:-** This scheme envisages direct payment of the difference between the MSP and the selling / modal price to pre-registered farmers selling his produce in the

notified market yard through a transparent auction process. All the payments will be done directly into their bank account of farmers. This scheme does not involve any physical procurement of crops as the farmers are paid the difference between the MSP and Sale / Modal price on sale in notified market.

- iii) **PPSS:-**In addition to PDPS, oilseed producing states will have the option to roll out Private Procurement Stockist Scheme (PPSS) on pilot basis in district/ selected APMC(s) of district involving the participation of private stockist. The pilot district/ selected APMC(s) of district will cover one or more crop of oilseeds for which MSP is notified. Since it is akin to PSS, it involves physical procurement of the notified commodity.

12.4 Market Intervention Scheme (MIS)

The Department also implements Market Intervention Scheme (MIS) for procurement of agricultural and horticultural commodities, which are perishable in nature and are not covered under the Price Support Scheme (PSS). The objective of intervention is to protect the growers of these commodities from making distress sale in the event of a bumper crop during the peak arrival period when the prices tend to fall below economic levels and cost of production. The condition is that there should be either at least a 10 percent increase in production or a 10 percent decrease in the ruling market prices over the previous normal year. The scheme is implemented at the request of a State/UT government which is ready to bear 50 percent of the loss (25 percent in case of North-Eastern States), if any, incurred on its implementation. The extent of total amount of loss to be shared on a 50:50 basis between the Central Government and the State Government, is restricted to 25 percent of the

total procurement value which includes cost of the commodity procured plus permitted overhead expenses.

12.5 Income/Production and Target/Achievement

12.5.1 Assistance to NCDC Programmes for Development of Cooperatives

The National Cooperative Development Corporation (NCDC) is a non-equity based development financing institution created exclusively for the cooperative sector with the aim & objectives to promote, strengthen and develop farmers' cooperatives; assist programmes of cooperatives for supply of inputs, processing, storage and marketing of agricultural produce & consumer goods and those dealing with notified commodities & services; and assist cooperatives of weaker section such as those comprising of members from scheduled castes, scheduled tribes, labour & women and those working in the handloom, sericulture, poultry, fishery and dairy sectors etc. The Central Government has prescribed an overall ceiling of twenty five percent (25%) of annual budget of NCDC for financing all activities under notified services so that focus of NCDC continues on financing of cooperatives in agriculture & allied sector. In 2018-19, an assistance of Rs.27223.96 crore has been disbursed (as on 7.03.2019) against approved outlay of Rs.12,000 crore for the various programmes implement by NCDC.

12.5.2 Cooperative Spinning Mills: In order to improve economic condition of the cotton growers as well as handloom & power loom weavers and to consolidate the gains achieved so far, the Department, through NCDC, continued to provide financial assistance to the spinning mills & ginning and pressing units in the cooperative sector. Assistance is provided for establishment of new cooperative spinning

mills; modernisation/expansion of existing spinning mills, establishment of modern ginning and pressing units, modernisation/expansion of existing units etc. During the year 2018-19, NCDC released Rs.228.76 crore (as on 7.03.2019) for this component.

12.5.3 Cooperative Storage: DAC&FW through NCDC has been making systematic and sustained efforts to assist cooperatives in creating additional storage capacity aimed at facilitating expanded operations of cooperative marketing of agriculture produce, distribution of inputs and sale of consumer articles. Storage capacity assisted by NCDC stood at 165.10 lakh MT as on 31.03.2018 and a total amount of Rs.1064.05 crore has been released by NCDC under various programmes towards construction of godowns, repair and renovation of godowns, technical and margin money assistance for business promotion. During the year 2018-19 (as on 7.03.2019), Rs.11.64 crore has been released for the storage programme.

12.5.4 Cold Storage: As on 31.03.2018, 323 cold storage projects have been organized/ sanctioned with a capacity of 9.76 lakh MT. Against this, 305 cooperative cold storage projects with a total capacity of 9.36 lakh MT assisted by NCDC have been completed / installed. This includes 36 projects of capacity expansion of 1.28 lakh MT. Besides, 17 cold storage projects of 0.396 lakh MT (including 2 capacity expansion projects of 0.144 lakh MT) are under implementation. During 2017-18, NCDC released Rs.4.04 crore comprising of Rs.3.95 crore as loan and Rs.0.09 crore as subsidy under CSISAC Scheme. Upto 31.03.2018, NCDC has disbursed Rs.217.030 crore for promotion and development of cooperative cold storages in the country. To encourage cold chain development for perishable commodities, the NCDC has created a separate cold chain Division. During the year 2018-19 (as on 7.03.2019), Rs.7.34 crore has been released for cold chain activity.

12.5.5 Foodgrains: NCDC provides financial assistance for setting up of foodgrain processing units such as rice mills, rice flakes unit, dal mills, wheat flour mills, maize processing units, cattlefeed plants etc. During 2018-19 (as on 7.03.2019), NCDC released Rs.8.00 crore and cumulatively, as on 7.03.2019, released 37.86 crore to foodgrain processing units.

12.5.6 Oilseed: NCDC provide financial assistance for establishment of oilseed processing units. During 2018-19 (as on 7.03.2019), NCDC released Rs.8.26 crore and cumulatively, as on 7.03.2019, released Rs.544.42 crore for oilseed processing units.

12.5.7 Plantation Crop: NCDC provide financial assistance for establishment of units for processing of Plantation Crops and for meeting working capital requirement of plantation crops growers' cooperatives. During 2018-19 (as on 7.03.2019), NCDC released Rs.10.32 crore and cumulatively, as on 7.03.2019, NCDC has released Rs.42.16 crore.

12.5.8 Fruit & Vegetable: NCDC provides financial assistance for setting up of fruit and vegetable processing units by cooperatives. The primary objective of the NCDC Scheme is to provide the benefit of value addition to the growers in respect of their horticulture produce through processing in an efficient manner, which in turn may help in increasing the income of the farmers. Cumulatively, as on 7.03.2019, NCDC has released Rs. 6.08 crore for 81 fruit & vegetable processing units.

12.5.9 Cooperative for Weaker Sections: NCDC is promoting and financing programmes for weaker sections and different types of projects for societies belonging to fishery, poultry, dairy, livestock, handloom, coir, jute, sericulture, Scheduled Castes, Scheduled Tribes, labour & women cooperatives.

- a) **Fisheries:** NCDC provides assistance to fishery cooperatives to take up activities relating to production, processing, storage, marketing, etc. During 2018-19 (as on 7.03.2019), NCDC sanctioned Rs.229.89 crore and released Rs.466.72 crore. Cumulatively, as on 7.03.2019, NCDC has released Rs.952.18 crore under this head.
- b) **Poultry:** NCDC has been extending assistance to poultry cooperatives. Cumulatively, NCDC has released Rs.45.39 crore to 286 Units/projects by the end of 7.03.2019.
- c) **Dairy & Livestock:** NCDC provides assistance to Primary, District and State level dairy cooperatives. NCDC provides financial assistance for Integrated Livestock Projects/ Modernisation/ Expansion/ Renovation of existing units; Processing and Marketing Infrastructure; Purchase of equipment and transport vehicles; & Margin Money requirements. During 2018-19 (as on 31.10.2018), under the dairy & Livestock programme, NCDC has sanctioned financial assistance of Rs.2732.78 crore and released Rs.1617.65 crore. Cumulatively, as on 7.03.2019, NCDC has released an amount of Rs.4986.70 crore to dairy & livestock cooperatives.
- d) **Handloom:** The Scheme for the development of handloom cooperatives right from Apex, Regional and Primary Handloom Cooperatives. During 2018-19 (as on 7.03.2019), NCDC released Rs.0.16 crore. Since inception of scheme, NCDC has released an amount of Rs.464.60 crore.
- e) **Jute:** The scheme for development of jute cooperatives includes establishment/ expansion/ modernization of Jute mill and construction of godowns and showrooms. During 2018-19, NCDC has released Rs.34.09 crore to Government of Assam

for establishment of composite Jute Mill by Assam Cooperative Jute Mills Limited. Since inception of scheme, cumulatively, NCDC has released Rs.38.06 crore for 183 units/projects.

12.5.10 Consumer Cooperatives:

NCDC provides financial assistance for various consumer activities to primary cooperatives, District Wholesale Consumer Stores and State Consumer Federations for undertaking distribution of consumer goods in rural and urban areas. Under the CSISAC Scheme NCDC has released Rs.10.92 crore in 2018-19 (as on 7.03.2019) and cumulative assistance released upto 7.03.2019 stood at Rs.15.12 crore.

12.5.11 Computerisation of Cooperatives:

NCDC has been encouraging and financing cooperatives for computerization from primary level to national level by providing financial assistance for computerization which includes cost of hardware, system & application software, networking, technical manpower, maintenance, infrastructure & site preparation, training & capacity building as well as technical guidance for computerization of their processes. During the year 2018-19 (as on 7.03.2019), NCDC released Rs.162.60 crore and cumulatively released Rs.602.71 crore under this activity.

12.5.12 Integrated Cooperative Development Projects:

NCDC is implementing Integrated Cooperative Development Projects (ICDP) scheme in selected districts. During the year 2018-19 (as on 7.03.2019), NCDC has released loan assistance of Rs.324.52 crore.

12.5.13 Cooperatives in Least-Developed/ Under-Developed States:

The process of economic development in the country brought to light certain regional disparities and imbalances in some parts due to inherent factors like topography, agro-climatic conditions and poor infrastructure. Financial

assistance, on liberal terms, is provided by NCDC to the Cooperatively Least-Developed / Under Developed States (UD/LD States) under its various schemes. Assistance for cooperative programmes in these States is provided on comparatively liberal terms entailing subsidy component. For the purposes of funding by NCDC, the Government of India has categorized 11 States as Cooperatively Least-Developed and placed 11 States and 2 Union Territories' in the category of Cooperatively Under-Developed States as shown below:

Cooperatively Least-Developed States: Arunachal Pradesh, Assam, Bihar, Jharkhand, Jammu & Kashmir, Manipur, Meghalaya, Mizoram, Nagaland, Sikkim and Tripura.

12.5.14 Cooperatively Under-Developed States/UTs: Andhra Pradesh, Chhattisgarh, Goa, Himachal Pradesh, Madhya Pradesh, Odisha, Rajasthan, Telangana, Uttar Pradesh, Uttarakhand, West Bengal, Andaman & Nicobar Islands (UT) and Lakshadweep (UT)

During 2017-18, NCDC sanctioned financial assistance of Rs.16431.52 crore and released Rs.17161.35 crore to LD/UD States accounting for 71.74% and 78.11% of total sanction & release respectively. Cumulatively, as on 31.03.2018, Rs.63727.89 crore were released to LD/UD States under various schemes of NCDC which accounts for around 65.96% of the total assistance released by the Corporation.

12.5.15 Development of Women Cooperatives: NCDC encourages women cooperatives to avail assistance under its various schemes. A large number of women members are engaged & involved in cooperatives dealing with activities related to Foodgrain Processing, Plantation Crops, Oilseed Processing, Fisheries, Dairy & Livestock, Spinning Mills, Handloom & Powerloom Weaving, Integrated Cooperative Development Projects

etc. Women Cooperatives are covered under Weaker Section Programme for the purpose of availing subsidy and concessional funding under Central Sector Integrated Scheme on Agricultural Cooperation.

During the year 2017-18, NCDC sanctioned Rs.786.72 crore to 14 units under various programmes like Storage, ICD Projects, Textile, Service Cooperative & Consumer programmes and released Rs.769.47 crore under various programme. Of the above, NCDC sanctioned Rs.716.79 crore to six women cooperatives in the States of Andhra Pradesh, Maharashtra, Gujarat and Karnataka and released assistance of Rs.767.79 crore to them. NCDC assistance has been provided to these women cooperatives in the form of working capital loan to meet their fund requirement towards expansion of their businesses. By these initiatives of the Corporation for funding women cooperatives, more than 26 lakh women members of the societies have been benefitted. NCDC has been playing significant role over the years to uplift women cooperatives towards empowerment of women across the country.

Cumulatively, as on 31.03.2018, NCDC has sanctioned and released financial assistance of Rs.1532.96 crore and Rs.1420.77 crore respectively for the development of cooperative societies exclusively promoted by women. This included activities related to Foodgrain Processing, Plantation Crops, Oilseed Processing, Fisheries, Dairy & Livestock, Storage, Spinning Mills, Handloom & Powerloom Weaving, Integrated Cooperative Development Projects & Service Cooperatives.

In the 12461 projects/units sanctioned in 2017-18, it is estimated that 31.47 lakh women are enrolled as members, out of which 401 women members are Directors on the Boards.

NCDC established Laxmanrao Inamdar National Academy for Cooperative Research and Development (LINAC) at Gurugram, Haryana as its training institute to train and develop the personnel engaged in NCDC assisted projects / schemes. During 2017-18, the Institute held 32 training programmes including 4 programmes exclusively for women cooperators. The 4 training programmes on “Role of Governance & Leadership Development“ for Women Cooperatives were attended by 137 women participants. Two of the above programmes were exclusively for 58 participants from North Eastern States.

12.6 Assistance to Multi-State Cooperative Societies

The objective of this scheme is to strengthen the scope of weaker National Level Federations giving financial assistance for the approved activities viz; promotional, technical and consultancy services, research studies, improvement of infrastructural facilities, conference / workshops / seminars / trainings, skill development programmes and for undertaking the commercial / economic activities for their self-reliance and sustained growth and development. During the year 2017-18, the financial assistance has been provided to the following National Level Federations:-

12.6.1 National Federation of Urban Cooperative Banks and Credit Societies Ltd. (NAFCUB), New Delhi.

NAFCUB is an apex National Level Federation of Urban Co-operative Banks and Credit Societies in the country and is registered under the Multi-State Cooperative Societies Act, 2002. NAFCUB is committed to work towards building a strong and viable urban co-operative banking and credit system across the Country, to strive for level playing field for the institutions, to be an effective voice of the sector, to work

towards eliminating visible weaknesses and infirmities, to provide the training and other support and to knit the institutions into a cohesive unit for them to benefit from strength of being in co-operative system. During the year 2017-18, Rs.38.00 lakhs as grants-in-aid has been released to it.

12.6.2 All India Federation of Cooperative Spinning Mills Ltd. (AIFCOSPIN)

AIFCOSPIN, Mumbai was established in 1964 as an apex body of Cooperative Spinning Mills at the national level with the objective of looking after the promotional needs of co-operative spinning mills. It is registered under the Multi-State Co-operative Societies Act, 2002. During the year 2016-17, Rs.20.00 lakhs as grants-in-aid has been released to it.

12.6.3 National Cooperative Agriculture and Rural Development Banks' Federation Limited (NCARDBF), Mumbai

NCARDBF, Mumbai, is an Apex Body of Cooperative Agriculture and Rural Development Banks functioning in the country to promote interests of all its Members and assisting them in attaining organisational and business goals, to promote mutual understanding among members and providing them a common forum for interactions on legal, policy and operational issues and to channelize efforts to resolve such issues. During the year 2016-17, Rs.10.00 lakhs as grants-in-aid has been released to it.

12.6.4 National Federation of State Cooperative Banks Ltd., (NAFSCOB), Mumbai.

NAFSCOB was founded on 19th May, 1964. It is facilitating operations of State and Central Cooperative Banks in particular and development of cooperative credit in general.

During the year 2016-17, Rs.45.00 lakhs as grants-in-aid has been released to it. Federation's objectives are to provide a common forum to the member banks to examine the problems of cooperative credit banking and allied matters and evolve suitable strategies to deal with them, to promote and protect the interests of the member banks in all spheres of their activities and to give expression to the views of the member banks; co-ordinate and liaison with Government of India, Reserve Bank of India, respective State Governments,

12.6.5 National Labour Cooperatives Federation of India Ltd. (NLCF), New Delhi

NLCF, an apex national level organization of Labour Co-operative Societies was established in November, 1981. It is registered under the Multi-State Co-operative Societies Act, 2002. During the year 2016-17, Rs.46.00 lakhs as grants-in-aid has been released to it. The main objective of the federation is to organize, promote, guide and develop labour cooperatives for the economic and social development of the unorganized labour sector especially economically weaker sections of the society.

12.6.6 National Federation of Fishers Cooperative Ltd. (FISHCOPFED), New Delhi.

The National Federation of Fishers Cooperatives Ltd. (FISHCOPFED) is a national level federation of fisheries cooperatives and the apex institution of Indian Fisheries Cooperative Movement. Its motto is to promote and develop the fishery cooperative movement in India, to educate, guide and assist fishers in their efforts to build up and expand the fishery cooperative sector and serve as an exponent of cooperative opinion in accordance with cooperative principles. It was established in 1980 as All

India Federation of Fishermen Cooperatives and was rechristened as National Federation of Fishermen's Cooperatives Ltd. in 1982. During the year 2017-18, Rs.10.00 lakhs as grants-in-aid has been released to it.

12.6.7 National Federation of Cooperative Sugar Factories Limited (NF-CSF), New Delhi

The National Federation of Cooperative Sugar Factories Ltd (NFCSF) was registered as a Multi-Unit Cooperative Society on December 2, 1960 under the provisions of Bombay Cooperative Societies Act 1925 as extended to the Union Territory of Delhi. In 1972, it was deemed to be under The Delhi Cooperative Societies Act 1972 and later under the Multi State Cooperative Societies Act 1984. Since, 2002, NFCSF is deemed to be under the Multi State Cooperative Societies Act, 2002. During the year 2017-18, Rs.10.00 lakhs as grants-in-aid has been released to it.

Sugar Federation

The Objectives of the Federations are:

- (i) To advocate, promote & safeguard the interests of its members in accordance with the cooperative principles.
- (ii) To arrange education and training for the benefit of its members.
- (iii) To arrange for technical support and services to its members both for improving their operational efficiency as well as for organisation and promotion of new cooperative sugar factories.
- (iv) To promote R & D activities for its members, sponsor research projects, conferences, seminars etc., to find out solutions of the problems of its member cooperative sugar factories and allied subjects.

- (v) To act as accredited representative and spokesman organisation of the cooperative sugar sector factories at the policy fora of Central and State Governments, business fora and organisations relating to sugar industry; establish liaison with national and international organisations and others allied to sugar industry.
- (vi) To advice and assist its members in the matters related to their management and operations.
- (vii) To undertake information services for the benefit of its members.
- (viii) To publish literature and documents on sugar industry for the benefit of its members.
- (ix) To undertake any other activities those are incidental and conducive to the attainment of its objectives and interest of its members for the development and progress of sugar and its co-products industries either directly or through strategically collaborative joint ventures or partnership with organisations including insurance within India and abroad.

12.7 Assistance for Cooperative Education and Training:

The Government of India has been implementing a Central Sector Scheme for Cooperative Education and training through the National Cooperative Union of India (NCUI) and National Council for Cooperative Training (NCCT) since 1960. Upto 50% of the expenditure is given as Grant in Aid to NCUI by the Government for Cooperative Education in cooperatively Under Developed States (UDS) and under developed areas of developed states and for other approved

activities. Government also provides Grants up to the extent of 50% to Junior Cooperative Training Centres (JCTCs) through NCUI. The JCTCs are being run by State Cooperative Unions/State Governments. NCUI monitors the programmes of JCTCs. Currently, NCUI has been running 43 Cooperative Education Field Projects spreads over 22 States and Union Territories and also conducting various programmes at NCUI Head Office.

During the Financial year 2018-19 (From 1st April 2018 to 30th September 2018), NCUI through its Cooperative Education Field Projects conducted wide-ranging programmes on various issues of Cooperative Development. Under UDS Projects, NCUI has organized 11316 in which, 1,52,849 participants have been benefited.

The National Centre for Cooperative Education (NCCE) of NCUI during the year 2017-18, organized 165 training programmes against the target of 75 programmes including 12 weeks Diploma Programme in Cooperative Education and Development. 5497 persons from various sectors of the cooperative movement in different states were trained through these programmes. Out of 165 training programme, 54 programmes were for weaker sectors like forest labour, fisheries, Handloom & Handicrafts, construction labour etc and 7 programmes for SC/ST cooperatives, twelve programmes were organized exclusively for women cooperative in which 785 women participated. During the year 2018-19 (up to 30th September 2018) NCUI through its Cooperative Education Field Projects organized 46 programmes with 1496 participants. Out of these events, 11 programmes with 335 participants were imparted for weaker cooperative sector like Labour, Fisheries, Poultry, Joint Farming, Construction, Handloom & Handicraft and SC/ST Cooperative etc. considering the need

for socio-economic Development of women, 8 programmes were conducted exclusively for women participants. During this period, Ministry has not released any grant to NCUI.

NE Region: The Government of India is providing separate assistance for intensification of cooperative education in the north eastern region through NCUI. It has established seven filed projects namely Aizawl (Mizoram), Thoubal (Manipur), Mangalwaria (Sikkim), Shillong (Meghalaya), Kohima (Nagaland), Morigaon and Jorhat (Assam) in the North Eastern region.

The assistance is also given to Centre for International Cooperation and Training in Agricultural Banking (CICTAB) Pune. During the year 2017-18, a sum of Rs. 3.75 Lakhs has been released to CICTAB to conduct two international training programme for the personnel working in the Cooperatives of the SAARC Countries.

National Council for Cooperative Training (NCCT) is the nodal organization in the country engaged in the training of various stakeholders. Recently, the Ministry of Agriculture & Farmers Welfare, Department of Agriculture, Cooperation and Farmers Welfare, Government of India duly registered National Council for Cooperative Training (NCCT) under the Societies Registration Act, 1860. NCCT is the Autonomous Society promoted by Ministry of Agriculture & Farmers Welfare. The General Council of the NCCT is headed by Hon'ble Union Agriculture Minister. The Executive Council of NCCT is headed by the Additional Secretary (Cooperation), Department of Agriculture, Cooperation and Farmers Welfare, Ministry of Agriculture & Farmers Welfare.

The Council, through its network comprising of a National Institute at Pune called Vaikunth Mehta National Institute of Cooperative

Management (VAMNICOM), five Regional Institutes of Cooperative Management (RICMs) and fourteen Institutes of Cooperative Management (ICMs), imparts training to the people associated with cooperative organisations as well as other organisations linked with the cooperative sector. All the RICMs and ICMs are accredited with C-PEC BIRD Lucknow.

12.7.1 Training Network of NCCT

National Level - Vaikunth Mehta National Institute of Cooperative Management (VAMNICOM), Pune

Regional Level - Five Regional Institutes of Cooperative Management at Chandigarh, Bangalore, Kalyani, Gandhinagar, Patna.

State Level Fourteen Institutes of Cooperative Management at Bhopal, Bhubaneswar, Chennai, Dehradun, Guwahati, Hyderabad, Imphal, Jaipur, Kannur, Lucknow, Madurai, Nagpur, Pune & Thiruvananthapuram.

The training units of the Council have been imparting training to the personnel of all sectors of cooperative movement in India to enhance knowledge, skill and attitude of the employees., as General Management Programme, Cooperative Credit and Banking, Urban Cooperative Banking, Long Term Finance, Cooperative Marketing and Processing, Consumer Cooperative Management, Handloom Cooperative Management, Cooperative Accounts and Audit, Fishery Cooperative Management, Cooperative Law and Allied Laws, Dairy

Cooperative Management, Housing Cooperative Management, Industrial Cooperative Management, Cooperative Education and Training etc.

In addition to the targets, Units of the NCCT are conducting Professional Programmes duly approved by AICTE. Out of the 20 Training Units, VAMNICOM and RICM Gandhinagar are conducting PGDM and ICMs -Bhubaneswar, Chennai, Dehradun, Kannur, Lucknow, Madurai, Nagpur and Thiruvananthapuram are conducting MBA affiliated with State Universities.

12.7.2 Collaborative Programmes organised in association with other Organisations

- ❖ National Bank for Agriculture and Rural Development (NABARD)
- ❖ Bankers Institute of Rural Development (BIRD)
- ❖ National Backward Classes and Finance Development Corporation (NBCFDC)
- ❖ Forward Market Commission (FMC) and Security Exchange Board of India (SEBI)
- ❖ Warehousing Development and Regulatory Authority (WDRA)
- ❖ Director General Resettlement (Ministry of Defence)
- ❖ Development Commissioner Handicrafts, Ministry of Textiles
- ❖ National Urban Livelihood Mission (NULM)
- ❖ National Cooperative Development Corporation (NCDC)
- ❖ National Federation for Urban Cooperative Banks & Credit Societies Ltd.

Efforts are on to identify new partners for collaboration.

12.7.3 Objectives of NCCT

- To formulate overall policies and plans relating to cooperative training.
- To organise and direct arrangements in regard to the training to personnel employed in cooperative departments and cooperative institutions in the country.
- To assess periodically the needs of training for cooperative personnel to facilitate planning and designing of training arrangements.
- To establish and manage cooperative training institutions.
- To identify problem areas of cooperatives requiring research and to organize studies.
- To ensure maintenance of high academic standards in cooperative education and training in various institutes in the country and suggest syllabi and standards of education for different courses.

