



सत्यमेव जयते

# वार्षिक रिपोर्ट 2017-18

कृषि, सहकारिता एवं किसान कल्याण विभाग

कृषि एवं किसान कल्याण मंत्रालय

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# ANNUAL REPORT 2017-18



सत्यमेव जयते

**Department of Agriculture, Cooperation & Farmers Welfare**  
**Ministry of Agriculture & Farmers Welfare**  
**Government of India**  
**Krishi Bhawan, New Delhi-110 001**  
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## CHAPTER 1

## Overview

**1.1** Agriculture plays a vital role in India's economy. 54.6% of the population is engaged in agriculture and allied activities (census 2011) and it contributes 17.4% to the country's Gross Value Added for the year 2016-17 (at current prices). Given the importance of agriculture sector, Government of India took several steps for its sustainable development. Steps have been taken to improve soil fertility on a sustainable basis 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 for creation of a unified national agriculture market to boost the income of farmers. Further, to mitigate risk in agriculture sector a new scheme "Pradhan Mantri Fasal Bima Yojana (PMFBY) has been launched for implementation from Kharif 2016.

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

**1.3 Agriculture Gross Value Added (GVA)**

As per the Provisional Estimates released by Central Statistics Office (CSO), Ministry of Statistics & Programme Implementation on 31.05.2017, agriculture and allied sectors contributed approximately 17.4 percent of India's GVA at current prices during 2016-17. GVA of agriculture and allied sectors and its share in total GVA of the country at current prices series during the last 4 years is as follows:

(Rs. in crore)

Sector	Year			
	2013-14	2014-15	2015-16	2016-17
<b>GVA of Agriculture and Allied Sectors</b>	1926372	2068958	2175547	2372085
<b>Percent to total GVA</b>	18.6	18.0	17.5	17.4

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

**1.4** There has been a continuous decline in the share of agriculture and allied Sectors in the GVA from 18.6 percent in 2013-14 to 17.4 percent in 2016-17. 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 GVA	Agriculture & Allied Sector GVA
<b>2013-14</b>	6.1	5.6
<b>2014-15</b>	7.2	-0.2
<b>2015-16</b>	7.9	0.7
<b>2016-17</b>	6.6	4.9

Source: Central Statistics Office.

**1.5** Agriculture and Allied sectors witnessed a growth of 5.6 per cent in 2013-14, (-) 0.2 per cent in 2014-15, 0.7 per cent in 2015-16 and 4.9 in 2016-17 at 2011-12 basic prices. The vicissitudes of growth in the agricultural and allied sector have implications for overall growth of GVA and in 2016-17 the percentage contribution to total GVA growth was much larger than 2015-16.

### Rainfall 2017-18

#### Monsoon Rainfall (June - September)

**1.6** The cumulative rainfall in the country during the monsoon season, i.e. 1<sup>st</sup> June to 30<sup>th</sup> September, 2017, has been 5 percent lower than that of the Long Period Average (LPA). Rainfall in the four broad geographical divisions of the country during the above period has been equal to LPA in South Peninsula, but lower than LPA by 10 percent in North-West India, 6 percent in Central India and by 4 percent in East & North East India. Out of 36 meteorological sub-divisions, 5 met sub-divisions in the country received excess rainfall, 25 met subdivisions received normal rainfall and 6 met subdivisions received deficient rainfall. Out of 630 districts for which rainfall data is available, 23(4 percent) districts received large excess rainfall, 79(12 percent) received excess rainfall, 313(50 percent) districts received normal rainfall, 207 (33 percent) received deficient rainfall and 8(1 percent) received large deficient rainfall.

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

**1.7** During the post-monsoon season (1<sup>st</sup> October to 22<sup>nd</sup> November, 2017) country received rainfall which was 10 percent lower than the LPA. Out of 36 meteorological subdivisions, 7 received large excess/ excess rainfall, 13 received normal rainfall and 16 received deficient/large deficient rainfall.

#### Production Scenario 2016-17

**1.8** The normal spell of rainfall during monsoon 2016 and the various policy initiatives taken

by the Government made it possible to achieve a broad-based record foodgrain production in the year 2016-17. As per the Fourth Advance Estimates for 2016-17, production of rice is estimated at a new record of 110.15 million tonnes. Rice production is 3.50 million tonnes higher than the previous record production of 106.65 million tonnes achieved during 2013-14 and has increased significantly by 5.74 million tonnes than the production of 104.41 million tonnes during 2015-16. Production of wheat during 2016-17 is also estimated at a record level of 98.38 million tonnes. The wheat production is higher by 2.53 million tones than the previous record production of 95.85 million tonnes during 2013-14. The wheat production is higher by 6.10 million tonnes as compared to the wheat production of 92.29 million tonnes in 2015-16. Further, production of coarse cereals is estimated at a new record level of 44.19 million tonnes. It is higher than the previous record production of 43.40 million tonnes achieved during 2010-11 by 0.79 million tonnes and also higher by 5.67 million tonnes as compared to the production of 38.52 million tonnes achieved during 2015-16.

**1.9** As a result of significant increases in the area coverage and productivity of all major pulses, total production of pulses during 2016-17 is estimated at a record level of 22.95 million tonnes. The production during 2016-17 is higher by 6.61 million tonnes than the previous year's production of 16.35 million tonnes. Total foodgrain production during 2016-17 in the country is estimated at 275.68 million tonnes which is higher by 10.64 million tonnes than the previous record production of foodgrain of 265.04 million tonnes (2013-14) and also higher by 24.12 million tonnes than the foodgrain production in 2015-16.

**1.10** Total oilseeds production in the country in 2016-17 is estimated at 32.10 million tonnes which is higher by 6.85 million tonnes



over the production achieved during 2015-16. Production of sugarcane is estimated at 306.72 million tonnes which is lower by 41.73 million tonnes than the production of 348.45 million tonnes during 2015-16. Despite lower area coverage during 2016-17, higher productivity of cotton has resulted in a higher

production level of 33.09 million bales (of 170 kg each), i.e., an increase of 3.09 million bales, as compared to 30.01 million bales during 2015-16. Production of jute & mesta estimated at 10.60 million bales (of 180 kg each) is marginally higher than the level of production of 10.52 million bales during the 2015-16.

### Area, production and yield of major crops

Crops	Area (Lakh hectare)			Production (Million Tonnes)			Yield (kg/hectare)		
	2014-15	2015-16	2016-17*	2014-15	2015-16	2016-17*	2014-15	2015-16	2016-17*
Rice	441.10	434.99	431.94	105.48	104.41	110.15	2391	2400	2550
Wheat	314.65	304.18	305.97	86.53	92.29	98.38	2750	3034	3216
Coarse cereals	251.70	243.89	247.71	42.86	38.52	44.19	1703	1579	1784
Pulses	235.54	249.12	294.65	17.15	16.35	22.95	728	656	779
Foodgrains	1243.00	1232.18	1280.26	252.02	251.57	275.68	2028	2042	2153
Oilseeds	255.96	260.87	262.06	27.51	25.25	32.10	1075	968	1225
Sugarcane	50.66	49.27	43.89	362.33	348.45	306.72	71512	70720	69886
Cotton@	128.19	122.92	108.45	34.80	30.01	33.09	462	415	519
Jute & Mesta#	8.10	7.82	7.66	11.13	10.52	10.60	2473	2421	2490

\* 4th advance estimates @ Production in million bales