12.7.4 Target and Achievement

Progress of Training Programmes- NCCT Units during

the last three years (2015-18) & 2018-19

Year	Target		Achievement	
	Prog	Participants	Prog	Participants
2015-16	1600	40000	2170	70687
2016-17	1600	40000	2012	63147
2017-18	1600	40000	1924	61548
2018-19 (Upto January 2019)	1740	43500	1491	50591

12.8 Schemes under Umbrella Scheme of PM-AASHA implemented by DAC&FW

Details of the procurement made under Price Support Scheme (PSS) during the last 3 years is below at **Annexure-I**

**TENTATIVE DETAILS OF PULSES AND OILSEEDS PROCURED AT
MSP UNDER PSS 2016-17 TO 2019-20 (AS ON 22.03.2019)**

YEAR	Agency	PSS OPERATION	Commodity	Catagery(Pulses/ Oilseed/Cotton)	STATE	QUANTITY Procured (IN MTs)	MSP Per MT (Rs.)	MSP COST (Rs. IN LAKH)
YEAR (IN MTs)	Agency	PSS OPERATION	Commodity	Catagery(Pulses/ Oilseed/Cotton)	STATE	QUANTITY Procured	59,500	1974.51
2016-17	MSP Per MT (Rs.)	MSP COST (Rs. IN LAKH)	COPRA	Oil seed	TAMILNADU	1170.44	59,500	696.41
2016-17	NAFED	MILLING COPRA 2016	COPRA	Oil seed	ANDHRA PRADESH	3318.50	59,500	1974.51
2016-17	NAFED	MILLING COPRA 2016	COPRA	Oil seed	TAMILNADU	1170.44	59,500	696.41
2016-17	NAFED	BALL COPRA 2016	COPRA	Oil seed	KARNATAKA	1836.40	62,400	1145.91
2016-17	NAFED	BALL COPRA 2016	COPRA	Oil seed	TAMILNADU	0.46	62,400	0.29
2016-17	NAFED	SUNFLOWER SEED RABI-16	SUNFLOWER SEED	Oil seed	HARYANA	4784.75	38,000	1818.21
2016-17	NAFED	SUNFLOWER SEED RABI-16	SUNFLOWER SEED	Oil seed	ODISHA	164.56	38,000	62.52
2016-17	NAFED	SOYABEAN KHARIF-16	SOYABEAN	Oil seed	MAHARASHTRA	162.19	27,750	45.00
2016-17	NAFED	GROUNDNUT KHARIF-16	GROUNDNUT	Oil seed	GUJARAT	210731.16	42,200	88928.55
2016-17	NAFED	MOONG KHARIF -16	MOONG	Pulses	MAHARASHTRA	6430.28	52,250	3359.82
2016-17	NAFED	MOONG KHARIF -16	MOONG	Pulses	KARNATAKA	1837.30	52,250	959.99
2016-17	NAFED	TOOR KHARIF-16	TOOR	Pulses	KARNATAKA	30920.55	50,500	15614.88
2016-17	NAFED	TOOR KHARIF-16	TOOR	Pulses	MAHARASHTRA	115276.03	50,500	58214.40
2016-17	NAFED	TOOR KHARIF-16	TOOR	Pulses	GUJARAT	49797.10	50,500	25147.54
2016-17	SFAC	Moong KHARIF	MOONG	Pulses	MAHARASHTRA	547.53	52,250	286.08
2016-17	SFAC	Moong KHARIF	MOONG	Pulses	KARNATAKA	681.60	52,250	356.14
TOTAL	427658.85		198610.23					
2017-18	NAFED	MUSTARD SEED RABI-2017	MUSTARD SEED	Oil seed	HARYANA	36940.18	37,000	13667.87
2017-18	NAFED	MOONG (SUMMER) 2017	MOONG	Pulses	MADHYA PRADESH	111000.00	52,250	57997.50
2017-18	NAFED	MOONG (SUMMER) 2017	MOONG	Pulses	ODISHA	1405.99	52,250	734.63
2017-18	NAFED	URAD (SUMMER)	URAD	Pulses	MADHYA PRADESH	15747.65	50,000	7873.83

YEAR	Agency	PSS OPERATION	Commodity	Catagery(Pulses/ Oilseed/Cotton)	STATE	QUANTITY Procured (IN MTs)	MSP Per MT (Rs.)	MSP COST (Rs. IN LAKH)
2017-18	NAFED	SUNFLOWER SEED RABI - 2017	SUNFLOWER SEED	Oil seed	HARYANA	6249.99	39,500	2468.75
2017-18	NAFED	SUNFLOWER SEED RABI - 2017	SUNFLOWER SEED	Oil seed	TELANGANA	112.10	39,500	44.28
2017-18	NAFED	SUNFLOWER SEED RABI - 2017	SUNFLOWER SEED	Oil seed	ODISHA	177.00	39,500	69.92
2017-18	NAFED	SESAMUM SEED RABI - 2017	SESAMUM SEED	Oil seed	WEST BENGAL	3419.81	50,000	1709.91
2017-18	NAFED	GROUNDNUT RABI 2017	GROUNDNUT	Oil seed	ODISHA	947.77	42,200	399.96
2017-18	NAFED	MOONG KHARIF - 2017	MOONG	Pulses	TELANGANA	3319.95	55,750	1850.87
2017-18	NAFED	MOONG KHARIF - 2017	MOONG	Pulses	KARNATAKA	21758.40	55,750	12130.31
2017-18	NAFED	MOONG KHARIF - 2017	MOONG	Pulses	RAJASTHAN	262203.84	55,750	146178.64
2017-18	NAFED	MOONG KHARIF - 2017	MOONG	Pulses	MAHARASHTRA	5262.35	55,750	2933.76
2017-18	NAFED	MOONG KHARIF - 2017	MOONG	Pulses	ANDHRA PRADESH	2358.65	55,750	1314.95
2017-18	NAFED	URAD KHARIF - 2017	URAD	Pulses	RAJASTHAN	130905.00	54,000	70688.70
2017-18	NAFED	URAD KHARIF - 2017	URAD	Pulses	TELANGANA	11170.41	54,000	6032.02
2017-18	NAFED	URAD KHARIF - 2017	URAD	Pulses	KARNATAKA	13090.50	54,000	7068.87
2017-18	NAFED	URAD KHARIF - 2017	URAD	Pulses	MAHARASHTRA	58663.95	54,000	31678.53
2017-18	NAFED	URAD KHARIF - 2017	URAD	Pulses	GUJARAT	19878.40	54,000	10734.34
2017-18	NAFED	URAD KHARIF - 2017	URAD	Pulses	ANDHRA PRADESH	13600.00	54,000	7344.00
2017-18	NAFED	URAD KHARIF - 2017	URAD	Pulses	UTTAR PRADESH	22567.99	54,000	12186.71
2017-18	NAFED	URAD KHARIF - 2017	URAD	Pulses	WEST BENGAL	6790.00	54,000	3666.60
2017-18	NAFED	SOYABEAN KHARIF - 2017	SOYABEAN	Oil seed	RAJASTHAN	11624.58	30,500	3545.50
2017-18	NAFED	SOYABEAN KHARIF - 2017	SOYABEAN	Oil seed	TELANGANA	34553.06	30,500	10538.68
2017-18	NAFED	SOYABEAN KHARIF - 2017	SOYABEAN	Oil seed	MAHARASHTRA	26104.46	30,500	7961.86
2017-18	NAFED	GROUNDNUT KHARIF 2017	GROUNDNUT	Oil seed	GUJARAT	829697.00	44,500	369215.17
2017-18	NAFED	GROUNDNUT KHARIF 2017	GROUNDNUT	Oil seed	RAJASTHAN	146279.51	44,500	65094.38
2017-18	NAFED	GROUNDNUT KHARIF 2017	GROUNDNUT	Oil seed	ANDHRA PRADESH	61300.12	44,500	27278.55
2017-18	NAFED	GROUNDNUT KHARIF 2017	GROUNDNUT	Oil seed	KARNATAKA	11860.28	44,500	5277.82
2017-18	NAFED	TOOR KHARIF - 2017	TOOR	Pulses	TELANGANA	75300.00	54,500	41038.50
2017-18	NAFED	TOOR KHARIF - 2017	TOOR	Pulses	KARNATAKA	336154.15	54,500	183204.01
2017-18	NAFED	TOOR KHARIF - 2017	TOOR	Pulses	MAHARASHTRA	336717.75	54,500	183511.17

YEAR	Agency	PSS OPERATION	Commodity	Catagery(Pulses/ Oilseed/Cotton)	STATE	QUANTITY Procured (IN MTs)	MSP Per MT (Rs.)	MSP COST (Rs. IN LAKH)
2017-18	NAFED	TOOR KHARIF - 2017	TOOR	Pulses	ANDHRA PRADESH	55600.00	54,500	30302.00
2017-18	NAFED	TOOR KHARIF - 2017	TOOR	Pulses	GUJARAT	69986.72	54,500	38142.76
TOTAL						2742747.56		1363885.34
2018-19	NAFED	GRAM RABI - 2018	GRAM	Pulses	TELANGANA	50000.00	44,000	22000.00
2018-19	NAFED	GRAM RABI - 2018	GRAM	Pulses	KARNATAKA	135422.10	44,000	59585.72
2018-19	NAFED	GRAM RABI - 2018	GRAM	Pulses	ANDHRA PRADESH	91982.65	44,000	40472.37
2018-19	NAFED	GRAM RABI - 2018	GRAM	Pulses	MAHARASHTRA	194726.89	44,000	85679.83
2018-19	NAFED	GRAM RABI - 2018	GRAM	Pulses	RAJASTHAN	579972.38	44,000	255187.85
2018-19	NAFED	GRAM RABI - 2018	GRAM	Pulses	MADHYA PRADESH	1611972.09	44,000	709267.72
2018-19	NAFED	GRAM RABI - 2018	GRAM	Pulses	GUJARAT	91000.00	44,000	40040.00
2018-19	NAFED	GRAM RABI - 2018	GRAM	Pulses	UTTAR PRADESH	14354.05	44,000	6315.78
2018-19	NAFED	MUSTARD SEED RABI - 2018	MUSTARD SEED	Oil seed	RAJASTHAN	471614.16	40,000	188645.66
2018-19	NAFED	MUSTARD SEED RABI - 2018	MUSTARD SEED	Oil seed	HARYANA	227602.00	40,000	91040.80
2018-19	NAFED	MUSTARD SEED RABI - 2018	MUSTARD SEED	Oil seed	MADHYA PRADESH	119747.28	40,000	47898.91
2018-19	NAFED	MUSTARD SEED RABI - 2018	MUSTARD SEED	Oil seed	GUJARAT	52659.55	40,000	21063.82
2018-19	NAFED	MUSTARD SEED RABI - 2018	MUSTARD SEED	Oil seed	UTTAR PRADESH	1211.41	40,000	484.56
2018-19	NAFED	MUSTARD SEED RABI - 2018	MUSTARD SEED	Oil seed	WEST BENGAL	826.60	40,000	330.64
2018-19	NAFED	GROUNDNUT RABI - 2018	GROUNDNUT	Oil seed	TELANGANA	26.98	44,500	12.01
2018-19	NAFED	GROUNDNUT RABI - 2018	GROUNDNUT	Oil seed	ODISHA	2418.78	44,500	1076.36
2018-19	NAFED	SUNFLOWER SEED RABI - 2018	SUNFLOWER SEED	Oil seed	TELANGANA	215.00	41,000	88.15
2018-19	NAFED	SUNFLOWER SEED RABI - 2018	SUNFLOWER SEED	Oil seed	HARYANA	2400.00	41,000	984.00
2018-19	NAFED	SUNFLOWER SEED RABI - 2018	SUNFLOWER SEED	Oil seed	ODISHA	130.43	41,000	53.48
2018-19	NAFED	URAD RABI - 2018	URAD	Pulses	ANDHRA PRADESH	79163.00	54,000	42748.02
2018-19	NAFED	URAD RABI - 2018	URAD	Pulses	TELANGANA	2000.00	54,000	1080.00
2018-19	NAFED	URAD RABI - 2018	URAD	Pulses	TAMILNADU	1547.86	54,000	835.84

YEAR	Agency	PSS OPERATION	Commodity	Catagery(Pulses/ Oilseed/Cotton)	STATE	QUANTITY Procured (IN MTs)	MSP Per MT (Rs.)	MSP COST (Rs. IN LAKH)
2018-19	NAFED	URAD RABI - 2018	URAD	Pulses	ODISHA	4216.77	54,000	2277.06
2018-19	NAFED	MASOOR RABI - 2018	MASOOR	Pulses	MADHYA PRADESH	233245.61	42,500	99129.38
2018-19	NAFED	MASOOR RABI - 2018	MASOOR	Pulses	UTTAR PRADESH	13698.24	42,500	5821.75
2018-19	NAFED	MOONG RABI - 2018	MOONG	Pulses	ODISHA	2675.11	55,750	1491.37
2018-19	NAFED	MOONG RABI - 2018	MOONG	Pulses	ANDHRA PRADESH	1604.05	55,750	894.26
2018-19	NAFED	MOONG KHARIF - 2018	MOONG	Pulses	KARNATAKA	28950.00	69,750	20192.63
2018-19	NAFED	MOONG KHARIF - 2018	MOONG	Pulses	TAMILNADU	364.90	69,750	254.52
2018-19	NAFED	MOONG KHARIF - 2018	MOONG	Pulses	TELANGANA	13375.31	69,750	9329.28
2018-19	NAFED	MOONG KHARIF - 2018	MOONG	Pulses	MAHARASHTRA	12252.03	69,750	8545.79
2018-19	FCI	MOONG KHARIF - 2018	MOONG	Pulses	MAHARASHTRA	5978.45	69,750	4169.97
2018-19	NAFED	MOONG KHARIF - 2018	MOONG	Pulses	RAJASTHAN	236277.28	69,750	164803.40
2018-19	NAFED	MOONG KHARIF - 2018	MOONG	Pulses	MADHYA PRADESH	2650.96	69,750	1849.04
2018-19	FCI	MOONG KHARIF - 2018	MOONG	Pulses	MADHYA PRADESH	386.50	69,750	269.58
2018-19	NAFED	MOONG KHARIF - 2018	MOONG	Pulses	HARYANA	224.90	69,750	156.87
2018-19	NAFED	MOONG KHARIF - 2018	MOONG	Pulses	GUJARAT	1978.60	69,750	1380.07
2018-19	FCI	MOONG KHARIF - 2018	MOONG	Pulses	ANDHRA PRADESH	242.20	69,750	168.93
2018-19	NAFED	URAD KHARIF - 2018	URAD	Pulses	TELANGANA	578.39	56,000	323.90
2018-19	NAFED	URAD KHARIF - 2018	URAD	Pulses	MAHARASHTRA	7741.69	56,000	4335.35
2018-19	FCI	URAD KHARIF - 2018	URAD	Pulses	MAHARASHTRA	3632.40	56,000	2034.14
2018-19	NAFED	URAD KHARIF - 2018	URAD	Pulses	RAJASTHAN	77444.94	56,000	43369.17
2018-19	NAFED	URAD KHARIF - 2018	URAD	Pulses	MADHYA PRADESH	298599.69	56,000	167215.83
2018-19	FCI	URAD KHARIF - 2018	URAD	Pulses	MADHYA PRADESH	46400.31	56,000	25984.17
2018-19	NAFED	URAD KHARIF - 2018	URAD	Pulses	UTTAR PRADESH	29742.95	56,000	16656.05
2018-19	NAFED	URAD KHARIF - 2018	URAD	Pulses	KARNATAKA	10.10	56,000	5.66
2018-19	FCI	URAD KHARIF - 2018	URAD	Pulses	ANDHRA PRADESH	493.00	56,000	276.08
2018-19	NAFED	URAD KHARIF - 2018	URAD	Pulses	GUJARAT	9397.60	56,000	5262.66
2018-19	NAFED	GROUNDNUT KHARIF - 2018	GROUNDNUT	Oil seed	RAJASTHAN	232482.14	48,900	113683.77
2018-19	NAFED	GROUNDNUT KHARIF - 2018	GROUNDNUT	Oil seed	MADHYA PRADESH	28501.21	48,900	13937.09
2018-19	NAFED	GROUNDNUT KHARIF - 2018	GROUNDNUT	Oil seed	GUJARAT	447638.22	48,900	218895.09
2018-19	NAFED	GROUNDNUT KHARIF - 2018	GROUNDNUT	Oil seed	UTTAR PRADESH	8762.60	48,900	4284.91
2018-19	NAFED	SOYABEAN KHARIF - 2018	SOYABEAN	Oil seed	RAJASTHAN	2957.80	33,990	1005.36

YEAR	Agency	PSS OPERATION	Commodity	Catagery(Pulses/ Oilseed/Cotton)	STATE	QUANTITY Procured (IN MTs)	MSP Per MT (Rs.)	MSP COST (Rs. IN LAKH)
2018-19	NAFED	SOYABEAN KHARIF - 2018	SOYABEAN	Oil seed	TELANGANA	15560.30	33,990	5288.95
2018-19	NAFED	SOYABEAN KHARIF - 2018	SOYABEAN	Oil seed	MAHARASHTRA	724.51	33,990	246.26
2018-19	FCI	SOYABEAN KHARIF - 2018	SOYABEAN	Oil seed	MAHARASHTRA	558.51	33,990	189.84
2018-19	NAFED	SOYABEAN KHARIF - 2018	SOYABEAN	Oil seed	KARNATAKA	6.00	33,990	2.04
2018-19	NAFED	TOOR KHARIF -2018	TOOR	Pulses	TELANGANA	70300.00	56,750	39895.25
2018-19	NAFED	TOOR KHARIF -2018	TOOR	Pulses	KARNATAKA	107245.58	56,750	60861.87
2018-19	FCI	TOOR KHARIF -2018	TOOR	Pulses	KARNATAKA	4166.59	56,750	2364.54
2018-19	NAFED	TOOR KHARIF -2018	TOOR	Pulses	GUJARAT	10567.20	56,750	5996.89
2018-19	NAFED	TOOR KHARIF -2018	TOOR	Pulses	TAMILNADU	285.93	56,750	162.27
2018-19	NAFED	TOOR KHARIF -2018	TOOR	Pulses	MAHARASHTRA	23761.37	56,750	13484.58
2018-19	NAFED	NIGERSEED KHARIF-2018	NIGERSEED	Oil seed	MADHYA PRADESH	15.90	58,770	9.34
2019-20	NAFED	MOONG RABI -2019	MOONG	Pulses	TAMILNADU	608.04	69,750	424.11
2019-20	NAFED	URAD RABI-2019	URAD	Pulses	TAMILNADU	3166.45	56,000	1773.21
2019-20	NAFED	GRAM RABI-2019	GRAM	Pulses	TELANGANA	34500.00	46,200	15939.00
2019-20	NAFED	SUNFLOWER SEED RABI-2019	SUNFLOWER SEED	Oil seed	TELANGANA	319.40	53,880	172.09
2019-20	NAFED	MUSTARD SEED RABI - 2019	MUSTARD SEED	Oil seed	RAJASTHAN	1096.15	42,000	460.38
TOTAL						5756379.10		2700165.26

Price Deficiency Payment Scheme (PDPS):- This scheme does not involve any physical procurement of crops as the farmers are paid the difference between the MSP and Sale / Modal price on sale in notified market.

Private Procurement Stockist Scheme (PPSS):- Since it is akin to PSS, it involves physical procurement of the notified commodity.

Market Intervention Scheme (MIS) :Details of sanction accorded under MIS during the last 3 years are given below at Annexure-II.

Annexure-II

Details of sanction accorded under MIS from 2016-17 to 2018-19 (As on 22.03.2019)

YEAR	Period	Commodity	State	Market Intervention Price (MIP) (Rs. Per MTs.)	Sanctioned Qty (in MTs.)	MIP Value (Rs in Lakhs)
2016-17	01.09.2016 to 30.09.2016	Grapes	Mizoram	42,000	3,800	1596.00
2016-17	01.11.2016 to 30.11.2016	Onion	Karnataka	6240	1,00,000	6240.00
2016-17	01.12.2016 to 30.12.2016	Onion	Telangana	7070	5,000	353.50
2016-17	07.12.2016 TO 14.02.2017	Areca nut-Chali	Karnataka	2,51,000	28,000	70280.00
2016-17	07.12.2016 TO 14.02.2017	Areca nut-Red	Karnataka	2,70,000	12,000	32400.00
2016-17	14.12.2016 to 12.01.2017	Oil Palm FFB	Tamil Nadu	7650	1,000	76.50
2016-17	17.02.2017 to 18.03.2017	Ginger	Arunachal Pradesh	8570	12,675	1086.25
2017-18	08.04.2017 to 07.05.2017	Potato	Uttar Pradesh	4,870	1,00,000	4870.00
2017-18	02.05.2017 to 31.05.2017	Red Chilli	Telangana	50,000	33,700	16850.00
2017-18	02.05.2017 to 31.05.2017	Red Chilli	Andhra Pradesh	50,000	88,300	44150.00
2017-18	04.06.2017 to 03.07.2017	Potato	Nagaland	6,000	6,600	396.00
2017-18	17.06.2017 to 16.07.2017	Turmeric	Andhra Pradesh	55,720	12,100	6742.12
2017-18	13.06.2017 to 12.07.2017	Garlic	Rajasthan	28,600	10,000	2860.00
2017-18	09.06.2017 to 08.07.2017	Onion	Madhya Pradesh	5,867	3,25,500	19097.09
2017-18	09.06.2017 to 08.07.2017	Onion	Madhya Pradesh	5,867	3,25,500	19097.09
2017-18	27.06.2017 to 26.07.2017	Onion	Rajasthan	3,650	20,000	730.00
2017-18	02.03.2018 to 31.03.2018	Potato	Uttar Pradesh	5,490	2,00,000	10980.00
2018-19	13.04.2018 to 20.06.2018	Garlic	Rajasthan	32,570	1,54,000	50157.80
2018-19	13.04.2018 to 12.05.2018	Onion	Rajasthan	6,180	2,60,000	16068.00

In addition to above, this Division also implements scheme for releasing of pulses to States / UTs at Discounted Rate to be utilized for various welfare schemes from the stock of pulses procured under PSS. The objective of the scheme is for disposal of pulses procured under PSS by way of distribution to States/ UTs for utilization under various welfare schemes like Mid-day-Meal (MDM), Integrated Child Development Services (ICDS), Public Distribution System (PDS), etc. with Central Subsidy of Rs. 15per Kg. over the “issue price” as a “One time Measure” on “First Come- First Serve” and First in First Out” (FIFO) basis for a period of 12 months or till present PSS pulses stock of 34.88 lakh MT lasts, whichever is earlier. Details

of updated status of implementation of scheme are enclosed at **Annexure 12.1 & 12.1(a)**.

12.9 Success Stories

A National Level Workshop on Nutri-Cereals (Millets) under National Food Security Mission was held on 28th September, 2018 at Vaikunth Mehta National Institute of Cooperative Management (VAMNCIOM), Pune. The Workshop was jointly organized by Department of Agriculture, Cooperation and Farmers Welfare (DAC&FW) & Indian Council of Agricultural Research (ICAR), Government of India and Department of Agriculture, Government of Maharashtra. The Workshop was inaugurated by Shri Radha Mohan

Singh, Union Minister of Agriculture & Farmers Welfare, Govt. of India.

The Vaikunth Mehta National Institute of Cooperative Management (VAMNICOM) organized a National Workshop on “Making FPO’s Smart, Sustainable and Competitive” on the 20th September 2018 at VAMNICOM campus, Pune. The Workshop was inaugurated by Shri Parshottam Rupala, Hon’ble Union Minister of State, Ministry of Agriculture and Farmers Welfare and Ministry of Panchayati Raj.

NCCT through its units, organized **“One Day State Level Workshop on Strategies for Doubling of Farmers’ Income in the States by 2022”** from 30th January, 2019 to 6th March, 2019 at Regional Institutes of Cooperative Management, Bangalore, Kalyani, Gandhinagar & Institutes of Cooperative Management, Imphal, Hyderabad, Bhopal, Nagpur, Kannur, Bhubaneswar, Thiruvananthapuram, Chennai, Dehradun, Lucknow. The objective of the Workshop was to highlight and discuss on the strategies for doubling farmers’ income by 2022 in the states.

An MoU has been signed between Ministry of Agriculture & Farmers Welfare, Department of Agriculture, Cooperation & Farmers Welfare and Dr. Rajendra Prasad Central Agricultural University, Pusa, Samastipur, Bihar to Establish a Field Training Centre known as “Sardar Vallabhbhai Patel Training Institute for Agricultural Cooperatives” for development of Cooperative Sector at KVK Piprakothi, Motihari, Bihar. NCCT will support in designing the training programmes and will also assist in organizing seminars, workshops etc. for capacity building of the farmers.

Some of our units which are also engaged in conducting Recruitment test for the Cooperative Sector of their respective states on their demand. VAMNICOM, Pune, RICM, Bengaluru, ICM,

Chennai & Nagpur have successfully completed these assignments.

NCDC has disbursed Rs.26818.58 crore so far. 8% of this amount (Rs.2048.63 crore) has been released for weaker section programmes. Further, the Corporation has witnessed an increase of 228% in disbursements in last five years (2014-15 to 2018-19 as on 27.02.2019- Rs.77557.52 crore) as compared to previous five years (2009-10 to 2013-14- Rs.23635 crore)

Rs. 77557.52 crore were disbursed in the last five years which are more than 63% of total disbursement of Rs.123436.83 crore since inception in 1963.



A view of the 1st Executive Council Meeting of NCCT held on 29th June, 2018 under the chairpersonship of Smt. Upma Srivastava, IAS, Additional Secretary (Cooperation), Ministry of Agriculture & Farmers Welfare



A group photo along with Dr. Abhilaksh Likhi, IAS, Joint Secretary (Cooperation), Ministry of Agriculture and Farmers Welfare, Government of India, Shri Mohan Kumar Mishra, Secretary, NCCT during the One Day State Level Workshop on Strategies for Doubling of Farmers’ Income in the States by 2022 held on 16th February, 2019 at RICM, Bangalore

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Chapter 13

Agricultural Trade

13.1 Overview

Agricultural Trade Policy, Promotion and Logistics Development Division of this Department is entrusted with the responsibility of making policy recommendations on export and import of agricultural commodities. Agricultural Trade Policy, Promotion and Logistics Development Division is the nodal Division of the Department for coordinating/formulating responses on World Trade Organization's (WTO) Agreement on Agriculture with the Ministry of Commerce, with DIPP on FDI in agriculture, with Ministry of Finance in matters relating to the modification in the Custom duty and Goods and Services Tax (GST) on agricultural commodities and with Ministry of Commerce in matters relating to Preferential Trade Agreements (PTAs)/ Free Trade Agreements (FTAs) with different countries.

The Division which was earlier called the Agriculture Trade Policy Division has been rechristened as Agriculture Trade Policy, Promotion and Logistics Development Division realizing the importance of Agri-Logistics in improving India's Agricultural Trade. This Division works in close coordination with the Logistic Division of Department of Commerce and other related agencies for development of agro-logistics.

13.2 India's Agriculture Trade

13.2.1 India has emerged as a significant Agri-exporter in a few crops viz. rice, cotton, sugarcane, cashew nut, castor seed and groundnut. As per WTO's Trade Statistics, the share of India's agricultural exports and

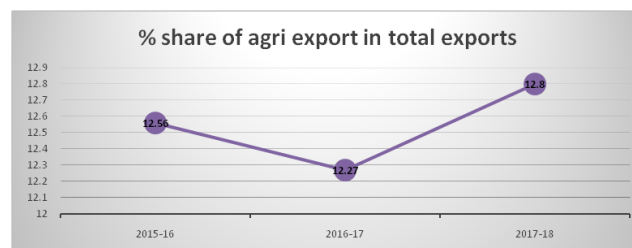
imports in the world agriculture trade in 2017 were 2.27% and 1.90%, respectively.

13.2.2 Agricultural exports as a percentage of agricultural GDP have increased from 8.71% in 2015-16 to 9.00% in 2017-18. During the same period, Agricultural imports as a percentage of agricultural GDP has decreased from 5.68% to 5.47%.

13.3 Agricultural Exports and Imports

13.3.1 Export of agricultural commodities has helped producers to take advantage of wider international market which, in turn, has incentivized their domestic production. Crops exported in large quantities viz. rice, cotton, castor, have witnessed significant increase in area coverage and growth rate of production.

13.3.2 Agricultural exports increased from Rs. 2,15,396 crores in 2015-16 to Rs. 2,50,273 crores in financial year 2017-18 registering a growth of nearly 16.19%. Agricultural exports during 2017-18 were primarily on account of higher exports of rice (basmati), rice (non-basmati), raw cotton, guar gum meal, oil meals, castor oil etc. The share of agricultural exports in India's total exports increased from 12.56% in 2015-16 to 12.80% in 2017-18.



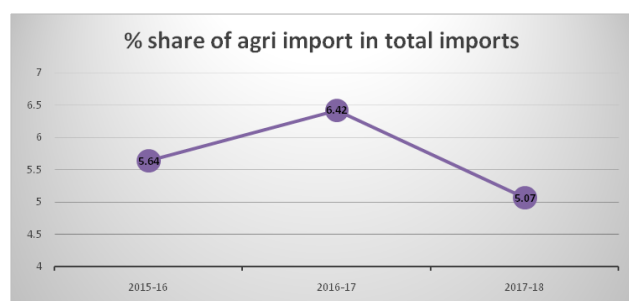
13.3.3 India's top 10 agricultural export commodities in terms of quantity and value for the year 2015-16 to 2017-18 are given in the table 1 below:

Table 1: India's top 10 agricultural commodities (Exports)**[Value in Rs. Crores]**

S.N.	Commodity	2015-16	2016-17	2017-18
1	Rice -basmati	22719	21604	26841
2	Rice (other than basmati)	15483	17145	22927
3	Spices	16630	19442	20014
4	Cotton raw	12821	10982	12156
5	Oil meals	3599	5371	6969
6	Coffee	5125	5668	6245
7	Cashew nut	5028	5303	5945
8	Sugar	9825	8678	5229
9	Fresh vegetables	5237	5772	4997
10	Groundnut	4075	5454	3384
	Total agri & allied exports	215396	227554	250273

Source: Department of Commerce

13.3.4 India's agricultural imports increased from Rs. 1,40,311 crore in 2015-16 to Rs.1,52,061 crore in 2017-18 registering a growth of nearly 8.37%. Increase in value of agricultural imports during this period was primarily on account of imports of vegetable oils, pulses, fresh fruits, cashew nuts, spices, sugar, cocoa, cotton etc. Share of agricultural imports in the total imports decreased from 5.64% in 2015-16 to 5.07% in 2017-18.



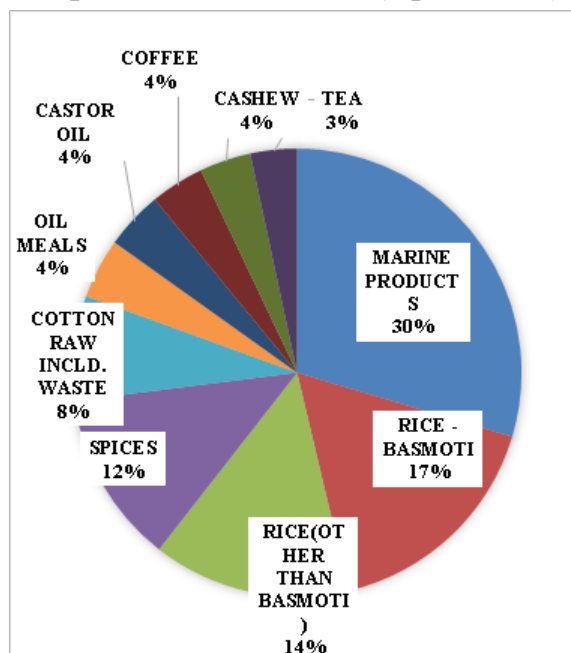
13.3.5 India's top 10 agriculture import commodities for the year 2015-16 to 2017-18 are given in the table 2 below:

Table 2: India's top 10 agricultural commodities (Imports)**[Value in Rs. crores]**

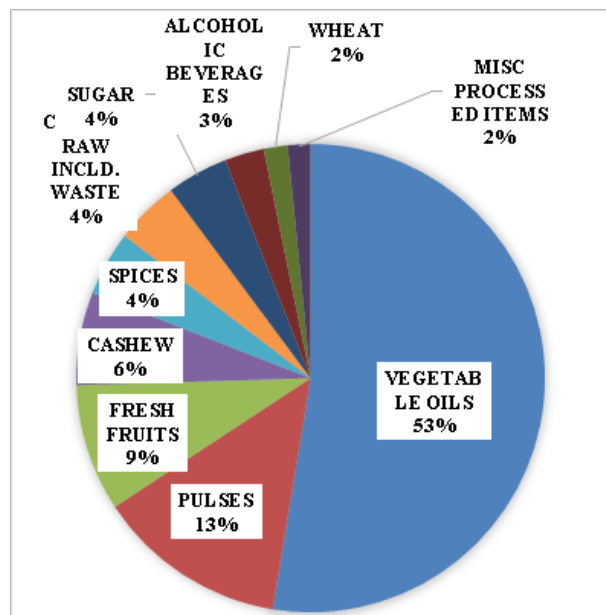
	Commodity	2015-16	2016-17	2017-18
1	Vegetable oils	68677	73047	74996
2	Pulses	25619	28523	18748
3	Fresh fruits	11072	11241	12525
4	Cashew nut	8701	9027	9134
5	Spices	5400	5758	6377
6	Cotton raw	2566	6337	6306
7	Sugar	4038	6868	6036
8	Wheat	873	8509	2358
9	Misc processed items	1811	2116	2238
10	Cocoa products	1399	1540	1472
	India's total agri and allied imports	140311	164680	152061

Source: Department of Commerce

13.3.6 Share of top 10 exported and imported agri-commodities during 2017-18 is as follows:

Export share in 2017-18 (top 10 items)

Import share in 2017-18 (top 10 items)



Source: Department of Commerce

13.4 Objectives/Schemes/Targets & Achievements/ Success Stories

To ensure Farmers' welfare by:

- Making policy recommendations on export and import of agricultural commodities.
- Coordinate/ formulate responses on World Trade Organization's (WTO) Agreement on Agriculture with the Ministry of Commerce, with DIPP on FDI in agriculture, with Ministry of Finance in matters relating to the modification in the Custom duty and Goods and Services Tax (GST) on agricultural commodities and with Ministry of Commerce in matters relating to Preferential Trade Agreements (PTAs)/Free Trade Agreements (FTAs) with different countries.
- Making policy recommendations and suggestions on improving Agri-Logistics in the country.

Government has set an overall target of increasing the Agri and allied exports to US\$

60bn by 2022 and all measures are being reviewed and re-casted to achieve this target. To enable this target, a new Agricultural Export Policy has been unveiled for the first time in the history of our country during 2017-18. The Division gave appropriate policy inputs to Department of Commerce for this policy. The Policy is aimed at doubling the agricultural exports and integrating Indian farmers and agricultural products with the global value chains. The Agriculture Export Policy has the following visions:

Harness export potential of Indian Agriculture, through suitable policy instruments, to make India global power in agriculture and raise farmers' income.

The objectives of the Policy are:

- To double agricultural exports from present ~US\$ 30+ Billion to ~US\$ 60+ Billion by 2022 and reach US\$ 100 Billion in the next few years thereafter, with a stable trade policy regime.
- To diversify our export basket, destinations and boost high value and value added agricultural exports including focus on perishables.
- To promote novel, indigenous, organic, ethnic, traditional and non-traditional Agri products exports.
- To provide an institutional mechanism for pursuing market access, tackling barriers and deal with sanitary and phyto-sanitary issues.
- To strive to double India's share in world agri exports by integrating with global value chain at the earliest.
- Enable farmers to get benefit of export opportunities in overseas market.

13.5 Foreign Trade Policy

India, with a large and diverse agriculture, is among the world's leading producers of rice,

wheat, sugarcane, castor seeds, groundnut, millet, sesame seed, fruits and vegetables. Therefore, changes in its balance sheets for key commodities will have a potentially large impact on world markets. Over the years, India has developed export competitiveness in certain specialized agriculture products viz. basmati rice, guar gum and castor.

13.6 Measures taken on Export & Import Policy (2018)

Export of all varieties of pulses including organic pulses has been made free without any quantitative restriction vide notification dated 22.11.2017. Import duty on Lentil (masur) and chana (gram) has been raised from zero to 30% on 21.12.2017. Import duty on chickpeas raised from 30% to 40 on 6th February, 2018 and from 40% to 60% on 1st March 2018. Import duty on crude palm oil from 30% to 44% and on refined palm oil from 40% to 54% on 1st March, 2018. The Government on 20th March, 2018 scrapped the 20% export duty on sugar in a bid to boost overseas sales of the commodity and lift its domestic price. Export of all varieties of edible oil except mustard oil has been made free without any Quantitative restriction on 6th April, 2018. However, export of mustard oil in branded consumer packs of upto 5 Kgs will continue to be permitted for export with a Minimum Export Price (MEP) of USD 900/MT.

Import policy of Urad and Moong in whole, split & other forms are restricted (under EXIM Code 07139010, 07133190 and 07133100) with annual import quota of 3 lakh MT vide notification dated 4.5.2018. Import duty on wheat has been increased from 20% to 30% on 23.5.2018. Import duty on walnut (in shell) has been increased from 30% to 100% vide notification dated 23.5.2018. Department of Revenue on 14th June, 2018

has increased basic custom duty on major vegetable edible oils i.e. on crude sunflower oil from 25% to 35%, on refined sunflower oil 35% to 45%, on refined olive oil from 35% to 40%, on crude groundnut oil, olive oil, other oils obtained solely from olive oil, Soyabean oil, safflower oil, cotton seed oil, coconut oil, palm kernel oil or babassu oil, rapeseed oil, colza oil, mustard oil, linseeds oil, maize (corn) oil, castor oil, sesame oil and other fixed vegetable fats & oils and its fractions from 30% to 35%, and on refined groundnut oil, other oils obtained solely from olive oil, Soyabean oil, safflower oil, cotton seed oil, coconut oil, palm kernel oil or babassu oil, rapeseed oil, colza oil, mustard oil linseeds oil, maize (corn) oil, castor oil, sesame oil and other fixed vegetable fats & oils and its fractions from 35% to 45%.

Again, Department of Revenue vide Notification dated 20.6.2018 raised import duty on few items i.e. from 60% to 70% on Kabuli Chana, Bengal Gram, and chickpeas, from 30% to 40% on Lentils, from Rs. 35/kg to Rs. 42/kg on almond (in shell), from Rs. 100/kg to Rs. 120/kg on almond (shelled), from 100% to 120% on walnut (in shell) and from 50% to 75% on fresh apple. Import of Arecanut over and above CIF Rs. 251/per kilogram is free and import below CIF Rs. 251/kg is prohibited vide DGFT's notification dated 25.7.2018. Import of long pepper revised from prohibited to Free and MIP is not applicable on Long pepper from 17.9.2018.

13.7 Foreign Direct Investment (FDI) Policy in Agriculture

13.7.1 Hundred percent FDI has been allowed in development and production of seeds and planting material. In addition, 100% FDI is allowed for floriculture, horticulture and cultivation of vegetables and mushrooms

under controlled conditions. Also, hundred percent FDI is allowed in animal husbandry (including breeding of dogs), pisciculture, aquaculture and services related to agro and allied sectors. Similarly, hundred percent FDI is allowed in the plantation sector namely tea, coffee, rubber, cardamom, palm oil tree and olive oil tree.

13.7.2 From April 2000 to December 2018, FDI inflows of Rs. 13,508 crores have been received in agriculture sector (i.e. agriculture services including agriculture machinery) (Source: DIPP). The investments were made in development and production of seed and planting material, horticulture and nursery services, agriculture machinery, plant protection services, cattle breeding and livestock rearing, cold storage and warehousing.

13.8 Goods and Services Tax:

13.8.1 Government has rolled out a new tax regime namely Goods and Services Tax (GST) with effect from 1st July 2017. GST envisages to introduce 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 is more comprehensive, compliable, simple, harmonized and development oriented tax system. The GST, unlike the earlier system, will allow the supplier at each stage to set-off the taxes paid at previous levels in the supply chain. It is essentially a tax on value added at each stage. The final consumer will thus bear only the GST charged by the last dealer in the supply chain, with set-off benefits at all the previous stages (GOI).

13.8.2 Impact of GST on Agricultural Sector: The impact of GST on agricultural sector is foreseen to be positive. It has been

observed that the fitment of rates of items in the food segment is done in a manner that it would not increase inflation. It has been done on the principle that GST rate would be more or less at par with current indirect tax regime. Activities relating to agriculture are currently exempted from the levy of service tax under GST.

13.9 PTA/FTA, WTO, Agri-cells

13.9.1 PTA/ FTA/ RCEP

Negotiations on India-Peru Trade Agreement, India-Israel FTA Negotiation, India Mauritius Comprehensive Economic Cooperation & Partnership Agreement (CECPA), Regional Comprehensive Economic Partnership (RCEP) is under consideration. Rules of Origin chapter in the proposed Economic and Technical Cooperation Agreement (ETCA) between India and Sri Lanka are also under consideration in this year.

13.9.2 WTO Meetings

Officer for Agriculture Trade Policy Division has participated in 87th Meeting of Committee of Agriculture, World Trade Organisation at Geneva, Switzerland. Issues related to quantitative restriction on pulses was replied and inputs were also shared with Department of Commerce.

13.9.3 Strengthening India's Agri Export – Creation of Agri-Cells in Nations Abroad

Agri-cells were created and officials were nominated by Ministry of External Affairs in the top 10 agriculture produce export destinations, to robust agri-export, handle agri-trade and related issues. Till now Agri-Cell is formed in 6 countries namely UAE, USA, Saudi Arabia, Vietnam, China and Nepal.

13.10 Institutional Mechanism for in-house Knowledge Management

Commodity Profile

13.10.1 Trade Division has been regularly publishing commodity profiles of six prime agricultural products viz. Rice, Wheat, Pulses, Vegetable Edible Oils, Sugar and Cotton. The profile gives a snapshot on

the trends in production, export, import, price movements and explains trade policy in brief for the commodity concerned.

13.10.2 The commodity profiles are placed in the public domain and are updated once in each month. These profiles can be viewed by clicking 'Agriculture Trade Policy' at <http://agricoop.nic.in/divisions.html>

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Chapter 14

Rashtriya Krishi Vikas Yojana (RKVY)

14.1 Overview

14.1.1 Rashtriya Krishi Vikas Yojana (RKVY) was launched as a flagship scheme of the Department of Agriculture, Cooperation & Farmers Welfare (DAC & 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 has been implemented as a State Plan Scheme till the end of financial year 2013-14 and is being implemented as a CSS (State Plan) scheme thereafter. In accordance with directions of the Ministry of Finance, funding pattern of the scheme from 2015-16 onwards has been altered i.e., it is to be shared between the Centre and States in the ratio of 60:40 (90:10 for 8 North-Eastern and 3 Himalayan States) against 100% funding by the Central Government till the end of the financial year 2014-15.

14.1.2 The Scheme has been revamped as Rashtriya Krishi Vikas Yojana - Remunerative Approaches for Agriculture and Allied Sector Rejuvenation (RKVY-RAFTAAR) for implementation from 2017-18 to 2019-20 with major focus on pre & post-harvest infrastructure, besides promoting agri-entrepreneurship, innovations & value addition with the approval of Union Cabinet on 01.11.2017. State Level Sanctioning Committees (SLSCs) constituted under the Chairmanship of Chief Secretary of the concerned State/UT is empowered to approve projects under the scheme. State Agriculture Department is the nodal Department for

implementation of the scheme in the State. The scheme is available for the entire spectrum of agriculture & allied sector activities such as crop development, horticulture, agricultural mechanization, marketing, pre & post-harvest management, animal husbandry, dairy development, fisheries, extension, etc.

14.2 Objectives of RKVY-RAFTAAR Scheme

- (i) To strengthen the farmers' efforts through creation of required pre and post-harvest agricultural infrastructure that increases access to quality inputs, storage, market facilities etc. and enable farmers to make informed choices.
- (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 that will help farmers increase their income as well as encourage production/productivity.
- (iv) To mitigate risk of farmers with focus on additional income generation activities - like integrated farming, mushroom cultivation, bee keeping, aromatic plant cultivation, floriculture etc.
- (v) To attend national priorities through several sub-schemes.
- (vi) To empower youth through skill development, innovation and agri-entrepreneurship based agribusiness models that attract them to agriculture.

14.3 Funding pattern under RKVY-RAFTAAR:

RKVY-RAFTAAR funds would be provided to the States in the following streams:

- (a) Regular RKVY-RAFTAAR - 70% of annual outlay for the following activities:
 - (i) Infrastructure and assets - 50% (of 70%) of regular RKVY-RAFTAAR outlay (20% for Pre-harvest infrastructure and 30% for post-harvest infrastructure)
 - (ii) Value addition linked production projects- 30% (of 70%) of regular RKVY-RAFTAAR outlay
 - (iii) Flexi-funds - 20% (of 70%) of regular RKVY-RAFTAAR outlay. States can use this for supporting any projects as per the local needs.
- (b) RKVY-RAFTAAR special sub-schemes as per national priorities -20% of annual outlay ; and
- (c) Innovation and agri-entrepreneur development -10% of annual outlay including 2% for administrative costs.

14.4 District and State Agricultural Plans: RKVY 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 RKVY also mandate each State to prepare State Agriculture Infrastructure Development Programme (SAIDP) in a similar manner to that of DAPs and SAPs for identifying a shelf of projects for RKVY -RAFTAAR.

14.5 Income/Production and Target/Achievement

RKVY-RAFTAAR fund is provided to the States/UTs as grant in aid. There is no physical

target set for any States at the Central level. The 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 under the scheme and sector-wise cost of projects approved by the States under the scheme during the last year and current year is given respectively at **Annexures-14.1 and 14.2.**

14.6 Implementation of Sub-Schemes

RKVY-RAFTAAR also has provision for implementing national priorities through initiating special programmes as sub-schemes without affecting the autonomy and flexibility of States. Three new initiatives have been taken up under RKVY-RAFTAAR as sub-schemes with focused interventions during the current year besides implementing five other sub-schemes launched during the previous years. The details of the sub-schemes being implemented under the scheme during the current year and their objectives are given as under:

- I. Bringing Green Revolution to Eastern India (BGREI):** Initiated in 2010-11, BGREI has targeted productivity improvement in the rice based cropping system of Assam, West Bengal, Odisha, Bihar, Jharkhand, Uttar Pradesh and Chhattisgarh. The allocation for this programme during 2017-18 was Rs.450 crore. The allocation for the programme in 2018-19 is Rs.315 crore.
- II. Crop Diversification Programme (CDP):** This scheme has been launched in 2013-14 to promote technological innovation to encourage farmers to choose crop alternatives. The allocation for this programme during 2017-18 was Rs. 40 crore. The allocation for 2018-19 is Rs.19.96 crore.
- III. Reclamation of Problem Soil (RPS):** This programme was initiated as a sub-scheme

of RKVY during 2016-17 for enhancing soil fertility & productivity for meeting the demand for food grains in the country. The allocation for the programme for 2017-18 was Rs.30 crore. The allocation for 2018-19 is Rs.20 crore.

IV. Additional Fodder Development Programme (AFDP): This programme was launched in 2014-15 in order to mitigate the impact of drought on livestock. The allocation for this programme for 2017-18 was Rs. 20 crore and for 2018-19 is Rs.10 crore.

V. Swachh Bharat: This scheme has been initiated in 2017-18 with an allocation of Rs. 47.50 crore for 2017-18 for solid and liquid waste management in agriculture. The allocation for the programme in 2018-19 is Rs.36 crore.

VI. Animal Health & Disease Control: This is a new initiative launched as a sub-scheme under RKVY during the current year (2018-19) for Brucellosis control in female calves and strengthening of veterinary infrastructure and mobile veterinary clinics. The allocation for the programme for 2018-19 is Rs.50.62 crore.

VII. Area Expansion of Cashew: This is another new initiative launched under RKVY in 2018-19 in order to augment area and production of cashew in backward districts including tribal districts of States like Kerala, Karnataka, Andhra Pradesh, Odisha and Maharashtra. The allocation for this programme for 2018-19 is Rs.40 crore.

VIII. Pilot Intervention for Most Vulnerable Drought Prone Districts: This programme is also initiated as a sub-scheme of RKVY during 2018-19 for drought proofing of identified districts of Andhra Pradesh, Karnataka and Rajasthan. The allocation

for this programme for 2018-19 is Rs.10 crore.

14.7 Success Stories

Some of the success stories reported by the States under the scheme are mentioned hereunder:

I. Full Fill the Dream through “Bhavya Soya Paneer”

Category: Food Processing

Introduction

Sh. Vikram Singh Hada belonged to a farmers family. He saw a stall of soya product displayed by KVK Kota- a value addition project under RKVY. He was trained by KVK, Kota and has seen great success.

Challenges

- To become skill full in the field of Soya processing
- To establish Soya processing unit to become an Entrepreneur of Soya paneer.



Soya Processing Unit of Sh. Vikram Singh Hada



Governor of Rajasthan Govt. observing soya Paneer

II. Date Palm Cultivation in Western Rajasthan



Category :- Horticulture

Initiative:- To meet out the challenge of availability of plants, 132912 Date palm plants of variety Barahi, Khuneizi, Khalas and Medjool raised from tissue culture technique were imported and distributed to farmers of Western Rajasthan due to suitable climatic conditions under subsidy scheme of RKVY. Technical know how was provided by officers of Horticulture department. In addition to subsidy on date palms plants, financial help was also provided for cultivation and maintenance of plants for 2 years.

Impact :-In fact, increased income has up lifted the socio-economic status of farmers significantly. Moreover, cultivation of date palm has also helped in removing the deficiency of nutrients of farmers as date fruits are very rich source of nutrition. In addition to it, dependency on import of date fruits has also reduced as date fruits are easily available

in local market. It has also saved foreign currency. Date palm cultivation has changed the cropping pattern and helped in reducing desertification. Dependency on growing of Moong, Moth, Bajra has also reduced as farmers are having option of planting date palm plants. It is very hardy plant, can with stand adverse condition and can grow well in saline water. Technical know how of farmers has also increased.



III. Krishi Yantra Dhare – Custom Hire Service Centres

Category – Agriculture, Horticulture, Animal Husbandry

Introduction: Krishi Yantra Dhare–Farm Machinery Custom Hire Service Centres is a boon to Small & Marginal farmers who cannot afford to purchase (practically not possible) the Farm Machinery even with subsidiary rates. Under this scheme farmers have a golden opportunity to avail hi-tech and advanced farm machineries at nominal charges at their door step, which helps in taking up timely agricultural operations.

Initiative: During, 2014-15, 175 Custom Hire Service centres have been established by two Service Providers namely, Shree Kshetra Dharmastala Rural Development Project, Dharmastala (SKDRDP) and Indian Society of Agribusiness Professionals, New Delhi (ISAP) with an allocation of Rs. 3698.08 lakhs from RKVY and further during 2015-16 & 2016-17, 174 centres have been established through Kala

Chetana Yuva Samsthe, Bijapura , VST Tillers Tractors Ltd., Bangalore, Mahindra & Mahindra Ltd.,(FES), Swaraj div., Punjab & Mumbai & John Deere India Private Ltd., Pune and work order is issued for establishment of 95 centres in 2017-18. Totally 349 centres are operational as on date, with a subsidy of Rs.152.38 crores from State Government of Karnataka.

Achievements: Till date (March 2018) 349 centres have been established and around 8.88 lakh farmers have been benefited throughout the state from this programme by hiring the Farm Machinery & equipments at nominal hiring charges.



Kalburgi Centre



Koodla Centre



Paddy Transplanter



Reaper



Mandya Centre



Multicrop Thresher

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Chapter 15

Drought Management

15.1. In accordance with the Government of India (Allocation of Business) Rules, Department of Agriculture, Cooperation and Farmers Welfare (DAC&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. DAC&FW closely monitors progress of SWM in the country, in close coordination with India Meteorological Department (IMD), and keeps a watch over deficient/large deficient rainfall conditions.

15.2. DAC&FW has reviewed and updated the Crisis Management Plan (CMP) for Drought (National) during the year 2018. The Plan defines the roles and responsibilities of various agencies involved in crisis management, including media management during drought. CMP 2018 (National) was circulated to State/ Union Territory Governments for preparing their own CMPs.

15.3. State Governments initiate necessary relief measures in the wake of natural calamities, including drought, from State Disaster Response Fund (SDRF), which is readily available with them. Contribution to SDRF is made by Central and State Governments in the ratio of 3:1 for General Category States (18 out of 29, 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 Special Category States (11 out of 29, namely, 8 North Eastern States of Arunachal Pradesh, Assam, Manipur, Meghalaya, Mizoram, Nagaland, Sikkim and Tripura and 3 hilly States of Himachal Pradesh, Jammu & Kashmir and Uttarakhand). For the financial years 2018-19 and 2019-20, the contribution to SDRF between the Central and the State will be in the ratio of 9:1. 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 National Disaster Response Fund (NDRF), for natural calamities of severe nature, as per established procedure and extant items and norms for assistance from SDRF/NDRF. Allocation under SDRF has been made on the basis of recommendations of 14th Finance Commission, for a period of 5 years from 2015-16 to 2019-20 and allocation under SDRF is for State Governments only.

15.4. During the year 2018-19, as per information available till date, Andhra Pradesh, Karnataka, Maharashtra, Jharkhand, Gujarat, Rajasthan and Odisha had declared drought during Kharif Season and submitted Memorandum seeking financial assistance from NDRF. Inter-Ministerial Central Teams (IMCTs) visited these States (except Odisha) to assess the loss/damage to crops etc. and recommend appropriate financial assistance from NDRF. Karnataka has also declared drought during Rabi Season and has submitted Memorandum seeking financial assistance from NDRF. IMCT has been constituted to visit the State to assess the loss/damage to crops etc. and

recommend appropriate financial assistance. Assistance to the States would be provided as per the norms.

15.5. 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 at the district level, prescribing 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 so far prepared Contingency Plans for **648 districts** in the country.

15.6. A National Drought Management Plan (NDMP), as required under the provisions of the Disaster Management Act, 2005, has been prepared. This Plan has been prepared in consultation with the National Disaster Management Authority (NDMA), keeping in view the theme of National Platform for Disaster Risk Reduction (NPDRR) to achieve the “Disaster Risk Reduction for Sustainable Development: Making India Resilient by 2030”. This NDMP will be updated, from time to time, taking into account various factors.

15.7. DAC&FW is also in the process of preparing a “Drought Proofing Plan” for selected districts in the States of Andhra Pradesh, Karnataka and Rajasthan, in association with CRIDA under ICAR.

Chapter 16

International Cooperation

16.1 Overview

16.1.1 Mandate & Nature of Work:

The mandate of International Cooperation is to foster mutually beneficial partnerships with other countries of the world in a multilateral as well as bilateral format. Department of Agriculture, Cooperation & Farmers Welfare is the contact point in Government of India for Food & Agriculture Organization (FAO) and World Food Programme (WFP) of the United Nations. Bilateral Agreement, Memorandum of Understanding (MoU), Protocols and Work Plans with the countries of strategic interest are signed and implemented for furthering cooperation in the field of Agriculture & Allied sectors in coordination with the Ministry of External Affairs, other concerned Ministries and Departments and Indian Missions abroad.

16.1.2 Staff & Strength : Headed by a Joint Secretary level officer, the Division is manned by a Director, 2 Under Secretaries, and comprises of 5 Sections having responsibility for works relating respectively to countries of Asia, Europe, Africa, America, Australia along with Multilateral Organisations and foreign deputation of officials from the Department.

16.1.3 Minister (Agriculture), Embassy of India, Rome: The Office of Minister (Agriculture), EoI, Rome is a subordinate office under the administrative control of DAC&FW. The Indian Ambassador in Rome is the Permanent Representative to the FAO, IFAD and WFP for the purpose of maintaining liaison and coordination with these three Rome Based Agencies (RBAs). Keeping in view, the specialized nature and the increasing volume of interaction with the UN agencies and their

associated bodies, an agricultural 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 and designated as India's Alternate Permanent Representative (APR). Minister (Agriculture), EoI, Rome represents Indian interests, particularly in the field of agriculture and allied sectors at the meetings of various UN Agencies.

16.2 Cooperation with International Organisations:

16.2.1 Food & Agriculture Organization (FAO):

India made an annual membership contribution to FAO of US\$ 1995055.32 and Euro 1387118.76, for the Calendar Year 2019 during Financial Year 2018-2019. India collaborates with FAO in the form of training, consultancy services, equipment and material in the field of agriculture and allied sectors under its Technical Cooperation Programme (TCP). FAO India has formulated updated Country Programming Framework (CPF) for India for the year 2018. This document will be succeeded in early 2019 by a longer duration programming framework, which FAO will work on as a new CPF for the period 2019-2022 in line with the UN Sustainable Development Goals (SDGs) within the framework of United Nations Sustainable Development Framework (UNSDF).

Important FAO events/meetings attended:

- (i) 159th Session of FAO Council held at Rome, Italy during 4-8 June, 2018.

- (ii) 26th Session of the Committee on Agriculture (CoAG) meeting held at Rome Italy during 1-5 October, 2018.
- (iii) 160th Session of FAO Council held at Rome, Italy during 3-7 December, 2018.
- (iv) 13th session of Commission on Phytosanitary Measures (CPM) at Rome, Italy during 16-20 April 2018.
- (iii) Strengthening Agriculture and Allied Sector Contributions to India's National Biodiversity Action Plan (NBAP) 2008 and the National Biodiversity Targets (NBTs): Project is implemented in the States of Kerala, Punjab and Mizoram. The project will support the efforts of Government of India (GOI) with increased capacity at national, state and local levels through the development of policy with strategy and action plan on mainstreaming biodiversity conservation into agriculture and allied sectors.

The details of the major projects which are currently under implementation with FAO assistance in the States, are as under:

- (i) Technical Assistance for Farmer Water School Programme and Agricultural Activities under UPWSRP II: The Project is implemented in Uttar Pradesh with an objective to strengthen the institutional and policy framework for integrated water resources management for the entire State and to increase agricultural productivity and water productivity by supporting farmers in targeted irrigation areas.
- (ii) Strengthening Institutional Capacities for Sustainable Mountain Development in the Indian Himalayan Region: Project is implemented in the Himalayan States (Jammu and Kashmir, Himachal Pradesh, Uttarakhand, Sikkim, West Bengal, Arunachal Pradesh, Nagaland, Manipur, Assam, Meghalaya, Tripura, Mizoram). It will contribute to enhance institutional capacities for sustainable mountain development in the Indian Himalayan Region (IHR), with a focus on agriculture and allied sectors through targeted support for institutional development and policy advocacy. It will further contribute to informed and evidence-based decision and policy making on mountain agriculture and allied sectors.
- (iv) Implementing the Monitoring and Analyzing Food and Agricultural Policies (MAFAP) Programme: Project is implemented in the States of Chhattisgarh, Gujarat, Haryana, Bihar, Uttar Pradesh, Odisha. The TCP will provide technical support to establish and strengthen country-owned, robust policy monitoring and analysis mechanisms in the areas of food and agriculture.
- (v) Study on enhancing and sustaining pulse production and improving income of farmers in the target regions: Project is implemented in the States of Odisha and Chattisgarh to enhance food security of the nation by increased productivity and production of pulses through sustainable farming techniques, improved fodder management and farmer incomes in the selected project locations.
- (vi) Study on improved processing and enhanced awareness on nutritional benefits of millets to increase farmers' incomes in the target regions: Project is implemented in the States of Rajasthan, Karnataka and Odisha with an objective to improve the production of millets, and promote its consumption within the country.

- (vii) Enabling institutional platforms of the rural poor, especially women and marginalised farmers through strengthening economic and social inclusion interventions : The objective of the project is to support National Rural Livelihood Mission to develop pathways for organic certification of the products especially through Participatory Guarantee System for India (PGS) and to integrate climate resilience concepts into CRP capacity building strategy and develop uniform certification standards for CRPs.
- (viii) Time critical saving of livestock, agriculture, livelihoods recovery of communities affected in Kerala floods: The Project is implemented in the State of Kerala to enhance safety of livestock and poultry in prioritized districts; to reinforce agriculture-based livelihoods security in the prioritized districts.
- (ix) Technical Assistance for Development of Sustainable Agricultural Value Chains in Mizoram funded by WFP: Project is implemented in the State of Mizoram to strengthen the capacity of community stakeholders to improve livestock management; for sustainable and ecological jhum management and to develop business plans for sustainable value chain development.
- (x) Technical Assistance for Development of Sustainable Agricultural Value Chains in Nagaland funded by WFP: Project is implemented in the State of Nagaland to strengthen the capacity of community stakeholders for sustainable and ecological jhum management, develop business plans for sustainable food value chains and improve and upgrade the agricultural curriculum.

16.2.2 World Food Programme (WFP):

- (i) Set up in 1963, WFP seeks to provide emergency feeding in places facing acute food insecurity due to natural calamities and man-made causes. Present share of Government of India for a biennium is US \$ 1.92 Million towards WFP Pledge Contribution which is used by them to support WFP India Country Programme. Besides, GoI makes an annual payment of Rs. 30 Lacs to UNWFP Country Office towards their Local Operating Cost (LOC). Under a seat sharing arrangement with Afghanistan, India will be member of the Executive Board in 2020-21 and 2021-22.
- (ii) WFP India Country Strategic Plan (CSP: 2019-2023) has been approved in the 2nd Regular Session of the WFP Executive Board Meeting in Rome during 26-29 November 2018. Memorandum of Understanding (MoU) between GoI and the UNWFP was signed for 2019-2023.

Important WFP meetings attended are:

- (i) Annual Session of the WFP Executive Board 2018 held in Rome, Italy during 18-22 June, 2018.
- (ii) 2nd Regular Session of the WFP Executive Board held in Rome, Italy during 26-29 November, 2018.

16.2.3 International Fund For Agriculture Development (IFAD)

India is a founder member of IFAD and a key contributor among the member Countries. IFAD funds are derived from member contributions (made in replenishment cycles), investment incomes and special funds. India has so far pledged US\$ 211 million and contributed US\$ 171 million to IFAD's Resources. Department of

Economic Affairs is the nodal for IFAD in India.

Currently, following projects with assistance from IFAD are under implementation in the agricultural sector:

- (i) Convergence of Agricultural Interventions in Maharashtra's Distressed Districts Programme – Implemented by the State Government and having a project size of USD118.65 million. The overall goal of the programme is to develop resilient, sustainable and diversified households, on-farm and off-farm livelihoods, allowing households to face climatic and market risks without falling back into poverty and distress.
- (ii) Andhra Pradesh Drought Mitigation Project – Implemented by State Government of Andhra Pradesh and having a project size of Rs.1103 Crore. The overall goal of the programme is to improve the incomes and strengthen the drought resilience of 165,000 farm households. The Development Objective is to strengthen the adaptive capacity and productivity of agriculture in the rainfed areas of five districts in southern AP.
- (iii) Fostering Climate Resilient Upland farming system in Northeast (FOCUS) (Nagaland & Mizoram) – Implemented by the states of Mizoram and Nagaland for a project size respectively of Rs.5.4 billion and 6 billion. The overall goal of the project is to increase agricultural income of 201,500 households, and to enhance their resilience to climate change. This would be achieved through the development objective of increasing the environmental sustainability and profitability of farming systems practiced by highland farmers.

16.2.4 Other International Organizations:

In addition to the 3 Organisations already mentioned, this Department is a member of the following International Organizations (IOs) and the annual contributions to these International Organizations are made as per agreed commitment/agreement:

1. Trust Fund of FAO for Desert Locust in Eastern Region.
2. Trust Fund for International Desert Locust.
3. Organization for Economic Cooperation & Development (OECD).
4. Asia and Pacific Coconut Community (APCC).
5. Asia and Pacific Plant Protection Commission (APPPC).
6. Global Crops Diversity Trust Fund (GCDT)
7. International Institute of Refrigeration (IIR)

16.3 Bilateral Cooperation

16.3.1 MoU/MoC/Agreements/Work Plans: Department of Agriculture, Cooperation and Farmers' Welfare has entered into 69 MoUs/MoCs/Agreements with 63 countries in the field of agriculture. During the year 2018, MoU were signed for cooperation in agriculture and allied sectors with Iran, Uzbekistan and Maldives. In addition to these, an Agreement with Serbia for cooperation in Plant Health and Plant Quarantine and a Program for promoting investment into India by Japan in the field of Agriculture and Fisheries were also signed.

16.3.2 As a follow up of the various MOUs, meetings of the following Joint Working Group (JWG) were held in 2018:

Sl no	Event and country	Date	Venue
1	1st meeting of Indo-Portugal Joint Working Group (JWG)	11.01. 2018	New Delhi
2	1st meeting of India-Madagascar Joint Working Group	8-9.02.2018	Antananarivo, Madagascar.
3	5th meeting of Indo-Dutch Joint Working Group	13.03.2018	New Delhi.
4	1st meeting of Indo-Poland Joint Working Group(JWG)	14.03.2018	New Delhi
5	1st meeting of India-Denmark Joint Working Group	16.05.2018	New Delhi
6	2nd meeting of India-Philippines Joint Working Group	18.05.2018	Manila, Philippines
7	Inaugural meeting of India-Nepal New Partnership in Agriculture	19.06.2018	New Delhi.
8	7th meeting of India-Nepal Joint Agriculture Working Group	16-17.08. 2018	Kathmandu, Nepal
9	1st meeting of India-Russia Joint Working Group	29.08.2018	Moscow, Russia
10	4th meeting of India-Australia Joint Working Group	13.09. 2018	New Delhi.
11	4th Meeting of India-South Africa Joint Working Group	24.01.2019	New Delhi

16.3.3 India-Nepal Cooperation: The inaugural meeting of the ‘India-Nepal New Partnership in Agriculture’ was held under the Chairmanship of Hon’ble Minister of Agriculture and Farmers Welfare and Hon’ble Agriculture Minister of Nepal on 19.6.2018 at New Delhi. A Draft Work Plan under the India-Nepal Joint Statement “New Partnership in Agriculture” for cooperation in the areas identified under the Joint Statement for the years 2018-20 sent to MEA on 5.6.2018. Among other areas of cooperation identified, India will assist Nepal in organic farming and soil health under a mutually approved Detailed Project Report (DPR) with an expenditure of INR 432.397 lakh to be provided by India. Two training programmes on Organic Farming and Certification for 20 Nepalese participants each, is being organized by National Centre for

Organic Farming (NCOF), Ghaziabad during 15th November, 2018 to 14th December, 2018 and 1st February, to 2nd March, 2019.

16.3.4 United States Agency for International Development (USAID): National Institute of Plant Health Management (NIPHM), Hyderabad has been collaborating with United States Agency for International Development (USAID) for training purposes and capacity building programmes. National Institute of Agriculture Extension Management (MANAGE), Hyderabad and National Institute of Agriculture Marketing (NIAM), Jaipur are also collaborating with USAID to provide training for nationals of three African countries viz. Liberia, Kenya and Malawi under trilateral cooperation envisaged under MoU with USA. Seventeen countries namely Botswana, DR Congo, Ghana, Kenya,

Liberia, Malawi, Mozambique, Rwanda, Sudan, Tanzania, Uganda from Africa and Afghanistan, Cambodia, Lao PDR, Mongolia, Myanmar, Vietnam from Asia have now been included under India-USAID Trilateral Cooperation. MANAGE has successfully completed 24 US-India-Africa Triangular International Training Programmes during April to November 2018. With this, under this USAID funded project, MANAGE has trained 565 Executives from 20 countries.

16.4 Strategic Groups:

16.4.1 India is a member of multilateral groupings such as G-20- a forum for global cooperation on international economic and financial issues; BRICS (Brazil, Russia, India, China and South Africa); IBSA (India, Brazil and South Africa); SCO (Shanghai Cooperation Organization); SAARC (South Asian Association for Regional Cooperation); ASEAN (Association of South East Asian Nations); BIMSTEC (Bay of Bengal Initiative for Multi-Sectoral Economic & Technical Co-operation) etc.

16.4.2 G-20: An Indian delegation led by Shri Parshottam Rupala, Hon'ble Minister of State (Agriculture & Farmers' Welfare) participated in G-20 Agriculture Ministers' Meeting held at Buenos Aires, Argentina from 26-28 July 2018. The Ministry had also participated in the First meeting of G-20 Agriculture Deputies held in Rosario, Argentina on 12-14 March 2018 and the Second meeting of G-20 Agriculture Deputies held in Buenos Aires, Argentina on 26-27 July 2018. Inputs were also given for the meeting of Heads of G20 Countries held in Buenos Aires from 31 Nov - 1 Dec 2018 in which Hon'ble Prime Minister participated.

16.4.3 Shanghai Cooperation Organization (SCO): The Shanghai Cooperation Organization (SCO) is a Eurasian political, economic and

security alliance. India officially joined SCO as full Member on 9th June, 2017 at a summit in Astana. Meetings of the SCO Permanent Working Group (PWG) on Agriculture and Agriculture Ministers' of SCO Member States were held in Bishkek, Kyrgyzstan during 18th-19th September, 2018 during which a 7-point SCO Action Plan for 2018-2019 on the implementation of the Agreement between the Governments of the SCO Member States on cooperation in agriculture was signed.

16.4.4 BRICS: The 8th Meeting of BRICS Ministers of Agriculture & Agrarian Development was held during 22nd June, 2018, in Skukuza, South Africa. BRICS Ministers of Agriculture adopted a Joint Declaration. In the Meeting, India gave an outline of achievements made by it in the field of agriculture and highlighted the areas where BRICS members could increase their cooperation for ensuring food and nutrition security among member nations as well as the need for more intense cooperation on issues related to climate change with a view to enable adoption on mitigation on long term basis.

16.4.5 BIMSTEC: Inputs were given for the 4th BIMSTEC Summit held in Kathmandu, Nepal on 30th -31st August 2018 in which Hon'ble Prime Minister also participated.

16.5 International Events:

16.5.1 70th Anniversary of India-Russia Diplomatic relations: 70th Anniversary of India-Russia diplomatic relations in the field of Agriculture sector was celebrated during 13th-14th February, 2018. During the event, an Indo-Russian Agriculture Business Summit, 2018 was held at New Delhi on 13.2.2018 and the main function was organised at Central State Farm (CSF) in Suratgarh, Rajasthan on 14.02.2018. Mr. Sergey O. Beletskiy, Deputy Minister, Ministry of Agriculture, Russia

and Shri Gajendra Singh Shekhawat, Hon'ble Minister of State for Agriculture & Farmers Welfare were attended the event.

16.5.2 World Food Day (WFD): World Food Day (WFD) was celebrated throughout the country on 16th October, 2018 to commemorate the founding day of the FAO and to create public awareness about the plight of the hungry and malnourished people and to take concrete action to tackle and overcome the menace of hunger. The theme of WFD 2018 was "Our Actions are our Future: A Zero Hunger World by 2030 is possible."

16.5.3 A workshop on Technical Cooperation in Agri-business with Argentina was held on 15th February, 2019 in New Delhi in which issues relating to Animal & Plant health, Cooperatives and Development of Agricultural Production System and application of innovative technologies for food security were discussed.

16.5.4 24th Conference of the Parties to the United Nations Framework Convention on Climate Change (COP 24 under UNFCCC): This Department participated in the COP 24 under UNFCCC held at Katowice, Poland from 2nd –14th December, 2018 as part of the delegation led by Hon'ble Minister for Environment, Forest and Climate Change. The members resolved to extend the research and model developed to the field so as to equip the farmers to maintain productions and productivity even in the face of challenges posed by climate change. The presentations on "Scaling up adaptation strategies for climate resilient agriculture" and "Integrated Farming System for Risk Management and Enhanced Climate Resilience" were given in the India Pavilion to highlight India's preparedness against challenges posed by climate change.

16.5.5 International Seminars/Workshops/Conferences etc. : During 2018-19 (upto February, 2019), this Department took part

in 107 International Conferences/Meetings/Seminars/Trainings etc. dealing with various aspects of agricultural development organized by the FAO and other International Organizations.

16.5.6 Declaration of 2023 as International year of Millets: India's proposal for an International year of Millets was approved by FAO Council in December, 2018 for the year 2023. This will now be placed at the FAO Conference in June 2019 after which it would be communicated to UNGA for final approval.

16.6 External Assistance:

16.6.1 There are various projects which are being implemented in different States of India with the help of external assistance provided by various foreign agencies/countries such as World Bank, International Fund for Agricultural Development (IFAD), JICA, GEF, Asian Development Bank (ADB) etc.

16.6.2 World Bank Assisted Projects: Currently the projects being implemented by the State governments in the agriculture sector with the assistance of World Bank from DEA are as under:

- (i) UP Sodic Land Reclamation Project – III
- (ii) Maharashtra Agricultural Competitiveness Project
- (iii) Rajasthan Agricultural Competitiveness Project
- (iv) Assam Agribusiness & Rural Transformation Project.
- (v) Maharashtra Project on climate Resilient Agriculture.
- (vi) HP Horticulture Development Project.

16.6.3 Japan International Cooperation Agency (JICA): Himachal Pradesh Crop

Diversification Promotion Project is being implemented with concurrence of DEA

16.6.4 Global Environment Facility (GEF):

GEF's mission is to safeguard the global environment by supporting developing countries in meeting their commitments to multiple environmental conventions and by creating and enhancing partnerships at national, regional and global scales.

GEF 6 : Under the Project 'Transforming Indian agriculture for global environmental benefits

and the conservation of critical biodiversity and forest landscapes' with GEF grant of \$ 33.55 million and co-financing of \$ 868.39 million, the following proposals have been approved :

- MP – Chambal landscape.
- Uttarakhand – Corbett Rajaji landscape.
- Odisha – Simlipal landscape.
- Mizoram – Dampa landscape.
- Rajasthan – Desert National Park landscape.

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Chapter 17

Integrated Scheme on Agriculture Census & Statistics

17.1 Overview

The Agriculture Census Scheme is a component of Integrated Scheme on Agriculture Census, Economics and Statistics under which 100 per cent financial assistance is provided to States/UTs for payment of salaries, office expenses, honoraria, tabulation and printing of schedules etc. 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. The Agriculture Census is conducted at five yearly intervals and the current Agriculture Census 2015-16 is tenth 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. is collected. The second Phase of the Census collects data on detailed characteristics of operational holdings such as, land use, irrigation status, tenancy particulars, 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 (<http://agcensus.nic.in>) for public use.

17.2 Target and Achievement during 2018-19

The tenth Agriculture Census with reference year 2015-16 is progressing in the country. The progress of Phase wise activities of Agriculture Census 2015-16 is given below:

Agriculture Census during 2018-19		
	Target	Achievement
I	Completion of Phase-I	Phase-I has been completed and provisional results have been released. The data for Phase-I is further examined for publishing the final report.
II	Completion of Phase-II	Data collection of Phase-II has been completed in all the States/UTs except Jharkhand and finalization of data tables are in progress.
III	Completion of Phase-III work (Input Survey 2016-17)	Data collection of Phase-III has been completed in 22 States/UTs and simultaneously started the work of data entry and processing. The field work of the remaining States/UTs is targeted to be completed by March 2019.

17.3 New Initiatives during Agriculture Census 2015-16

Data of land holdings are being computerized in the country. Since, Agriculture Census is predominantly based on land records; the feasibility of extraction of data using computerized land records were experimented in few States viz., Andhra Pradesh, Telengana, Maharashtra and Gujarat during Agriculture Census 2015-16.

17.4 Gender Perspective in Agriculture Census

Since 1995-96, following recommendations of the Central Statistics Office, Ministry of Statistics and Programme Implementation, gender dis-aggregated data in Agriculture Census are collected. The scope of collection of gender dis-aggregated data 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 as per results of latest Agriculture Census 2015-16 and Agriculture Census 2010-11 is given in the following table-

Sr. No.	Size Group	2010-11	2015-16*
1	Marginal (Below 1.00 ha.)	13.63	14.62
2	Small (1.00-2.00 ha.)	12.15	13.32
3	Semi-Medium (2.00-4.00 ha.)	10.45	11.53
4	Medium (4.00-10.00 ha.)	8.49	9.64
5	Large (Above 10.00 ha.)	6.78	7.70
	All Size Groups	12.78	13.87

* - Figures for Jharkhand and Maharashtra have been estimated

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Increase in percentage of female operational holders during different Agriculture Censuses indicates participation of more and more women in operation and management of agricultural holdings in the country.

17.5 Agriculture Census in North Eastern States (NE)

Agriculture Census 2015-16 is conducted in all the North Eastern States comprising of Arunachal Pradesh, Assam, Meghalaya, Manipur, Mizoram, Nagaland, Sikkim and Tripura. The published provisional results of Phase-I of the Census includes data from all the NE States and the data for phase-I is further examined for incorporation in the final report. All the North Eastern States have completed the data collection, data entry and processing of Phase-II. The data collection work of Phase-III has been completed in all the States and the scrutiny work is in progress.

Chapter 18

Pradhan Mantri KIsan SAMman Nidhi (PM-KISAN)

18.1 Overview

- ❖ Farmers Welfare Division of this Department is entrusted with the formulation, implementation, monitoring and evaluation of the Pradhan Mantri KIsan SAMman Nidhi (PM-KISAN) scheme. The objective of the scheme is to augment the income of families of all land holding Small and Marginal Farmers (SMFs) with combined holding of upto 2 hectares of land, subject to certain exclusions. The scheme aim to supplement the financial needs of the SMFs to enable them to take care of expenses related to agriculture and allied activities as well as domestic needs. This would also protect them from falling in the clutches of moneylenders for meeting such expenses and ensure their continuance in the farming activities.
- ❖ 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 into the bank accounts of eligible landholding SMFs 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 Direct Benefit Transfer(DBT) mode for which an exclusive web-portal 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.

18.2 Scheme

The Government with a view to augment the income of the Small and Marginal farmers has launched a Central Sector Scheme, namely, “**Pradhan Mantri KIsan SAMman Nidhi (PM-KISAN)**”. The Scheme takes effect from 01.12.2018 for transfer of benefit to eligible beneficiaries during this financial year 2018-19.

18.3 Aims and objective of the Scheme

The scheme aims to supplement the financial needs of the farmers in procuring various inputs to ensure proper crop health and appropriate yields, commensurate with the anticipated farm income.

18.4 Beneficiaries of the Scheme

All Small and Marginal landholder farmer families across the country having cultivable land holding upto 2 hectares shall be provided a benefit of Rs.6000 per annum per family payable in three equal installments of Rs. 2000, every four months.

The following categories of beneficiaries of higher economic status **shall not be eligible** for benefit under the scheme:

- (i) All Institutional Land holders; and
- (ii) Farmer families in which one or more of its members belong to following categories :
- (iii) Former and present holders of constitutional posts
- (iv) Former and present Ministers/ State Ministers and former/present Members of Lok Sabha/ Rajya Sabha/ State Legislative Assemblies/

State Legislative Councils, former and present Mayors of Municipal Corporations, former and present Chairpersons of District Panchayats.

- (v) All serving or retired officers and employees of Central/ State Government Ministries / Offices/Departments and its field units Central or State PSEs and Attached offices / Autonomous Institutions under Government as well as regular employees of the Local Bodies (Excluding Multi Tasking Staff / Class IV/Group D employees).
- (vi) All superannuated/retired pensioners whose monthly pension is Rs.10,000/-or more(Excluding Multi Tasking Staff / Class IV/Group D employees)
- (vii) All Persons who paid Income Tax in last assessment year.
- (viii) Professionals like Doctors, Engineers, Lawyers, Chartered Accountants, and Architects registered with Professional bodies and carrying out profession by undertaking practices.

The number of eligible Small and Marginal land holder farmer family has been estimated on the basis of projection of Agricultural Census 2015-16 data for the year 2018-19. The total number of eligible beneficiaries after exclusion of certain categories of beneficiaries of higher economic status has been estimated as 12.50 crore.

18.5 Implementation of the Scheme

18.5.1 A high level committee comprising of Union Ministers of Finance, Agriculture and Land Resources will be constituted for making necessary modifications in the scheme within the overall financial parameters of income support approved by the Government for effective implementation.

18.5.2 In some of the North-Eastern States, the land ownership are community based. In such states, an alternate implementation mechanism of

eligibility will be developed for the farmers and shall be implemented with the approval of committee comprising of Ministers of M/o Development of North-East Region(DoNER), Ministry of Land Resources, Ministry of Agriculture & Farmers Welfare and concerned State Chief Ministers or State nominated Minister.

18.5.3 A Committee under the Chairmanship of Cabinet Secretary with Secretaries of Department of Economic Affairs, Agriculture, Land Resources and Information Technology as members, to review and monitor implementation of the Scheme for effective rollout through appropriate implementation strategy.

18.5.4 The States shall prepare database of eligible beneficiary landholder farmer families in the villages capturing the Name, Age, Gender, Category (SC/ ST) , Aadhaar Number (in case Aadhaar Number has not been issued then Aadhaar Enrollment Number together with any other prescribed documents for purposes of the identification such as Driving Licence, Voters' ID Card, NREGA Job Card, or any other identification documents issued by Central/State/UT Governments or their authorities, etc.), Bank Account Number and the Mobile Number of the beneficiaries. Responsibility of identifying the landholder farmer family eligible for benefit under the scheme shall be of the State/ UT Government. In case of beneficiaries in States of Assam, Meghalaya, J&K where Aadhaar number has not been issued to most of the citizens, Aadhaar number shall be collected for those beneficiaries where it is available and for others alternate prescribed documents can be collected for identity verification purposes. States/UTs shall ensure that there is no duplication of the payment transferred to eligible families. Speedy reconciliation in case of wrong/incomplete bank details of the beneficiary should be ensured.

18.5.5 For the purpose of exclusion States have to take a self declaration from the beneficiaries. In the said self declaration taken by the States/

UT Governments an undertaking should also be included wherein the consent of the beneficiaries should be taken for using the Aadhaar number for verification of his eligibility for the scheme with the concerned agencies.

18.5.6 The existing land-ownership system in the concerned State/UT will be used for identification of beneficiaries. Further, State/UT Governments would also expedite the progress of digitization of the land records and linking the same with Aadhaar as well as bank details of the beneficiaries.

18.5.7 The lists of eligible beneficiaries would be published at the village level. Small and Marginal Farmer families who are eligible but have been excluded should be provided an opportunity to represent their case.

18.6 Review, Monitoring and Grievance Redressal Mechanism

18.6.1 There will be stratified review/monitoring mechanism at National, State and District Level. At the National level, the Review Committee will be headed by Cabinet Secretary. The States shall notify the State and District Level Review / Monitoring Committee.

18.6.2 The States shall also notify State and District Level Grievance Redressal Monitoring Committees for looking into all the grievances related to implementation of the scheme. Any grievances or complaints which are received should be disposed off on merit preferably within two weeks time.

18.7 Setting up of Project Monitoring Unit (PMU)

18.7.1 A Project Monitoring Unit (PMU) at Central level will be set up in DAC&FW. This PMU shall be tasked with the responsibility of overall monitoring of the scheme and shall be headed by Chief Executive Officer (CEO). PMU shall

also undertake publicity campaign (Information, Education and Communication-IEC).

18.7.2 Each State/UT Government will designate a Nodal Department for implementation of the scheme and coordinating with Central Government with regard to implementation of Income Support Scheme.

18.7.3 On the lines of PMU at central level, States/UTs may consider setting up dedicated Project Monitoring Units at State/UT Level. The administrative charges payable to the States/UTs will be provided by Government of India based on the volume of work and the number of beneficiaries and other related administrative expenses including cost to be incurred for procurement of stationary, field verification, filling of prescribed formats, their certification and its uploading as well as incentive for field functionaries, publicity, etc. States/UTs.

18.8 Implementation of the scheme (Beneficiary Details uploading by State)

Databases of Pradhan Mantri Fasal Bima Yojana (PMFBY), Soil Health Cards, Socio Economic and Caste Census (SECC), can also be utilized for identification of beneficiaries. **State/UT** wise status of number of farmer records shall be available at <http://pmkisan.gov.in>. The steps to be taken by the concerned State Government officials for preparation of database of eligible families, their uploading on pmkisan portal and their processing to Government of India for release of funds to farmer families through Direct Benefit Transfer has been given in detail in the operational guidelines of the scheme.

18.9 Release of funds

During 2018-19, an amount of Rs. 6005.48 crore have been released to 3,00,27,429 farmers. The State-wise detail of funds released under the Scheme is at Annexure-18.1.

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Chapter 19

Gender Perspective in Agriculture- 2018-19

19.1 Overview

19.1.1 Agriculture sector employs 80% of all economically active women comprising of 33% agricultural labour force and 48% of self-employed farmers in the country. Agriculture, the single largest production endeavour in India, is contributing substantially to the GDP. Increasing of percentage of female operational holders during different Agriculture Censuses indicates participation of more and more women in operation and management of agricultural holdings in the country.

19.1.2 National Policy on Farmers 2007 has included “*mainstreaming the human and gender dimensions in all farm policies and programmes as one of the major policy goals.*” Accordingly, Gender Mainstreaming initiatives are being promoted in the Department of Agriculture, Cooperation & Farmers Welfare (DAC&FW), Ministry of Agriculture & Farmers Welfare, by way of building their capacities and improving their access to inputs, technologies and other farming resources. Mainstreaming of gender concerns is being addressed by (i) earmarking 30% of funds for women under various major schemes/programmes and development interventions; (ii) taking pro-women initiatives to help women derive the benefits of beneficiary-oriented components of various programmes/ schemes and missions. Focus is also being given on formation of women Self Help Groups (SHGs), capacity building interventions, linking them to micro credit, enhancing their access to information and ensuring their representation in decision making bodies at various levels.

19.1.3 The National Gender Resource Centre in Agriculture (NGRCA) of the DAC&FW is established in Extension Division. NGRCA reflects the national commitment of empowerment of women through ‘strategy of mainstreaming and agenda setting’. The Centre acts as a focal point for convergence of all gender related activities and issues in agriculture and allied sectors within and outside DAC&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.

19.1.4 Being a Nodal Agency for women in agriculture in DAC&FW, Ministry of Agriculture & Farmers Welfare, NGRCA is actively involved in the revision of guidelines of various Beneficiary oriented Scheme/ programmes of DAC&FW to ensure allocation of resources and flow of benefits to the woman farmers in proportion to their participation in agricultural activities.

19.1.5 Besides undertaking and supporting training, research and advocacy to mainstreaming gender issues in agriculture and natural resource management, NGRCA aims at forging effective functional linkages with other related departments, agencies and institutions for Women Empowerment.

19.2 Current Initiatives of NGRCA

Being a Nodal Centre for women in agriculture in DAC&FW, Ministry of Agriculture & Farmers Welfare, the centre is actively involved in the following activities:

1. Macro/Micro level and Action Research Studies initiated by the Centre include-
 - Study on “Kisan Credit Card & Issues Related to Credit Availability to Women: Role of Financial Institutions in Empowering Women Farmers.
 - Gender Based Impact Analysis of ATMA Programme.
2. Publications brought out by NGRCA are:
 - Success Stories of Women Farmers (bi-lingual)
 - Farm Women Friendly Handbook (bi-lingual)”.
 - Compendium on Woman Agri-preneurs (under Process)
3. The Centre has also developed a Collaborative Project with ICAR – CIPHET, Ludhiana for empowerment of women in agriculture & allied sectors and enhancing their incomes. The project is likely to be considered for funding under RKVY in 2019-20.
4. The Centre has Celebrated Mahila Kisan Diwas, 2018 on October 14-15, 2018 in a big way by-
 - i. Mobilizing participation of various stake holders viz. women farmers, women entrepreneurs, Academia, Researchers/ Scientists, Farmer Organizations, Representatives from Banking Sector, Industry, NGO etc. who are involved in the process of women’s empowerment and emancipation through agriculture and allied sectors.
 - ii. Steering Group discussion on key thematic areas impinging lives of women farmers. These include-
 - Issues, Constraints and strategies for Farm Women in Agriculture;
 - Issues, Constraints and strategies for Farm Women in Animal Husbandry, Dairying, Fisheries and other off-farm activities; &
 - Farm Women’s access to institutional credit and micro-financing and building agri-enterprises
 - iii. Laying of an Exhibition by Institutions, Agripreneurs and progressive women farmers on innovative technology and farm practices.
 - iv. Felicitation and honouring of 45 Progressive Women Farmers from across the country for their exemplary work in Agriculture and allied sectors based on their nominations by respective State Governments/ MANAGE.
 - v. Two Books titled “Success Stories of Women Farmers (English & Hindi)” and “Farm women Friendly Handbook (English & Hindi)” were released.
 - vi. About, 400 stakeholders, including women from across the country participated in this event.
 - vii. Published literature had been distributed to the Women farmers during the celebration of Mahila Kisan Diwas, 2018.

19.3 Mainstreaming Efforts of Various Divisions of DAC&FW

The important mainstreaming and gender budgeting efforts within various subject matter divisions are briefly given hereunder:

19.3.1 Horticulture

Mission for Integrated Development of Horticulture (MIDH) is an umbrella scheme on horticulture subsuming the ongoing schemes i.e. National Horticulture Mission

(NHM), Horticulture Mission for North East & Himalayan States (HMNEH), Central Sector Schemes of National Horticulture Board, Coconut Development Board (CDB) and Central Institute for Horticulture, Nagaland, which is area/project based and are targeted to benefit the farmers specifically small and marginal farmers.

The MIDH aims at promoting holistic growth of the horticulture sector through area based regionally differentiated strategies. Keeping in view the overall social objectives and as per directives, all the implementing agencies i.e. State Horticulture Missions and National Level Agencies have been directed to ensure that at least 30% of the budget allocation is earmarked for women beneficiaries while giving subsidies as well as for imparting training for skills development to women farmers for growing horticulture crops and post harvest management.

During the current financial year 2018-19, funds to the tune of Rs. 2546.24 Crore have been earmarked for implementation of schemes under MIDH. Out of this, a total of Rs. 1298.05 crores has been released till 13th November, 2018 to the MIDH implementing agencies.

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 implementing agencies have been asked to ensure that the said funds are given in women beneficiaries such as women farmers, women Self Help Groups, women entrepreneurs etc, to encourage and to obtain the benefits of schemes under the Mission as far as possible. Further, Operational Guidelines of MIDH also provides more subsidy/assistance to women farmers, beneficiaries as compared to general category farmers.

19.3.2 Agriculture Extension

The Centrally Sponsored Scheme “Support to State Extension Programmes for Extension Reforms” (ATMA) implemented since 2005 is now under implementation in 676 districts of 29 States and 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 governments with an objective to support their 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, 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. The funds under the scheme are being released to the state governments on the basis of State Extension Work Plan (SEWP) formulated & submitted by them. As per provision of the Operational Guidelines of Modified ATMA Scheme, 2014:-

- At least 30% scheme beneficiaries should be women farmers/ farm women;
- Minimum 30% of resources meant for programmes and activities are required to be allocated to women farmers and women extension functionaries with specific documentation of expenditure and performance for women being maintained;
- Women farmers are to be involved in different decision making bodies at district and block level such as Agriculture Technology Management Agency (ATMA)

Governing Board and ATMA Management Committee at district level;

- Women are represented in Farmers Advisory Committees (FACs) set up at block/ district and state level;
- More women are involved as 'Farmer Friends' under the newly introduced mechanism for extension delivery below the block level through a 'Farmer Friend';
- Farm Women's Food Security Groups (FSGs) @ at least 2 per block to be formed annually for ensuring household food and nutritional security providing assistance of Rs. 10,000/ per group.
- Inclusion of one 'Gender Coordinator' in every State in the team of committed extension personnel being supported under the Scheme. The role of Gender Coordinator is to ensure flow of support viz. training/ capacity building and extension support as per the specific requirements of women farmers through a strategy suited to their needs.
- Since inception of the Scheme in 2005-06, total 11911343 farm women (24.28% of the total benefited farmers) have participated in farmer oriented activities like Exposure Visits, Training, Demonstrations & Kisan Melas including 862423 women farmers benefited during 2018-19 (up to 31st December, 2018). During FY 2018-19, Rs. 19515/- lakhs were allocated and earmarked for women, out of which Rs.12827.40 lakhs have been utilised under the scheme for women beneficiaries (as on 31.12.2018).

The Central Sector Scheme "Establishment of Agri-Clinics & Agri-Business Centres (ACABC)" was implemented since April, 2002 with the aim to supplement the efforts of public extension, support agricultural development and create gainful self-employment opportunities

to unemployed youths (including women) with qualification in agriculture and allied sectors.

The scheme promotes involvement of agripreneurs (including women) trained under the ACABC scheme in providing advisory and extension services to the farmers in agriculture and allied areas. The agripreneurs trained under ACABC scheme are actively engaged in providing advisory and extension services to the farmers on various technologies.

The National Institute of Agricultural Extension Management (MANAGE), Hyderabad is the implementing agency for training component under the scheme through a network of identified Nodal Training Institutes (NTIs) in various States and NABARD is implementing the subsidy component on behalf of Government of India and is monitoring credit support to agripreneurs through commercial banks.

Under ACABC scheme, the training is imparted to unemployed candidates who possess degree/ diploma in agriculture and allied subjects, intermediate in agriculture and science graduates with PG in agri related courses through selected Nodal Training Institutes (NTIs) in various parts of the country. The NTIs also provide hand-holding to the trained candidates for establishment of agri-ventures in agriculture and allied areas and facilitates in providing loan assistance from banks and subsidy support from NABARD.

There is a provision of credit linked back-ended upfront composite subsidy on the bank loan availed by trained candidates under the Scheme. The subsidy is 44% in respect of women, SC/ ST and all categories of candidates from North-Eastern and Hill States and 36% in respect of other categories. The subsidy is admissible for loans upto Rs.20 lakh in case of individual and Rs.100 lakh in case of Group Projects (for ventures set up by a group of 5 trained candidates).

During the current year, 2707 candidates were trained and 433 have established their ventures. Since inception of the scheme, 61897 candidates have been trained and 26183 agri-ventures have been established in the country till 31.12.2018. Out of these 4762 and **1502 are women** candidates and entrepreneurs. These ventures are acting as active supplementary institutions for Government Extension mechanism in the states. Now the benefits of MUDRA Loan Scheme have also been included for venture establishment under the Scheme.

19.3.2.1 Extension Education Institutes (EIs): To provide training and HRD support to the extension functionaries across the Country, the Ministry of Agriculture & Farmers Welfare had established four regional EIs in the country namely EEI, Nilokheri (Haryana), EEI, Hyderabad (Andhra Pradesh), EEI, Anand (Gujarat), and EEI, Jorhat (Assam) to cater to the training needs of middle level field functionaries waiting in agriculture & allied department of States/UTs.

During 2017-18, the Extension Education Institutes (EIs) conducted 182 training courses with 4479 field extension functionaries including 989 women extension functionaries, whereas during 2018-19 (till 31.12.2018), the EIs conducted 142 training courses with 3266 participants including 663 women extension functionaries.

19.3.2.2 Model Training Courses

During 2017-18, 62 Model Training Courses in the thrust areas of agriculture & allied sectors were conducted through specialized National Training Institutes with 1238 field extension functionaries including 194 women extension functionaries working in agriculture & allied departments of States/UTs, whereas during 2018-19 (till 31.12.2018), 46 Model Training Courses have been conducted with 923 field

extension functionaries including 123 women extension functionaries.

19.3.2.3 Diploma in Agril. Extension Services for Input Dealers (DAESI)

During 2017-18, 149 batches of DAESI programme were conducted to provide certification to 5906 Input Dealers including 32 women candidates, whereas during 2018-19 (till 31.12.2018), 148 programmes have been started to train 5920 input dealers including 57 women candidates.

19.3.3 Crops

The scheme 'National Food Security Mission (NFSM)' is being implemented in 29 states in the country for increasing the production and productivity of food grains. Besides, Bringing Green Revolution to Eastern India (BGREI) is also under implementation in 7 eastern states of the country of those districts only in which neither NFSM-Rice, nor NFSM-Wheat are under implementation in the covered states. While issuing the administrative approval states are advised to allocate the funds for general, Special Component plan (SCP) for Scheduled Castes and Tribal Sub Plan (TSP) for Scheduled Tribes as per their proportion in the state population. Besides, at least 33% of funds will be earmarked for small and marginal farmers. At least 30% of funds under NFSM and 33% under BGREI will be made for women farmers.

19.3.4 Agricultural Marketing

In order to provide single window approach and user & investment friendly atmosphere, all the ongoing six Plan Schemes implemented during the XI Plan period have been put under one umbrella "Integrated Scheme for Agricultural Marketing (ISAM). It aims to (i) promote agri-marketing through creation of marketing and agribusiness infrastructure including storage,

(ii) incentivize agri-market reforms, (iii) provide market linkages to farmers, (iv) provide access to agri-market information and (v) support quality certification of agriculture commodities. ISAM scheme is having five components, namely: (i) Agricultural Marketing Infrastructure (AMI), the objective of this component is to create market infrastructure including Storage Infrastructure and Integrated Value Chain Projects (IVC) [the schemes of Grameen Bhandaran Yojana (GBY) and Development/ Strengthening of Agricultural Marketing Infrastructure, Grading and Standardization (AMIGS) has been merged as AMI] (ii) Marketing Research and Information Network (MRIN) (iii) Strengthening of Agmark Grading Facilities (SAGF), (iv) Agri-Business Development (ABD) through Venture Capital Assistance (VCA) and Project Development Facility (PDF) and (v) Training, Research and Consultancy through Choudhary Charan Singh National Institute of Agriculture Marketing (NIAM).

Under Agricultural Marketing Infrastructure (AMI) component, Women are eligible for subsidy @ 33.33% as against 25% for others.

19.3.5 Mechanization and Technology

To recognizing the need 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) was launched in the year 2014-15 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 centres located all over the country.

The SMAM provides a suitable platform for converging all 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 allocated under SMAM for women beneficiaries.
- 10% more assistance for women beneficiary to procure Agricultural Machinery, implements and equipment including PHT under component 2 and 3.
- 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.

Gender Friendly Equipment for Women: Under the component 1 of SMAM, Agricultural Mechanization through Training, Testing, and Demonstration, a total 882 women were trained during the current Financial Year 2018-19 (till August 2018). 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.

19.3.6 Seeds

Sub-Mission for Seeds and Planting Material (SMSP) is under implementation w.e.f. 01.04.2014 with the view to develop/strengthen seed sector and to enhance production and multiplication of high yielding certified/ quality seeds of all agricultural crops and making it available to the 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.

Financial assistance/subsidy benefits are equally available/ open to all the farmers including that of women farmers. Implementing States/ UTs/ agencies have been requested to allocate sufficient funds and ensure participation of women farmers.

19.3.7 Cooperation

NCUI implements cooperative Education Programmes through its 44 cooperative education field projects while NCCT provides training to cooperatives through its 5 RICMs, 14 ICMs and one National level institute i.e. VAMNICOM. Besides the above, stress is given to women development activities with the overall objective of bringing women in to the cooperative fold from grass root levels by informal approach and to revitalize and develop women participation in group activities and to improve the socio-economic conditions of women of selected blocks. The Cooperative Education Programme for women is being implemented by National Cooperative Union of India (NCUI) through

the State Cooperative Unions in the states of Madhya Pradesh, Manipur, Mizoram, Orissa, Rajasthan, Tamil Nadu, Uttar Pradesh and West Bengal. During the year 2017-18 as many as 1938 women were imparted education under various classes in 22 events. NCUI is now running four exclusive women development projects located at Shimoga (Karnataka), Aska (Odisha), West Imphal (Manipur) and Bhopal (M.P.), under the Special Scheme of Intensification of Cooperative Education in cooperatively under-developed states (UDS). Each field project has got a special women development component. Under this, women are organized into self-help groups. During the year 2017-18, 228 self help groups with membership of 2926 women were formed by the lady mobilizers of the cooperative education field projects. Through various income generating activities, 12366 women were benefitted under this programme. During the year 2017-18, a total of 85973 women were imparted education under various educational activities.

NCDC encourages women cooperatives to avail assistance under its various schemes. A large number of women members are engaged & involved in cooperatives dealing with activities related to Food Grain Processing, Plantation Crops, Oil Seeds Processing, Fisheries, Dairy & Livestock, Spinning Mills, Handloom and Powerloom Weaving, Integrated Cooperative Development Projects, etc. Women cooperatives are now covered under Weaker Section Programme for the purpose of availing subsidy and concessional funding during the remaining period of the 12th Five Year Plan programme under Central Sector Integrated Scheme on Agricultural Cooperation. Cumulatively, as on 31.03.2018 NCDC has sanctioned and released financial assistance of Rs. 1532.96 crore and Rs. 1420.77 crore respectively for the development of

cooperative societies, exclusively promoted by women. In the 12461 projects/units sanctioned by NCDC in the year 2017-18, it is estimated that 31.47 lakh women are enrolled as members, out of which 401 women members are on the Board of Directors.

NCDC has established Laxmanrao Inamdar National Academy for Cooperative Research and Development (LINAC) at Gurugram, Haryana as its training institute to train and develop the personnel engaged in NCDC assisted projects / schemes. During 2017-18 the institute held 32 training programmes exclusively for women cooperators. The four training programme on “Role of Governance and Leadership Development” for Women Cooperatives were attended by 137 participants. Two of the above programmes were exclusively for 58 participants from North Eastern States.

19.3.8 Policy

The National Policy for Farmers 2007 announced by the Government envisages the following measures aimed at women’s empowerment:

- Asset reforms under land, water and livestock for an equitable share to women farmers.
- Better access to inputs and services, science and technology, implements, credit and support services like creches, child care centres, nutrition, health and training.
- Encouragement to women for participating in group activities aimed at achieving economies of scale through farming groups.
- Involvement of women in conservation and development of bio-resources.

The Policy provisions, inter alia, include asset reforms in respect of land, water, livestock, fisheries, and bio-resources; support services and inputs like application of frontier

technologies; agricultural bio-security systems; supply of good quality seeds and disease-free planting material, improving soil fertility and health, and integrated pest management systems; support services for women like crèches, child care centers, nutrition, health and training; timely, adequate, and easy reach of institutional credit at reasonable interest rates, and farmer-friendly insurance instruments; use of Information and Communication Technology (ICT) and setting up of farmers’ schools to revitalize agricultural extension; effective implementation of MSP across the country, development of agricultural market infrastructure, and rural non-farm employment initiatives for farm households; integrated approach for rural energy, etc.

Many of the provisions of the NPF are being operationalised through various schemes and programmes which are being implemented by different Central Government Departments and Ministries. For the operationalisation of the remaining provisions of the Policy, an Action Plan has been finalized and circulated to the Ministries and Department concerned, as well as to all States and UTs for necessary follow up action. An Inter-Ministerial Committee constituted for the purpose also monitors the progress of the Plan of Action for the operationalisation of the NPF.

19.3.9 Agriculture Census

Since 1995-96, following the recommendations of the Central Statistics Office, Ministry of Statistics and Programme Implementation, gender based data in Agriculture Census have been collected. The scope of collection of gender based data has been 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 as per results of latest Agriculture Census 2015-16 and Agriculture Census 2010-11 is given in the following table:

Sr. No.	Size Group	2010-11	2015-16*
1	Marginal (Below 1.00 ha.)	13.63	14.62
2	Small (1.00-2.00 ha.)	12.15	13.32
3	Semi-Medium (2.00-4.00 ha.)	10.45	11.53
4	Medium (4.00-10.00 ha.)	8.49	9.64
5	Large (Above 10.00 ha.)	6.78	7.70
	All Size Groups	12.78	13.87

* Figures of Jharkhand and Maharashtra have been estimated

Increase in percentage of female operational holders during different Agriculture Censuses indicates participation of more and more women in operation and management of agricultural holdings in the country.

19.3.10 Rainfed Farming Systems (RFS)

To mainstream development of rainfed areas in a sustainable manner, Rainfed Area Development (RAD) Scheme is being implemented in the country from the year 2014-15 as a component of National Mission for sustainable Agriculture (NMSA). The major objective of the RAD is to make rainfed agriculture more productive, sustainable, remunerative and climate resilient by promoting location specific Integrated/ Composite Farming Systems and to promote conservation agriculture practices for sustainable use of natural resources.

Under Pradhan Mantri Krishi Sinchayee Yojana (PMKSY), Per Drop More Crop, i.e., Per Drop More Crop component (PDMC) of PMKSY is being implemented by Department

of Agriculture, Cooperation & Farmers Welfare from 1st July, 2015. PDMC mainly focuses on water use efficiency at farm level through precision/ Micro Irrigation (Drip and Sprinkler Irrigation).

Under the framework of National Mission for Sustainable Agriculture (NMSA), Sub Mission on Agro Forestry (SMAF) has been launched during 2016-17 with an aim to expand the tree coverage on farmland in complementary with agricultural crops. SMAF will accelerate the programme “Medh Par Ped”.

Guidelines of all these schemes envisage that at least 50% of the allocation is to be utilized for small, marginal farmers of which atleast 30% are women beneficiaries/ farmers. Allocation under RAD of NMSA during 2018-19 is Rs.234.00 crore.

19.3.11 Integrated Nutrient Management

Under the National Mission for Sustainable Agriculture, INM Divisions are implementing Paramparagat Krishi Vikas Yojana (PKVY), Mission Organic Value Chain Development for North Eastern Region (MOVCDNER), Soil Health Card & Soil Health Management scheme; States have been requested to earmark atleast 30% of budget allocations for women beneficiaries/farmers.

19.3.12 Plant Protection

Nation Institute of Plant Health Management (NIPHM) is a component under Sub Mission on Plant Protection and Plant Quarantine (SMPPQ) which provides Pest Management capacity building programme to State officials and farmers. Till October 2018, a total of 1229 male & 303 female officers have participated in 73 nos. of training programme and 1627 male & 155 female farmers have participated in 32 nos. of training at NIPHM.

19.4 The Way Forward:

Realizing that it is 'Gender' that differentiates the roles, responsibilities, resources, constraints and opportunities of women and men in agriculture, precise gender information is the need of the hour. Incorporating gender into agricultural development will lead to:

- Building inherent strength of women and men to mutually learn;
- Overcoming gender based prejudices; and
- Articulating gender perspectives in development activities

In line with the National Agricultural Policy-2000 and provisions under National

Policy for Farmers-2007, the strategy of the Government is to focus on farmers' welfare by making farming viable both for men and women. This may improve farm women's access to productive resources including agricultural extension services thereby bringing overall improvement in the lives of rural women. This may not only enhance the production and productivity of agricultural sector and improve overall national food security but would also smoothen the transition of women from being beneficiaries of the programmes & Schemes to their active participation in shaping the empowerment. A brief summary of flow of benefits to women under various schemes/programmes of the DAC&FW is given in **Annexure 19.1**.

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Chapter 20

Summary of Audit Paras/Observations

20.1 Rashtriya Krishi Vikas Yojana (RKVY)

There is no pending Audit Para pertaining to RKVY. However, Performance Audit of Rashtriya Krishi Vikas Yojana (RKVY) has been made for the period 2007-08 to 2012-13 (ending March 2013) by C&AG and likely had submitted the report in both the Houses of Parliament on 5th May 2015. The details of the status of pending Audit Para/ Performance Audit Report are as follows:

Sl. No.	Year	No. of Paras/ PA reports on which ATNs have been submitted to PAC after vetting by Audit	Details of 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	No. of ATNs which have been finally vetted by Audit but have not been submitted by the Ministry to PAC.
1.	2015			Performance Audit of RKVY has been done by C&AG for the period 2007-08 to 2012-13 (ending March 2013) and the report was submitted in both the Houses of Parliament on 5th May 2015. The Draft ATN on the observations made in the report were furnished to Audit on 27.06.2016 on which vetting of Audit has been received. On the basis of vetting remarks offered by C & AG on the first ATN, all the concerned States were requested to furnish their respective comments based on which the revised ATN was prepared and forwarded to C & AG on 22.05.2018. The vetting remarks of C & AG on the revised ATN have been received on 2.10.2018 and the same have been circulated to all the concerned States. The matter is being pursued with concerned State Governments and comments of some of the State Governments are still awaited.	

20.2 Crop Insurance Scheme:

C&AG in 2016-17 and 2017-18 had undertaken performance audit of the erstwhile Crop Insurance Schemes implemented by the Department from 2010-11 to 2015-16 and

made certain recommendations. The details of pending Audit Para/Action Taken Report is summarized as under:-

Sl. 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 1st 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.
1.	2017-18	Chapter 1 to 4 of the Report No. 7 of 2017 – Performance Audit of Agriculture Crop Insurance Schemes laid in the Parliament on 21st July, 2018.	Nil	All observations in Report No.7 of 2017 – Performance Audit of Agriculture Crop Insurance Schemes were sent to C&AG and returned by them with observations.	Though the final ATN has been accepted by the C&AG but returned with the comments that the ATN be uploaded both in English and Hindi simultaneously. Hindi translation of the report is in progress.

ANNEXURE – 2.1**FUNCTIONS AND ORGANIZATIONAL STRUCTURE****LIST OF FUNCTIONAL DIVISIONS IN THE DEPARTMENT OF AGRICULTURE, CO-OPERATION AND FARMERS WELFARE****DIVISIONS:**

- | | |
|--|--|
| 1. Administration | 14. Information Technology |
| 2. Agricultural Census | 15. Integrated Nutrients Management |
| 3. Agricultural Marketing | 16. International Cooperation |
| 4. Budget, Finance and Accounts | 17. Mechanization and Technology |
| 5. Credit | 18. Natural Resource Management |
| 6. Cooperation | 19. Plant Protection |
| 7. Crops | 20. Policy |
| 8. Drought Management | 21. Plan Coordination |
| 9. Economic Administration | 22. Rashtriya Krishi Vikash Yojna |
| 10. Extension | 23. Rainfed Farming System |
| 11. General Coordination | 24. Seeds |
| 12. Official Language | 25. Oil Seeds |
| 13. Horticulture | 26. Agriculture Trade Policy |
| | 27. Vigilance |

ANNEXURE – 2.2

FUNCTIONS AND ORGANIZATIONAL STRUCTURE INVENTORY OF FIELD FORMATIONS

I. ATTACHED OFFICES

1. Directorate of Economics & Statistics, Shastri Bhavan, 'B' Wing, New Delhi.
2. Commission for Agricultural Costs and Prices, Shastri Bhavan, 'F' Wing, Second Floor, New Delhi.
3. Directorate of Plant Protection, Quarantine and Storage, N.H.IV, Faridabad (Haryana).
4. Directorate of Marketing & Inspection, N.H.IV, Faridabad (Haryana).
5. Mahalanobis National Crop Forecast Centre, New Delhi.
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, 5th Floor, 'G' wing, Karpuri Thakur Station, Kendriya Karamchari Parisar (GPOA), Ashiana- Digha Road, Patna-800025 (Bihar).

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.
10. Directorate of Wheat Development, CGO Building, Hapur Road Chauraha, Kamla Nehru Nagar, Ghaziabad (U.P).
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, Vindhychal Bhavan, 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.

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ANNEXURE-2.3**1. PUBLIC SECTOR UNDERTAKING**

1. National Seeds Corporation, New Delhi.

2. AUTONOMOUS BODIES

1. Coconut Development Board, Kochi (Kerala).
2. National Horticulture Board, Gurgaon (Haryana).
3. National Cooperative Development Corporation, New Delhi.
4. Small Farmers' Agri Business Consortium, New Delhi.
5. National Institute for Agricultural Extension Management, Hyderabad (A.P).
6. Chaudhary Charan Singh National Institute of Agricultural Marketing, Jaipur (Rajasthan).
7. National Institute of Plant Health Management, Hyderabad (A.P).
8. National Centre for Cold Chain Development, 2nd Floor, B-Wing, Janpath Bhawan, New Delhi.

3. NATIONAL LEVEL COOPERATIVE ORGANISATIONS

1. National Cooperative Union of India, New Delhi.
2. National Agricultural Cooperative Marketing Federation of India Limited, New Delhi.

3. National Federation of Cooperative Sugar Factories Ltd., New Delhi.
4. National Heavy Engineering Cooperative Ltd., Pune (Maharashtra).
5. National Federation of Urban Cooperative Banks and Credit Societies Ltd., New Delhi.
6. The All India Federation of Cooperative Spinning Mills Ltd., Mumbai (Maharashtra).
7. National Cooperative Agriculture and Rural Development Banks Federation Ltd., Mumbai (Maharashtra).
8. National Federation of State Cooperative Banks Ltd., Navi Mumbai (Maharashtra).
9. National Federation of Labour Cooperatives Ltd., New Delhi.
10. National Cooperative Tobacco Growers' Federation Ltd., Anand (Gujarat).

4. AUHTORITIES

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.

Annexure 3.1(a)

Agricultural Statistics Division
Directorate of Economics & Statistics
Department of Agriculture, Cooperation and Farmers Welfare
Second Advance Estimates of Production of Foodgrains for 2018-19

as on 28.02.2019

Million Tonnes

Crop	Season	2003-04	2004-05	2005-06	2006-07	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19				
		3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	4th Adv. Est.	Target	2nd Adv. Est.	
1	2																				
Rice	Kharrif	78.62	72.23	78.27	80.17	82.66	84.91	75.92	80.65	92.78	92.36	91.50	91.39	91.41	96.30	97.50	99.00	99.00	101.96		
	Rabi	9.91	10.90	13.52	13.18	14.03	14.27	13.18	15.33	12.52	12.87	15.15	14.09	13.00	13.40	15.41	15.00	15.00	13.63		
	Total	88.53	83.13	91.79	93.36	96.69	99.18	89.09	95.98	105.30	105.23	106.65	105.48	104.41	109.70	112.91	114.00	114.00	115.60		
Wheat	Rabi	72.16	68.64	69.35	75.81	78.57	80.68	80.80	86.87	94.88	93.51	95.85	86.53	92.29	98.51	99.70	102.20	102.20	99.12		
	Kharrif	4.84	4.04	4.07	3.71	4.11	3.05	2.76	3.44	3.29	2.84	2.39	2.30	1.82	1.96	2.10	2.10	2.10	1.92		
Jowar	Rabi	1.84	3.20	3.56	3.44	3.81	4.19	3.93	3.56	2.69	2.44	3.15	3.15	2.42	2.60	2.85	2.85	2.80	1.84		
	Total	6.68	7.24	7.63	7.15	7.93	7.25	6.70	7.00	5.98	5.28	5.54	5.45	4.24	4.57	4.95	4.95	4.90	3.75		
Bajra	Kharrif	12.11	7.93	7.68	8.42	9.97	8.89	6.51	10.37	10.28	8.74	9.25	9.18	8.07	9.73	9.13	9.13	9.50	7.46		
	Kharrif	1.97	2.43	2.35	1.44	2.15	2.04	1.89	2.19	1.93	1.57	1.98	2.06	1.82	1.39	1.98	2.30	2.30	1.32		
Small Millets	Kharrif	0.56	0.48	0.47	0.48	0.55	0.44	0.38	0.44	0.45	0.44	0.43	0.39	0.39	0.44	0.44	0.60	0.60	0.38		
	Kharrif	19.48	14.89	14.58	14.05	16.79	14.42	11.54	16.44	15.95	13.59	14.06	13.93	12.10	13.52	13.64	14.50	14.50	11.08		
Nutri Cereals	Rabi	1.84	3.20	3.56	3.44	3.81	4.19	3.93	3.56	2.69	2.44	3.15	3.15	2.42	2.60	2.85	2.85	2.80	1.84		
	Total	21.32	18.09	18.14	17.50	20.60	18.62	15.47	20.01	18.64	16.03	17.20	17.08	14.52	16.12	16.50	17.30	17.30	12.92		
Maize	Kharrif	12.73	11.48	12.16	11.56	15.11	14.12	12.29	16.64	16.49	16.20	17.15	17.01	16.05	18.92	20.24	21.20	21.20	20.22		
	Rabi	2.25	2.70	2.55	3.54	3.85	5.61	4.43	5.09	5.27	6.05	7.11	7.16	6.51	6.98	8.47	7.50	7.50	7.58		
Barley	Total	14.98	14.17	14.71	15.10	18.96	19.73	16.72	21.73	21.76	22.26	24.26	24.17	22.57	25.90	28.72	28.70	28.70	27.80		
	Rabi	1.30	1.21	1.22	1.33	1.20	1.69	1.35	1.66	1.62	1.75	1.83	1.61	1.44	1.75	1.77	2.10	2.10	1.92		
Nutri/Coarse Cereals	Kharrif	32.22	26.36	26.74	25.61	31.89	28.54	23.83	33.08	32.44	29.79	31.20	30.94	28.15	32.44	33.89	35.70	35.70	31.30		
	Rabi	5.39	7.10	7.33	8.31	8.86	11.49	9.72	10.32	9.58	10.24	12.09	11.92	10.37	11.33	13.10	12.40	12.40	11.34		
Cereals	Total	37.60	33.46	34.07	33.92	40.75	40.04	33.55	43.40	42.01	40.04	43.30	42.86	38.52	43.77	46.99	48.10	48.10	42.64		
	Kharrif	110.84	98.59	105.01	105.78	114.55	113.45	99.75	113.73	125.22	122.15	122.70	122.34	119.56	128.74	131.38	134.70	134.70	133.26		
Tur	Rabi	87.45	86.64	90.21	97.30	101.46	106.45	103.70	112.52	116.98	116.63	123.09	112.53	115.66	123.24	128.21	129.60	129.60	124.09		
	Total	198.28	185.23	195.22	203.08	216.01	219.90	203.45	226.25	242.20	238.78	245.79	234.87	235.22	251.98	259.59	264.30	264.30	257.35		
Gram	Kharrif	2.36	2.35	2.74	2.31	3.08	2.27	2.46	2.86	2.65	3.02	3.17	2.81	2.56	4.87	4.25	4.50	4.50	3.68		

	Rabi	5.72	5.47	5.60	6.33	5.75	7.06	7.48	8.22	7.70	8.83	9.53	7.33	7.06	9.38	11.23	11.50	10.32
Urud	Kharrif	1.20	0.95	0.90	0.94	1.12	0.84	0.81	1.40	1.23	1.50	1.15	1.28	1.25	2.18	2.84	2.80	2.68
	Rabi	0.27	0.38	0.35	0.50	0.34	0.33	0.42	0.36	0.53	0.47	0.55	0.68	0.70	0.66	0.73	0.80	0.69
	Total	1.47	1.33	1.25	1.44	1.46	1.17	1.24	1.76	1.77	1.97	1.70	1.96	1.95	2.83	3.56	3.60	3.36
Moong	Kharrif	1.43	0.81	0.69	0.84	1.25	0.78	0.44	1.53	1.24	0.79	0.96	0.87	1.00	1.64	1.44	1.55	1.84
	Rabi	0.28	0.25	0.26	0.28	0.27	0.26	0.25	0.27	0.40	0.40	0.65	0.64	0.59	0.52	0.57	0.70	0.57
	Total	1.70	1.06	0.95	1.12	1.52	1.03	0.69	1.80	1.63	1.19	1.61	1.50	1.59	2.17	2.01	2.25	2.41
Other Kharrif Pulses	Rabi	1.04	0.99	0.95	0.91	0.81	0.95	1.03	0.94	1.06	1.13	1.02	1.04	0.98	1.22	1.61	*	1.53
Other Rabi Pulses	Kharrif	1.18	0.61	0.54	0.70	0.96	0.80	0.49	1.33	0.93	0.61	0.71	0.78	0.72	0.89	0.82	1.00	0.81
	Rabi	1.44	1.32	1.36	1.37	1.19	1.28	1.28	1.33	1.34	1.59	1.52	1.74	1.47	1.77	1.76	3.10	1.91
	Kharrif	6.16	4.72	4.86	4.80	6.40	4.69	4.20	7.12	6.06	5.92	6.00	5.73	5.53	9.58	9.34	9.85	9.01
Total Pulses	Rabi	8.74	8.41	8.52	9.40	8.36	9.88	10.46	11.12	11.03	12.43	13.26	11.42	10.79	13.55	15.89	16.10	15.02
	Total	14.91	13.13	13.38	14.20	14.76	14.57	14.66	18.24	17.09	18.34	19.26	17.15	16.32	23.13	25.23	25.95	24.02
Total Foodgrains	Kharrif	117.00	103.31	109.87	110.58	120.96	118.14	103.95	120.85	131.27	128.07	128.69	128.07	125.09	138.33	140.73	144.55	142.27
	Rabi	96.19	95.05	98.73	106.71	109.82	116.33	114.15	123.64	128.01	129.05	136.35	123.96	126.45	136.78	144.10	145.70	139.11
	Total	213.19	198.36	208.60	217.28	230.78	234.47	218.11	244.49	259.29	257.12	265.05	252.02	251.54	275.11	284.83	290.25	281.37

*included in Other Rabi Pulses

Annexure 3.1(b)

Agricultural Statistics Division
Directorate of Economics & Statistics
Department of Agriculture, Cooperation and Farmers Welfare
Second Advance Estimates of Production of Commercial Crops for 2018-19
as on 28.02.2019
Lakh Tonnes

Crop	Season	2003-04	2004-05	2005-06	2006-07	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	
																4th Adv. Est.	Target	2nd Adv. Est.
Groundnut	Khharif	68.60	52.62	62.98	32.94	73.62	56.17	38.52	66.43	51.27	31.88	80.58	59.31	53.68	60.48	75.40	75.40	54.41
	Rabi	12.67	15.12	16.95	15.69	18.20	15.51	15.76	16.22	18.37	15.07	16.56	14.71	13.66	14.14	16.39	15.28	15.29
	Total	81.27	67.74	79.93	48.64	91.83	71.68	54.28	82.65	82.65	69.64	46.95	97.14	74.02	74.62	91.79	90.68	69.70
Castorseed	Khharif	7.97	7.93	9.91	7.62	10.54	11.71	10.09	13.50	22.95	19.64	17.27	18.70	17.52	13.76	15.68	18.31	11.77
	Khharif	7.82	6.74	6.41	6.18	7.57	6.40	5.88	8.93	8.10	6.85	7.15	8.28	8.50	7.47	7.51	10.07	7.84
	Khharif	1.09	1.12	1.08	1.21	1.10	1.17	1.00	1.08	0.98	1.01	0.98	0.76	0.74	0.85	0.74	2.01	0.65
Soyabean	Khharif	78.18	68.76	82.74	88.51	109.68	99.05	99.64	127.36	122.14	146.66	118.61	103.74	85.70	131.59	109.81	148.20	136.89
	Khharif	3.06	4.31	4.56	3.66	4.63	3.57	2.14	1.92	1.47	1.87	1.66	1.43	0.85	1.11	0.83	1.01	0.98
	Rabi	6.24	7.56	9.83	8.62	10.00	8.01	6.36	4.59	3.69	3.57	3.38	2.91	2.12	1.41	1.28	2.01	1.34
Sunflower	Total	9.30	11.87	14.39	12.28	14.63	11.58	8.51	6.51	5.17	5.44	5.04	4.34	2.96	2.51	2.11	3.02	2.32
	Rabi	62.91	75.93	81.31	74.38	58.34	72.01	66.08	81.79	66.04	80.29	78.77	62.82	67.97	79.17	83.22	84.86	83.97
	Rabi	1.97	1.70	1.73	1.68	1.63	1.69	1.54	1.47	1.52	1.49	1.42	1.55	1.26	1.84	1.75	2.01	1.67
Safflower	Rabi	1.35	1.74	2.29	2.40	2.25	1.89	1.79	1.50	1.45	1.09	1.13	0.90	0.53	0.94	0.47	0.83	0.23
	Total Nine Oilseeds	166.71	141.49	167.67	140.12	207.13	178.08	157.28	219.22	206.91	207.91	226.24	192.21	166.98	215.26	209.96	255.00	212.53
	Rabi	85.14	102.04	112.11	102.77	90.42	99.11	91.53	105.57	91.08	101.50	101.26	82.90	85.53	97.50	103.12	104.99	102.49
Sugarcane	Total	251.85	243.54	279.78	242.89	297.55	277.19	248.82	324.79	297.99	309.41	327.49	275.11	252.51	312.76	313.08	359.99	315.02
	Total	2338.62	2370.88	2811.72	3555.20	3481.88	2850.29	2923.02	3423.82	3610.37	3412.00	3521.42	3623.33	3484.48	3060.69	3769.05	3850.00	3808.34
	Cotton #	137.29	164.29	184.99	226.32	258.84	222.76	240.22	330.00	352.00	342.20	359.02	348.05	300.05	325.77	348.88	355.00	300.87
Jute # #	Total	102.52	93.99	99.70	103.17	102.20	96.34	112.30	100.09	107.36	103.40	110.83	106.18	99.40	104.32	96.28	105.00	95.60
	Total	9.21	8.73	8.70	9.56	9.90	7.31	5.87	6.11	6.63	5.90	6.07	5.08	5.83	5.30	5.08	7.00	5.12
	Total	111.73	102.72	108.40	112.73	112.11	103.65	118.17	106.20	113.99	109.30	116.90	111.26	105.24	109.62	101.37	112.00	100.72

Lakh bales of 170 kgs. each

Lakh bales of 180 kgs. Each

Annexure-4.1

Seeds Programmes in North-Eastern States

S. No	Schemes/ Programmes Activities Approved	Details of Schemes/ Programmes/ Activities taken	Target for 2017-18	Achievement 2017-18	Target for 2018-19	Achievement 2018-19
1.	National Seed Reserve (NSR)	The basic objective of this component is to keep seed available for meeting requirement during natural calamities	67786 Qtl	63145 Qtl	65600 Qtl	65000 Qtl. (expected)
2.	Transport Subsidy on movement of Seeds to North-Eastern States including Sikkim, Himachal Pradesh, J&K, Uttaranchal and Hill areas of West Bengal.	The topographical situation and climatic conditions are not conducive for the production of seeds in the North-Eastern States. (a) Reimbursement of 100% difference between road and rail transportation cost to implementing States/agency for movement of seeds produced outside the state and movement to identified state capital/district headquarter. (b) The actual cost, restricted to maximum limit of Rs. 120/- per quintal for the movement of seed within the State from State Capital/ district headquarters to sale outlets/ sale counters is being reimbursed to implementing State/agency.	It is a reimbursement programme. Therefore, targets cannot be pre-fixed as transportation of seeds depends on demand which varies from year to year.	For NE States a quantity of 45214.29 qtl transported exclusively to NE States. An amount of Rs. 191.14 lakh has been reimbursed. The Total quantity of seeds transported including in NE States is 175421.32 Quintal. An amount of Rs. 293.96 lakh has been reimbursed	As mentioned in Col. 4	For NE States a quantity of 31739.06 qtl of seeds transported exclusively to NE States. An amount of Rs. 122.95 lakh has been reimbursed. The Total quantity of seeds transported including in NE States is 63788.39 Quintal (upto 05.12.2018). An amount of Rs. 251.68 lakh has been reimbursed.

Annexure-8.1

Details of the State-wise physical & financial progress report under PKVY schemes being implemented by DAC&FW during 2015-16 to 2018-19

(Rs in lakh)

S. No.	Name of the State	No of clusters	2015-16 1st year		2016-17 2nd year		2017-18 3rd year		clusters sanctioned in 2017-18	Allocation for new clusters in 2017-18	Release for new clusters sanctioned in 2017-18	Release in 2018-19 for old clusters	No of new clusters for 2018-19	Allocation for new clusters for 2018-19	Release in 2018-19 for new clusters
			Allocation	Release	Allocation	Release	Allocation	Release							
1	Andhra Pradesh	433	1854.47	1100.15	1308.50	798.17	759.88	292.93	867	1563.21	363.25	1380.28	4000	8078.40	2019.60
2	Bihar	327	1400.49	1050.37	988.17	664.26	573.86	0.00	100	428.28	214.14	0.00	102	206.00	0
3	Chhattisgarh	188.00	805.17	603.88	568.12	314.78	329.92	314.16	12.00	51.39	25.70	0.00	1000	2019.60	0
4	Gujarat	100	428.28	178.45	302.19	238.83	175.49	0.00	0	0.00	0.00	0.00	0	0.00	0
5	Goa	4	171.13	71.14	12.09	0.00	7.02	0.00	0	0.00	0.00	0.00	0	0.00	0
6	Haryana	20	85.66	53.53	60.44	45.98	35.10	0.00	0	0.00	0.00	0.00	0	0.00	0
7	Jharkhand	100	428.28	321.21	302.19	203.14	175.49	0.00	150	642.43	321.21	0.00	750	1514.70	0
8	Karnataka	545	2334.15	1945.12	1646.96	815.27	956.43	1224.64	0	0.00	0.00	408.21	500	1009.80	0.00
9	Kerala	119	509.66	382.22	359.61	0.00	208.83	307.24	500	2141.42	1070.71	0.00	110	222.16	0.00
10	Madhya Pradesh	880	3768.90	2826.67	2659.31	1787.60	1544.33	1813.94	500	2141.42	1070.71	0.00	2448	4943.98	2471.99
11	Maharashtra	932	3991.61	2598.51	2816.45	2957.59	1635.58	0.00	326	1396.21	698.10	0.00	350	706.86	0.00
12	Odisha	320	1370.51	1027.88	967.02	650.03	561.57	610.60	0	0.00	0.00	0.00	720	1454.11	727.06
13	Punjab	50	214.14	160.60	151.10	0.00	87.75	0.00	200	856.57	428.28	0.00	100	201.96	0.00
14	Rajasthan	755	3233.55	2373.69	2281.56	1491.13	1324.96	0.00	395	1691.72	845.86	0.00	5000	10098.00	5049.00
15	Tamil Nadu	112	479.68	399.73	338.46	207.26	196.55	194.64	0	0.00	0.00	0.00	200	403.92	201.96
16	Telangana	300	1284.85	1070.71	906.58	448.77	526.47	0.00	390	1670.31	835.15	0.00	0	0.00	0.00
17	Uttar Pradesh	575	2462.64	2032.20	1737.62	1270.64	1009.08	838.58	45	192.73	96.36	1280.26	500	1009.80	0.00
18	West Bengal	120	513.94	214.14	362.63	393.66	210.59	374.07	0	0.00	0.00	0.00	0	0.00	0.00
19	Assam	220	1413.34	576.39	997.24	0.00	579.12	1804.19	0	0.00	0.00	0.00	0	0.00	0.00
20	Arunachal Pradesh	19	122.06	51.41	86.13	81.08	50.02	94.50	0	0.00	0.00	0.00	0	0.00	0.00
21	Mizoram	34	218.43	89.08	154.12	138.65	89.50	211.94	0	0.00	0.00	22.37	0	0.00	0.00
22	Manipur	30	192.73	107.07	135.99	0.00	78.97	48.82	0	0.00	0.00	0.00	0	0.00	0.00
23	Nagaland	24	154.18	154.18	108.79	0.00	63.18	128.98	0	0.00	0.00	42.99	0	0.00	0.00
24	Sikkim	150	963.64	409.11	679.94	0.00	394.86	0.00	0	0.00	0.00	656.81	0	0.00	0.00
25	Tripura	50	321.21	133.84	226.65	308.83	131.62	164.81	0	0.00	0.00	72.00	0	0.00	0.00
26	Meghalaya	45	289.09	144.55	203.98	296.00	118.46	0.00	0	0.00	0.00	0.00	0	0.00	0.00
27	Himachal Pradesh	110	706.67	395.00	498.62	0.00	289.56	797.58	100	642.43	321.21	0.00	75	227.21	0.00
28	Jammu & Kashmir	28	179.88	74.95	126.92	87.81	73.71	0.00	0	0.00	0.00	0.00	25	75.74	0.00
29	Uttarakhand	550	3533.35	1962.97	2493.10	2019.40	1447.81	2668.08	35	224.85	112.42	0.00	3900	11814.66	5907.33
30	Andaman & Nicobar	68	485.39	130.00	342.49	0.00	198.89	0.00	0	0.00	0.00	0.00	0	0.00	0.00
31	Daman & Diu								55	392.59	235.55	0.00	0	0.00	0
32	Dadar Nagar								500	3569.04	1000	0.00	0	0.00	0
33	Delhi								500	3569.04	471.45	0.00	0	0.00	0
34	Puducherry								8	57.10	28.55	0.00	20	0.00	0
35	Chandigarh												65	218.79	77.42
36	Lakshadweep												135	454.41	227.20
37	Other Expenses														
	Total	7208	33763.09	22619.60	23822.96	15218.88	13834.58	11889.70	4683	21230.75	8138.68	3862.92	20000	44660.10	16796.76
Total fund released in 2017-18 is Rs 20346.29215 lakh (Including fund released for model organic clusters Rs 307.91 lakh and 10 lakh for the salary). Total fund released in 2018-19 is Rs 20659.67 lakh															

Annexure -12.1

Status of allocation of Pulses under discounted scheme from States 18.03.2019

Qty in MTs/Payment Rec. Rs-Lakh

State	Pulse	October 18		November 18		December 18		January 19		February 19		Total paid qty	Total paid qty	Lifting status (as on 08.03.19)	Lifting status (as on 15.03.19)
		Paid stock	Payment receipt	Paid Stock	Payment receipt	Paid Stock	Payment receipt	Paid Stock	Payment receipt	Paid Stock	Payment receipt				
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Maharashtra	Gram	10,001	2,212	10,001	2,538					18,000	5,153	38,002		19,838	
	Urad	5,000	1,131	5,000	1,467							10,000	84,002	9,780	29,618
TamilNadu	Tur									36,000	13,266	36,000			
	Gram	346	83	341	79			341	105	341	117	1,369		953	
Tripura	Toor	37,964	7,802	29,301	5,875			20,080	6,578	29,301	9,564	1,16,646	1,19,396	40,000	41,413
	Moong	358	121	341	123			341	124	341	118	1,381		460	
Himachal Pradesh	Masoor	1,600	286	25,000	4,661							26,600	26,600	12,696	12,696
	Gram	5,151	1,237	4,380	1,033	4,199	1,106	3,218	836	764	178	17,711		16,947	
Karnataka	Masoor	1,423	277	1,400	286	1,495	317	1,415	301			5,733	33,047	5,466	31,996
	Moong			1,029	371	1,583	629	1,822	414			2,612		2,612	
Andhra Pradesh	Urad			855	179	4,314	1,066	1,822	414			6,991		6,971	
	Toor	20,000	4,236	14,000	2,880	14,000	4,178	13,500	4,211			37,173	61,500	48,430	48,430
Gujarat	Toor	8,000	1,720	29,173	5,972							16,200	37,173	36,000	36,000
	Gram			16,200	2,827							8,600		673	
Kerala	Moong			8,600	1,982							8,600	29,500	540	2,321
	Gram			4,700	1,697							4,700		1,108	
Daman	Toor			3,000	695					1,600	532	4,600		3,000	
	Moong			4,321	872					2,310	860	4,575	16,583	4,321	9,121
Madhya Pradesh	Urad					2,265	899			1,544	254	3,087		1,800	
	Gram			6	1							6			
Total:	Moong			7	3							7	17		0
	Toor			3	1							3			
Total:	Gram							47,226	11,608	38,135	9,011	85,361	92,492	81,547.19	88,108
	Masoor							4,561	914	2,570	591	7,131		6,560.56	
Total:		89,844	19,104	1,57,658	33,542	27,856	8,194	94,047	25,406	1,30,906	39,644	5,00,310	5,00,310	2,99,704	2,99,704

Annexure-12.1(A)

Summary of Paid Stock for the month of Oct-18 till Feb-19:

Pulse	Paid for Oct.18	Paid Stock for Nov.18	Paid Stock for Dec.18	Paid Stock for Jan.-19	Paid Stock for Feb.-19	Crop season/ Scheme	PSS	PSF	Combined quantity
Toor	65,964	92,997.58	14000	33,580.15	65301	K-16/ K-17 PSF/ PSS	6054.57	2,65,788.16	2,71,842.73
Gram	15497.78	26,327.64	4198.68	50,784.99	58839.7	R-18 PSS/PSF R-17	1,55,630.53	18.27	1,55,648.80
Moong	358	6,077.02	3848.08	341	2651	R-17 PSS/K-17 PSS	13,275.10		13,275.10
Urad	5,000	5855.24	4314.17	3,365.29	1543.7	K-16 PSF/ K-17 PSS	19,477.20	601.2	20,078.40
Masur	3,023.10	26400	1494.86	5,975.97	2570.46	R-17 PSF/ R-18 PSS	27,063.27	12,401.20	39,464.47
Total:	89,843	1,57,657	27,855.79	94,047.40	130906		2,21,500.68	2,78,808.83	5,00,309.51

*An amount of Rs. 105.2 Cr. adjusted from advance fund of MP State.

Total Payment received upto 1.03.19: Rs 191.04 Cr. (Oct-18) + Rs 335.42 Cr. (Nov-18) + Rs 81.94 Cr. (Dec-18) +254.06 Cr. (Jan-19) + 396.44 (Feb- 19) = 1258.89 Cr. and advance fund of Rs 16.69 Cr. and Rs 55.85 Cr. from State of Madhya Pradesh and Karnataka respectively totaling Rs 1331.43 Cr.

Annexure-14.1(a)
Statewise Allocation and Release of funds under Normal RKVY and Sub-schemes for 2018-19 as on 25.02.2019
(Rs. in crore)

Sl. No.	Name of the States	Normal RKVY			BGREI	CDP		RPS		A/E/C		ANMHILT		Swatch Bharat		NRAA		AFDP		Total Sub-Scheme		Grand Total		Utilization				
		Allocation Normal RKVY	Release Normal RKVY 1st Installment	Release Normal RKVY 2nd Installment		Total of Normal RKVY	Allocation	Release	Allocation	Release	Allocation	Release	Allocation	Release	Allocation	Release	Allocation	Release	Allocation	Release	Allocation	Release	Total % of Release	UC Revd	UC Pending	% of Utilization		
1	Andhra Pradesh	195.05	97.53	97.51	195.04		2.10	2.10		4.32	2.16	2.24						1.00	0.50	9.66	4.76	204.71	199.80	97.60%	73.94	125.86	37.01%	
2	Bihar	121.43	60.72	0.00	60.72	43.72	21.86	1.00	1.00			2.06								46.96	21.95	168.39	82.67	49.09%		82.67	0.00%	
3	Chhattisgarh	62.98	31.49	31.49	62.98	49.74	49.12		2.00	1.00		1.71	0.84							53.45	50.96	116.43	113.94	97.87%	50.20	63.74	44.06%	
4	Goa	14.89	7.45	0.00	7.45							0.11								0.11	0.00	15.00	7.45	49.67%		7.45		
5	Gujarat	104.73	52.37	52.36	104.73		2.01	1.00	2.86			2.48						2.50	2.50	9.85	3.50	114.58	108.23	94.46%	36.06	72.17	33.32%	
6	Haryana	61.19	30.60	30.58	61.18		3.02	1.51	1.00	0.48		0.86							4.88	1.99	66.07	63.17	95.61%	18.48	44.69	29.25%		
7	Himachal Pradesh	23.09	11.55	11.54	23.09							0.75	0.30							0.75	0.30	23.84	23.52	98.66%		23.52	0.00%	
8	Jammu & Kashmir	19.18	9.59	0.00	9.59							0.65								0.65	0.00	19.83	9.59	48.37%		9.59		
9	Jharkhand	71.48	7.82	0.00	7.82	28.44	14.16					1.59								30.03	15.67	101.51	23.49	23.14%	13.93	9.56	59.30%	
10	Karnataka	104.23	52.11	52.11	104.22		1.60	0.80	3.00	1.50	2.50	1.55	0.42					2.50	1.25	11.15	4.14	115.38	108.36	93.92%	32.99	75.37	30.45%	
11	Kerala	61.97	30.99	30.99	61.98					6.00	3.00	0.32								6.32	3.00	68.29	64.98	95.15%	18.65	46.33	28.70%	
12	Madhya Pradesh	170.90	85.44	85.44	170.89							3.48	1.74							3.48	2.41	174.38	173.20	99.38%	43.93	129.37	25.35%	
13	Maharashtra	242.57	121.28	121.28	242.56		0.03	0.02	2.64	1.32		2.54	1.23							5.21	2.55	247.78	245.11	98.92%	73.56	171.55	30.01%	
14	Orissa	134.54	67.26	47.65	114.91	51.35	48.80	0.03	0.02	1.00	10.08	3.02	1.80						64.26	52.34	198.80	167.25	84.13%	91.87	75.38	54.93%		
15	Punjab	81.77	40.89	0.00	40.89		7.06	3.53				1.77								8.83	3.70	90.60	44.59	49.21%		44.59		
16	Rajasthan	153.29	76.64	76.64	153.28							5.21	0.87					1.50	0.75	6.71	1.62	160.00	154.90	96.81%	50.81	104.09	32.80%	
17	Tamil Nadu	165.20	82.60	82.60	165.20		0.05	0.03	3.04	1.52	6.06	3.03	1.01	0.49					10.16	5.23	175.36	170.43	97.19%	121.26	49.17	71.15%		
18	Telangana	256.77	128.39	0.00	128.39		0.10	0.05				1.71								1.81	0.30	258.58	128.69	49.77%		128.69	0.00%	
19	Uttar Pradesh	279.39	139.69	138.50	278.19	40.82	39.78					7.25	2.48					2.50	1.25	54.16	61.24	333.55	339.43	101.76%	102.03	237.40	30.06%	
20	Uttarakhand	21.27	10.64	10.63	21.27							1.51								1.51	1.60	22.78	22.87	100.41%	7.51	15.36	32.84%	
21	West Bengal	143.98	71.99	71.99	143.98	47.47	47.47					2.57	1.13							50.23	48.60	194.21	192.58	99.16%	61.90	130.68	32.14%	
22	Total "MH - 2552"	2489.88	1217.04	941.32	2158.35	261.54	221.19	19.96	12.71	16.54	6.32	28.96	11.21	43.17	9.50	24.00	18.68	10.00	6.25	404.17	285.85	2899.73	2444.33	84.59%	797.12	1647.21	32.61%	
1	Andhra Pradesh	17.13	8.57	0.00	8.57				1.00	0.50		0.45	0.19							1.45	0.69	18.58	9.26	49.82%		9.26	0.00%	
2	Assam	147.08	73.54	73.06	146.60	53.46	53.46					1.75	0.67						55.21	55.01	202.29	201.62	99.67%	48.32	153.30	23.97%		
3	Manipur	15.79	7.28	7.28	14.56				0.50			0.24								0.74	0.13	16.53	14.69	88.85%	7.28	7.41	49.57%	
4	Meghalaya	19.16	8.33	0.00	8.33				0.54	0.27		0.88							1.42	0.27	20.58	8.60	41.79%	5.05	3.55	58.72%		
5	Mizoram	10.41	5.21	5.21	10.41				1.00	0.50		0.39	0.15						1.39	0.65	11.80	11.06	93.74%	5.13	5.93	46.39%		
6	Nagaland	35.93	17.96	17.96	35.92				0.42	0.19	1.58	0.80	0.39						4.37	2.15	40.30	38.07	94.46%	35.93	2.14	94.38%		
7	Sikkim	13.66	6.83	6.83	13.66							0.40								0.40	0.00	14.06	13.66	97.12%	6.25	7.41	45.77%	
8	Tripura	51.82	25.91	25.91	51.82							1.63	0.79							1.63	0.79	53.45	52.61	98.42%	17.20	35.41	32.70%	
9	Total "MH - 2552"	310.98	153.62	136.24	289.86	53.46	53.46	0.00	0.00	3.46	1.46	6.54	2.18	0.00	1.01	0.00	0.00	0.00	66.61	59.69	377.59	349.55	92.57%	125.16	224.39	35.81%		
1	Delhi	3.30	0.00	0.00	0.00							0.15								0.15	0.00	3.45	0.00	0.00%		0.00		
2	Puducherry	2.70	1.35	0.00	1.35							0.12								0.12	0.00	2.82	0.00	0.00%		0.00		
3	Total "MH - 2552"	6.00	1.35	0.00	1.35							0.27								0.27	0.00	6.27	0.00	0.00%		0.00		
1	Andhra Pradesh	2.30	0.00	0.00	0.00							0.20								0.20	0.00	2.50	0.00	0.00%		0.00		
2	Chhattisgarh	0.20	0.00	0.00	0.00							0.06								0.06	0.00	0.26	0.00	0.00%		0.00		
3	D & N Haveli	2.90	0.00	0.00	0.00						0.20	0.20							0.20	0.00	3.10	0.00	0.00%		0.00			
4	Daman & Diu	0.50	0.00	0.00	0.00							0.07								0.07	0.00	0.57	1.35	236.84%		1.35		
5	Lakshadweep	0.30	0.00	0.00	0.00							0.11								0.11	0.00	0.41	1.35	329.27%		1.35		
6	Total Us	12.20	1.35	0.00	1.35							0.91	0.00							0.91	0.00	13.11	2.70	20.59%		2.70		
7	Total Us (MH - 2401)	286.00	71.21		71.21							12.00			12.00					12.00	12.00	310.00	71.21	22.97%		71.21	0.00%	
8	Total Us (SAP) (Admin/ Innovation)	3099.06	1443.22	1077.56	2520.78	315.00	274.65	19.96	12.71	20.00	7.78	40.00	12.79	50.62	11.68	36.00	31.81	10.00	6.25	501.58	357.67	3600.00	2867.79	79.66%	922.28	1945.51	32.16%	
9	Grand Total (States+Us+Other)																					3372.00						

Note :- Out of Rs. 3100 crore, Rs. 12.20 crore for Us dedicated from "MH - 2401", Rs. 2.64 crore has been re-allocate for Maharashtra as adjusted from Gujarat under RPS

Annexure-14.1(b)
Statewise Allocation and Release of funds under Normal RKVY and Sub-schemes for 2017-18
as on 25.02.2019 (Release as on 31.03.2018)

(Rs. in crore)

Sl. No.	Name of the States	Normal RKVY		BGREI		CDP		RPS		FMD		Peri Urban		Swatch Bharat		Drought/NRM		AFDP		Saffron Mission		Total Sub-Scheme			Grand Total		Utilization				
		Allocation	Release	Allocation	Release	Allocation	Release	Allocation	Release	Allocation	Release	Allocation	Release	Allocation	Release	Allocation	Release	Allocation	Release	Allocation	Release	Allocation	Release	Total % of Release	UC Recd	UC Pending	% of Utilization				
1	Andhra Pradesh	206.51	206.51			2.10	1.05									4.00	0.00	1.28	0.64			7.38	1.69	213.89	208.20	97.34%	208.20	0.00	100.00%		
2	Arunachal Pradesh	40.51	101.3					1.00	0.50	0.41	0.00											1.41	0.50	41.92	10.63	25.36%	10.32	0.31	97.08%		
3	Assam	202.93	202.93	76.28	38.14			0.50	0.00	7.28	0.00	4.00	0.00									88.06	38.14	290.99	241.07	82.84%	212.70	28.37	88.23%		
4	Bihar	111.62	25.07	62.39	41.20	0.18	0.09	1.50	0.75					2.20								64.07	44.24	175.69	69.31	39.45%	28.72	40.59	41.44%		
5	Chhattisgarh	89.10	83.67	70.98	70.98			1.00	0.50	5.00	2.50											76.98	73.98	166.08	157.65	94.92%	145.67	11.98	92.40%		
6	Goa	17.77	8.89																			0.00	0.00	17.77	8.89	50.00%	4.92	3.97	55.37%		
7	Gujarat	199.97	185.18			2.01	0.52	11.00	7.50			3.95	0.00					3.20	1.50			20.16	9.52	220.13	194.70	88.45%	192.55	2.15	98.90%		
8	Haryana	110.11	79.98			7.55	7.55	0.50	0.00			3.95	0.00									12.00	7.55	122.12	87.53	71.68%	30.94	56.59	35.35%		
9	Himachal Pradesh	22.94	22.94							1.48	0.00											1.48	0.00	24.42	22.94	93.93%	22.94	0.00	100.00%		
10	Jammu & Kashmir	29.52	14.76							3.05	0.00										81.27	10.00	113.84	24.76	21.75%	23.52	1.24	94.99%			
11	Jharkhand	84.08		40.59	0.00					4.10	0.00											44.69	0.60	128.77	0.60	0.47%		0.60			
12	Karnataka	238.63	231.32			1.60	0.80	1.50	0.75			4.00	0.00					2.24	2.24			26.09	3.79	264.72	235.11	88.81%	195.72	39.39	83.25%		
13	Kerala	128.44	51.50																			0.00	0.00	128.44	51.50	40.10%	51.50	0.00	100.00%		
14	Madhya Pradesh	226.23	217.53							10.50	0.00											10.50	0.00	236.73	217.53	91.89%	217.53	0.00	100.00%		
15	Maharashtra	408.32	398.62			0.03	0.00	3.00	0.00			3.95	0.00					4.32	0.00			11.30	0.00	419.62	398.62	95.00%	341.06	57.56	85.56%		
16	Manipur	15.88	13.25					1.00	0.50	0.29	0.00											1.29	0.50	17.17	13.75	80.06%	13.25	0.50	96.36%		
17	Meghalaya	19.81	9.91					0.50	0.50	0.79	0.00											1.29	0.50	21.10	10.41	49.31%	9.91	0.50	95.24%		
18	Mizoram	9.40	9.38					1.00	0.03	0.00												1.03	1.00	10.43	10.38	99.46%	9.20	1.18	88.67%		
19	Nagaland	55.34	55.35					2.00	2.00	0.23	0.00											2.23	2.00	57.57	57.35	99.60%	57.35	0.00	100.00%		
20	Odisha	205.19	102.59	73.27	71.82	0.03	0.01	0.50	0.00	6.11	0.00	3.94	0.00									83.85	71.83	289.04	174.42	60.35%	174.41	0.01	99.99%		
21	Punjab	259.86	129.92			17.66	0.00	3.00	1.50			3.95	0.00									24.61	1.50	284.47	131.42	46.20%		131.42	0.00%		
22	Rajasthan	232.64	232.65																			8.64	2.32	241.28	234.97	97.38%	234.97	0.00	100.00%		
23	Sikkim	5.97	2.99							0.12	0.00											0.12	0.00	6.09	2.99	48.99%	2.99	0.00	100.00%		
24	Tamil Nadu	222.09	222.09			0.05	0.29	2.00	2.00													2.05	2.29	224.14	224.38	100.10%	223.85	0.53	99.76%		
25	Telangana	127.58	63.80			0.10	0.05															0.10	0.05	127.68	63.85	50.01%	49.45	14.40	77.44%		
26	Tripura	39.55	32.76							0.83	0.00											0.83	0.00	40.38	32.76	81.13%	14.88	17.88	45.42%		
27	Uttar Pradesh	369.03	214.52	58.25	39.13	8.40	6.06							6.85				4.32	2.16			70.97	54.20	440.00	268.72	61.07%	255.51	13.21	95.08%		
28	Uttarakhand	64.13	76.73							1.58	1.58			1.35								1.58	2.93	85.71	79.66	92.95%	78.32	1.34	98.31%		
29	West Bengal	230.67	225.53	67.74	67.74	0.19	0.09			8.20	0.00											76.13	67.83	306.80	293.36	95.62%	270.95	22.41	92.36%		
30	Total States	3993.84	3130.47	449.50	329.01	39.90	16.51	30.00	17.50	50.00	4.08	27.76	0.00	36.00	11.00	24.75	0.00	20.00	8.86	81.27	10.00	759.18	396.97	4753.01	3527.44	74.21%	3081.32	446.12	87.35%		
31	Delhi	3.31																				0.00	0.00	3.31	0.00						
32	Andhra Pradesh	2.66																				0.00	0.00	2.66	0.00						
33	Andaman & Nicobar	5.97																				0.00	0.00	5.97	0.00						
34	Chandigarh	2.30	1.15																			0.00	0.00	2.30	1.15						
35	Daman & Diu	0.45																				0.00	0.00	0.45	0.00						
36	Lakshadweep	0.30																				0.00	0.00	0.30	0.00						
37	Total Uts	12.04	1.15																			0.00	0.00	12.04	1.15						
38	National Level(240)(BGREI)	21.50	26.18	0.50										11.50	6.85	0.25	0.00					12.25	6.85	33.75	33.03						
39	Unallocated (CDP)					0.10	0.00															0.10	0.00	0.10	0.00						
40	Grand Total (States+ Uts+Other)	4027.37	3157.80	450.00	329.01	40.00	16.51	30.00	17.50	50.00	4.08	27.76	0.00	47.50	17.85	25.00	0.00	20.00	8.86	81.27	10.00	771.53	403.81	4750.00	3560.28	74.95%	3081.32	478.96	86.55%		
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Annexure- 14.2 (A)

Sector wise Approved Projects Cost (Ongoing and Completed projects) under RKVY 2017-18

(in Crore)

Sr No	State	Fin Year	CROP	HORT	SERI	ANHB	OTHR	FISH	COOP	IPMT	SEED	FINM	AMEC	EXTN	MRKT	NONF	ITEC	AGRE	NRM	IRRI	ORFM	DDEV	Total
1	ANDHRA PRADESH	2017-18	0.00000	100.64200	7.67500	119.84130	54.76000	47.28000	0.00000	12.39370	56.42060	1.50000	155.07500	5.66540	47.69860	0.00000	1.44000	91.67150	0.00000	0.00000	2.33880	41.98820	746.39010
2	ARUNACHAL PRADESH	2017-18	7.79980	0.00000	0.00000	0.00000	8.79980	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.50000	0.00000	0.00000	0.00000	0.00000	0.50000	0.00000	0.00000	17.59960
3	ASSAM	2017-18	369.75650	48.84250	0.00000	0.00000	0.50000	0.00000	0.00000	0.00000	0.00000	0.00000	39.56250	0.00000	0.00000	24.74040	0.00000	10.12300	0.00000	0.00000	9.77000	0.00000	503.29490
4	BIHAR	2017-18	26.64610	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	26.64610
5	CHATTISHGARH	2017-18	133.78670	35.32190	0.00000	0.00000	0.00000	15.72300	0.00000	1.00000	22.77250	2.25000	8.00000	7.61460	0.00000	0.00000	0.00000	0.00000	0.00000	22.00000	0.00000	0.00000	241.26870
6	GOA	2017-18	0.00000	15.74200	0.00000	0.00000	12.70000	3.00000	0.00000	1.06150	0.00000	0.00000	26.35990	5.06730	0.83850	0.00000	3.20310	0.00000	0.00000	0.00000	0.00000	0.00000	67.98230
7	GUJARAT	2017-18	108.75800	14.98240	0.00000	19.95420	2.85050	68.41000	0.00000	77.54500	168.83460	0.00000	0.00000	0.00000	48.88040	0.00000	0.00000	0.00000	157.69110	0.00000	0.00000	0.00000	667.90620
8	HARYANA	2017-18	76.13630	15.16700	0.00000	35.63590	3.80000	51.10000	0.00000	4.00000	0.00000	7.80000	69.92460	0.00000	0.00000	0.00000	0.00000	33.75400	15.00000	30.00000	2.60000	5.03350	349.95130
9	HIMACHAL PRADESH	2017-18	3.00000	0.50000	0.00000	4.36000	0.85860	2.98100	0.00000	0.00000	0.00000	0.00000	1.50000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	12.00000	2.48000	0.00000	27.67960
10	KARNATAKA	2017-18	0.00000	73.69000	15.83000	109.40000	81.34000	6.62000	0.00000	0.80000	34.56000	0.00000	1.66000	6.00000	96.61000	61.31000	0.00000	15.72000	0.92000	0.00000	0.00000	0.00000	504.46000
11	KERALA	2017-18	45.00000	41.56250	0.00000	21.83100	0.00000	20.65090	0.00000	0.00000	2.73430	0.00000	6.18790	0.77390	3.58990	28.56740	0.00000	8.39530	12.39200	0.00000	0.00000	0.00000	206.43070
12	MADHYA PRADESH	2017-18	0.00000	67.45450	0.00000	69.57830	14.80000	0.00000	22.95000	0.00000	79.35930	1.56500	126.10050	104.83910	1.32770	1.63520	0.00000	36.67760	23.40750	0.00000	0.00000	22.26250	571.95720
13	MAHARASHTRA	2017-18	41.71830	111.95000	0.00000	304.50000	0.00000	51.06630	0.00000	5.01820	25.79000	0.00000	115.00280	3.99940	120.79000	0.00000	0.00000	0.00000	4.19430	0.00000	0.00000	0.00000	784.02930
14	MEGHALAYA	2017-18	0.00000	1.76980	1.23670	0.00000	0.00000	0.20000	0.86690	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	3.55550	0.00000	0.00000	0.00000	7.62290
15	NAGALAND	2017-18	1.00000	4.35500	0.00000	0.00000	3.87000	4.13000	1.82000	1.00000	2.70000	1.00000	6.25000	1.00000	5.19000	0.00000	0.00000	0.40000	9.74810	0.00000	0.70000	0.00000	43.16310
16	ORISSA	2017-18	183.35620	93.49850	0.00000	35.62140	1.18150	60.86000	1.00500	15.01570	13.16820	13.25200	65.92000	157.42900	42.89150	0.00000	0.00000	42.59970	5.38690	57.82510	0.00000	15.41020	820.01240
17	RAJASTHAN	2017-18	0.00000	124.14980	0.00000	33.99230	2.01500	0.89000	10.00000	0.00000	1.34400	0.00000	0.00000	9.60000	0.00000	0.83330	24.65000	19.55320	42.70100	0.00000	0.00000	0.00000	269.72860
18	TAMILNADU	2017-18	180.25510	36.50140	0.00000	77.38000	0.00000	15.95780	14.06200	10.00000	1.00000	0.00000	61.64000	48.00000	25.32750	0.00000	0.00000	10.38000	4.50000	0.00000	3.00000	15.21000	503.21380
19	TELANGANA	2017-18	0.17450	0.00000	0.38400	16.80000	0.25000	5.11550	0.00000	4.95040	23.06710	12.15000	85.00000	0.00000	1.39720	2.20000	0.00000	9.30540	0.00000	0.00000	0.45000	0.00000	164.56410
20	TRIPURA	2017-18	22.72500	0.00000	0.00000	10.77070	0.00000	4.13750	0.00000	0.00000	2.13000	0.00000	0.00000	17.91300	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	57.67620
21	UTTAR PRADESH	2017-18	233.27320	49.84660	15.70250	198.88440	11.23700	24.37500	0.00000	0.00000	111.16860	2.33940	15.42840	1.54040	0.00000	0.00000	5.83900	9.64300	0.00000	13.80340	40.12050	0.00000	733.19240
22	UTTARAKHAND	2017-18	6.12440	1.81430	4.33500	10.99030	2.94610	3.24000	0.00000	0.00000	11.51080	0.00000	0.00000	0.00000	12.44320	0.00000	0.00000	0.24000	0.00000	0.00000	19.87000	4.62670	78.14080
23	WEST BENGAL	2017-18	123.28000	31.65800	0.00000	114.57750	0.00000	44.09260	30.00000	0.65000	24.11000	5.28000	29.70000	11.66000	14.86300	0.00000	0.00000	0.00000	20.00000	49.96490	0.00000	2.38420	502.42020
			1562.79010	869.44820	45.16320	1182.17730	201.91850	429.82260	80.69790	133.43450	580.67000	47.12740	806.11160	381.10210	422.34750	119.28630	52.72360	288.46270	299.49640	186.09340	81.32930	125.18990	7895.33050

Total (Ongoing/Completed) Project Cost (in Crores) = 7895.3305

CROP - CROP DEVELOPMENT; HORT - HORTICULTURE; SERI - SERICULTURE; ANHB - ANIMAL HUSBANDRY; OTHR - INNOVATIVE PROGRAMMES / OTHERS; FISH - FISHERIES; COOP - COOPERATIVES/COOPERATION; IPMT - INTEGRATED PEST MANAGEMENT; SEED - SEED; FINM - FERTILISERS AND INM; AMEC - AGRICULTURE MECHANISATION; EXTN - EXTENSION; MRKT - MARKETING AND POST HARVEST MANAGEMENT; NONF - NON FARM ACTIVITIES; ITEC - INFORMATION TECHNOLOGY; AGRE - RESEARCH (AGRI/HORT/ANIMAL HUSBANDRY etc); NRM - NATURAL RESOURCE MANAGEMENT; IRRI - MICRO/MINOR IRRIGATION; ORFM - ORGANIC FARMING / BIO FERTILISER; DDEV DEVELOPMENT

Annexure 14.2(b) Sector wise Approved Projects Cost (Ongoing and Completed projects) under RKVY 2018-19

Sr No	State	Fin Year	CROP	HORT	SERI	ANHB	OTHR	FISH	COOP	IPMT	SEED	FINM	AMEC	EXTN	MRKT	NONF	ITEC	AGRE	NRM	IRRI	ORFM	DDEV	Total
1	ANDHRA PRADESH	2018-19	5.2949	55.2455	8.3538	48.4307	0	20.2072	0.3	0	17.972	0	60.52	0	0	2.4	0	27.8044	0	0	112.92	18.3784	377.8269
2	ARUNACHAL PRADESH	2018-19	0	0	0	0	3.8	0	0	0	0	0	5.05	3.2	6.88	0	0	0	3.5	0	1.026	0	23.456
3	ASSAM	2018-19	154.496	3.8131	5.4626	21.5452	10.4317	5.127	0	3	19.3729	0	17.52	0	21.79	10.6955	0	10.95	0	0	0	7.418	291.622
4	CHATTISHGARH	2018-19	133.47	31.2011	0	0	0	0	0	0	15	0	0.8	1.03	1.2025	0	0	0	0	19	6.6	0	208.3036
5	GUJARAT	2018-19	3.6948	40.0578	0	111.8136	0	4	0	10.7029	107.4471	0	0	20.9504	170.6634	0	0	41.5657	4.1666	0	1.0992	7.04	523.2015
6	HARYANA	2018-19	5.0288	11.9161	0	14.5	0.6995	9.98	0	6.208	13.3	5	0	25.5	17	0	0	17.115	35	20	12.14	10.075	203.4624
7	HIMACHAL PRADESH	2018-19	3.5	0	0	0	4.5	1.006	0	0	0	0	1.6	0	0	0	0	0	0	0	0	0	10.606
8	KARNATAKA	2018-19	4.27	20.67	3.02	39.92	8.37	2.61	0	0	2.3	0	0	0	0	0	0	2.58	0	0	0	0	83.74
9	KERALA	2018-19	9.9913	0	0	2.5	0	0	0	0	0	0	0	0	0	0	0	0.89	11.8527	4.5811	0	0.6025	30.4176
10	MADHYA PRADESH	2018-19	67.1850	0	37.6493	0	13.41	111.0314	0	39.1	0.9573	69.998	45.519	0	0	0	6.8837	0	0	23.4798	71.0041	486.2176	
11	MAHARASHTRA	2018-19	0	15.22	6.5427	0	0	0	0	0	0	0	200	0	0	0	0	0	0	0	0.56	0	222.3227
12	MEGHALAYA	2018-19	0	5.8041	0	4.212	0.2646	3.987	0.5914	1.2538	0	0	0.99	11.1069	0	0	0	0	3.2542	0	0.126	0	31.59
13	NAGALAND	2018-19	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.462	0	0	0	0.462
14	ORISSA	2018-19	85.6413	37.1666	23.4227	0	0	15.1796	33.4309	6.3435	0	7.8836	0	4.0944	7.8995	0	0	4.3285	12.5335	7	1.45	12.852	259.2261
15	RAJASTHAN	2018-19	02.75	0	28.28	221.6108	0	0	0	0.12	0	0	0	0	0	0	9.3317	52.54	48.1	0	56.0933	418.8258	
16	TAMILNADU	2018-19	109.7	38.7369	0	19.4427	0	20.2725	11.8	0	1	0	35	56.3125	10	0	5.5522	4.5	0	0	14.75	327.0668	
17	TELANGANA	2018-19	2.1543	32.32	13.97	37.05	0	4.29	2.7	3.284	57.36	4.44	129.3	0	0.85	0	1.23	19.49	0	0	0.42	12.93	321.7883
18	TRIPURA	2018-19	11.5	0	0	6.2817	0	5.3	0	0	0.1883	0	0	0	0	0	0	0	0	0	0	0	23.27
19	UTTAR PRADESH	2018-19	130.1885	53.9336	0	2.9562	1.6	0	0	0	59.082	3.5	15.5469	69.4996	0	0	0	12.9397	0	0	39.466	0	388.6925
20	UTTARAKHAND	2018-19	0	0	0	2.7232	0	0	0	0	6.41	0	0	2.8	9.1379	0	0	0	19.1956	0	0	0	40.2667
21	WEST BENGAL	2018-19	114.6422	12.8283	2.98	46.212	0	37.7046	0	0	4.7414	0.8	54.25	14.19	0	0	0	0	0	40.3202	0	0	328.6687
			840.7571	361.6631	63.7518	423.4966	251.2766	143.0739	159.8537	30.7922	343.3937	22.5809	590.5749	254.2028	245.4233	13.0955	1.23	159.4309	147.0046	139.0013	199.287	211.1433	4601.0332

Total (Ongoing / Completed) Project Cost (in Crore) : =4601.0332

CROP - CROP DEVELOPMENT; HORT - HORTICULTURE; SERI - SERICULTURE; ANHB - ANIMAL HUSBANDRY; OTHR - INNOVATIVE PROGRAMMES / OTHERS; FISH - FISHERIES; COOP - COOPERATIVES/COOPERATION; IPMT - INTEGRATED PEST MANAGEMENT; SEED - SEED; FINM - FERTILISERS AND INM; AMEC - AGRICULTURE MECHANISATION; EXTN - EXTENSION; MRKT - MARKETING AND POST HARVEST MANAGEMENT; NONF - NON FARM ACTIVITIES; ITEC - INFORMATION TECHNOLOGY; AGRE - RESEARCH (AGRI/HORT/ANIMAL HUSBANDRY etc); NRM - NATURAL RESOURCE MANAGEMENT; IRRI - MICRO MINOR IRRIGATION; ORFM - ORGANIC FARMING / BIO FERTILISER; DDEV - DAIRY DEVELOPMENT

Annexure 18.1

Detail of State-wise funds released upto 31/03/2019

Sl.No.	Name of States/ UTs	Total No. of farmer families upto 31/03/2019	Total amount release upto 31/03/2019 (in Lakh)
1.	Andaman and Nicobar Islands	10,003	200.06
2.	Andhra Pradesh	33,16,854	66337.08
3.	Bihar	2,31,738	4634.76
4.	Chandigarh	13	0.26
5.	Chhattisgarh	1,11,898	2237.96
6.	Dadra and Nagar Haveli	4,253	85.06
7.	Daman and Diu	2,030	40.60
8.	Delhi	-	-
9.	Goa	2,189	43.78
10.	Gujarat	27,36,691	54733.82
11.	Haryana	9,41,260	18825.20
12.	Himachal Pradesh	4,51,506	9030.12
13.	Jammu and Kashmir	4,55,235	9104.70
14.	Jharkhand	4,70,100	9402.00
15.	Karnataka	19,546	390.92
16.	Kerala	9,35,786	18715.72
17.	Lakshdweep	-	-
18.	Madhya Pradesh	-	-
19.	Maharashtra	19,24,874	38497.48
20.	Odisha	8,48,945	16978.90
21.	Puducherry	4,199	83.98
22.	Punjab	11,23,234	22464.68
23.	Rajasthan	-	-
24.	Tamilnadu	19,61,212	39224.24
25.	Telangana	18,76,737	37534.74
26.	Uttar Pradesh	1,11,12,689	222253.78
27.	Uttarakhand	3,32,801	6656.02
28.	West Bengal	-	-
29.	Total (1)	2,88,73,793	577475.86

North-East States			
30.	Arunachal Pradesh	-	-
31.	Assam	9,45,571	18911.42
32.	Manipur	7,276	145.52
33.	Meghalaya	-	-
34.	Mizoram	21,934	438.68
35.	Nagaland	27,760	555.20
36.	Sikkim	-	-
37.	Tripura	1,51,095	3021.90
	Total (2)	11,53,636	23072.72
	Grand Total (1+2)	3,00,27,429	600548.58

Annexure-19.1

Women in Agriculture at a Glance

S. No	Divisions/ Subject Matter Area	Scheme/Component	Flow of benefit to women in schemes/programmes
1.	Horticulture	National Horticulture Mission (NHM), Horticulture Mission for North East & Himalayan States (HMNEH), Central Sector Schemes of National Horticulture Board, Coconut Development Board (CDB) and Central Institute for Horticulture, Nagaland	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 implementing agencies have been asked to ensure that the said funds are given in women beneficiaries such as women farmers, women Self Help Groups, women entrepreneurs etc, to encourage and to obtain the benefits of schemes under the Mission as far as possible. Further, Operational Guidelines of MIDH also provides more subsidy/assistance to women farmers, beneficiaries as compared to general category farmers. During the current financial year 2018-19, funds to the tune of Rs. 2546.24 Crore have been earmarked for implementation of schemes under MIDH. Out of this, a total of Rs. 1298.05 crores has been released till 13th November, 2018 to the MIDH implementing agencies.
2.	Agriculture Extension	Support to States for Extension Reforms	<ul style="list-style-type: none"> At least 30% scheme beneficiaries should be women farmers/farm women. Minimum 30% of resources meant for programmes and activities are required to be allocated to women farmers and women extension functionaries with specific documentation of expenditure and performance for women being maintained; Farm Women's Food and Nutritional Security Groups (FIGs) @ at least 2 women FSGs/block to be formed annually for ensuring food and nutritional security providing assistance of Rs. 10,000/- per group. Inclusion of one 'Gender Coordinator' in every State in the team of committed extension personnel being supported under the Scheme. The role of Gender Coordinator is to ensure flow of support viz. training/ capacity building and extension support as per the specific requirements of women farmers through a strategy suited to their needs At least 30% scheme beneficiaries are to be women farmers/farm women; Representation of Women farmers in different decision making bodies at State, District and Block level such as State Farmers Advisory Committee (SFAC) at State Level; Agriculture Technology Management Agency(ATMA) Governing Board, ATMA Management Committee(MC) and District Farmer Advisory Committee (DFAC) at district level and Block Farmer Advisory Committee (BFAC) at Block Level Preferential involvement of women as 'Farmer Friends' under the extension delivery mechanism below the block level (@1Farmer Friend/2 Villages) Since inception of the Scheme in 2005-06, total 11911343 farm women (24.28% of the total benefited farmers) have participated in farmer oriented activities like Exposure Visits, Training, Demonstrations & Kisan Melas including 862423 women farmers benefited during 2018-19 (up to 31st December, 2018). During FY 2018-19, Rs. 19515/- lakhs was allocated and earmarked for women, out of which Rs.12834 lakhs has been utilised under the scheme for women beneficiaries (as on 31.12.2018).

3		National Gender Resource Centre in Agriculture (NGRCA)	<ul style="list-style-type: none"> The Centre acts as a focal point to converge of all gender related activities & issues in agriculture & allied sectors within and outside the Department of Agriculture, Cooperation & Farmers Welfare, add gender dimension to agriculture policies & programmes, render advocacy / advisory services to the States/ UTs to internalize gender specific interventions and ensure that the policies and programmes in agriculture are fully engendered & reflect the national commitment to empowerment of women. The NGRCA has celebrated Mahila Kisan Diwas, 2018 on October 14-15, 2018 in a big way by Mobilizing participation of various stake holders viz. women farmers, women entrepreneurs, Academia, Researchers / Scientists , Farmer Organizations, Representatives from Banking Sector, Industry, NGO etc. who are involved in the process of women's empowerment and emancipation through agriculture and allied sectors. Felicitation and honouring of 45 Progressive Women Farmers from across the country for their exemplary work in Agriculture and allied sectors based on their nominations by respective State Governments/ MANAGE. Two Books titled "Success Stories of Women Farmers (English & Hindi)" and "Farm women Friendly Handbook (English & Hindi)" were released. About, 400 stakeholders, including women from across the country participated in this event.
4.		Establishment of Agri-Clinics & Agri-Business Centres (ACABC)	<p>The AC&ABC scheme has been revised during 2010-11 with changes in relevant operational aspects aiming to provide better services to farmers, improvements in the quality of training and simplify the process of subsidy disbursement and provision of extension service to farmers by these agripreneurs has been made a mandatory component of the said Scheme.</p> <p>The subsidy is 44% in respect of women, SC/ST & all categories of the candidates from North-Eastern and Hill States and 36% in respect of other categories.</p> <p>During the current year, 2707 candidates were trained and 433 have established their ventures. Since inception of the scheme, 61897 candidates have been trained and 26183 agri-ventures have been established in the country till 31.12.2018. Out of these 4762 and 1502 are women candidates and entrepreneurs. Out of the established ventures, 96 were subsidized as on 30.11.2018.</p>
5		Extension Education Institutes	<p>During 2017-18, the Extension Education Institutes (EEIs) conducted 182 training courses with 4479 field extension functionaries including 989 women extension functionaries, whereas during 2018-19 (till 31.12.2018), the EEIs conducted 142 training courses with 3266 field extension functionaries including 663 women extension functionaries working in agriculture & allied departments.</p>
6.		Diploma in Agril. Extension Services for Input Dealers (DAESI)	<p>During 2017-18, 149 batches of DAESI programme were conducted to provide certification to 5960 Input Dealers including 32 women candidates, whereas during 2018-19 (till 31.12.2018), 148 programmes have been started to train 5920 input dealers including 57 women candidates.</p>
7.		Model Training Courses	<p>During 2017-18, 62 Model Training Courses in the thrust areas of agriculture & allied sectors were conducted through specialized National Training Institutes with 1238 field extension functionaries including 194 women extension functionaries working in agriculture & allied departments of States/UTs, whereas during 2018-19 (till 15.11.2018), 46 Model Training Courses have been conducted with 923 field extension functionaries including 123 women extension functionaries.</p>

8.	Crops	National Food Security Mission (NFSM) & Bringing Green Revolution to Eastern India (BGREI)	At least 30% of funds under NFSM and 33% under BGREI will be made for women farmers.
9.	Agricultural Marketing	Integrated Scheme for Agricultural Marketing (ISAM)	Women under AMI are eligible for subsidy @ 33.33% as against 25% for others.
10.	Mechanization and Technology	Sub Mission on Agricultural Mechanization (SMAM)	<ul style="list-style-type: none"> State Governments have been advised to ensure 30% of allocation under the scheme belongs to women beneficiary and also to furnish reports separately in SMAM guidelines. 10% more assistance for women beneficiary to procure Agricultural Machinery, implements and equipments including PHT under component 2 and 3. In order to reduce the drudgery and increasing efficiency in farm operations, a number of agricultural implements and hand tools suitable for farm women have been developed by Research & Development organizations under ICAR. The list of gender friendly equipments has been sent to all States/UTs for popularizing them through various schemes of Government. Gender Friendly Equipment for Women: Under the component 1 of SMAM, Agricultural Mechanization through Training, Testing, and Demonstration, a total 882 women were trained during the current Financial Year 2018-19 (till August 2018).
11.	Seeds	Sub-Mission for Seed and Planting Material (SMSP)	Financial assistance/ subsidy benefits are equally available/ open to all the farmers including that of women farmers. Implementing States/UTs/ agencies have been requested to allocate sufficient funds and ensure participation of women farmers.
12.	Cooperation	National Cooperative Development Corporation	<p>The Cooperative Education Programme for women is being implemented by National Cooperative Union of India (NCUI) through the State Cooperative Unions in the states of Madhya Pradesh, Manipur, Mizoram, Orissa, Rajasthan, Tamil Nadu, Uttar Pradesh and West Bengal. During the year 2017-18 as many as 1938 women were imparted education under various classes in 22 events. During the year 2017-18, 228 self help groups with membership of 2926 women were formed by the lady mobilizers of the cooperative education field projects. Through various income generating activities, 12366 women were benefitted under this programme. During the year 2017-18, a total of 85973 women were imparted education under various educational activities.</p> <p>NCDC encourages women cooperatives to avail assistance under its various schemes. Women cooperatives are now covered under Weaker Section Programme for the purpose of availing subsidy and concessional funding during the remaining period of the 12th Five Year Plan programme under Central Sector Integrated Scheme on Agricultural Cooperation. Cumulatively, as on 31.03.2018 NCDC has sanctioned and released financial assistance of Rs. 1532.96 crore and Rs. 1420.77 crore respectively for the development of cooperative societies exclusively promoted by women. In the 12461 projects/ units sanctioned by NCDC in the year 2017-18, it is estimated that 31.47 lakh women are enrolled as members, out of which 401 women members are on the Board of Directors.</p> <p>NCDC has established Laxmanrao Inamdar National Academy for Cooperative Research and Development (LINAC) at Gurugram, Haryana as its training institute to train and develop the personnel engaged in NCDC assisted projects / schemes. During 2017-18 the institute held 32 training programmes exclusively for women cooperators. The four training programme on "Role of Governance and Leadership Development" for Women Cooperatives were attended by 137 participants. Two of the above programmes were exclusively for 58 participants from North Eastern States.</p>

13.	Policy		The National Policy for Farmers 2007 announced by the Government envisages the following measures aimed at women's empowerment: <ul style="list-style-type: none"> • Asset reforms under land, water and livestock for an equitable share to women farmers. • Better access to inputs and services, science and technology, implements, credit and support services like creches, child care centres, nutrition, health and training. • Encouragement to women for participating in group activities aimed at achieving economies of scale through farming groups. • Involvement of women in conservation and development of bio-resources.
14.	Rainfed Farming Systems (RFS)	National Mission for Sustainable Agriculture (NMSA).	Guidelines of all these schemes envisage that at least 50% of the allocation is to be utilized for small, marginal farmers of which atleast 30% are women beneficiaries/ farmers.
15.	Integrated Nutrient Management		Under the National Mission for Sustainable Agriculture, INM Division are implementing Paramparagat Krishi Vikas Yojana (PKVY), Mission Organic Value Chain Development for North Eastern Region (MOVCDNER), Soil Health Card & Soil Health Management scheme; States have been requested to earmark atleast 30% of budget allocations for women beneficiaries/farmers.
16.	Plant Protection		Nation Institute of Plant Health Management (NIPHM) is a component under Sub Mission on Plant Protection and Plant Quarantine (SMPPQ) which provides Pest Management capacity building programme to State officials and farmers. Till October 2018, a total of 1229 male & 303 female officers have participated in 73 nos. of training programme and 1627 male & 155 female farmers have participated in 32 nos. of training at NIPHM.

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सत्यमेव जयते

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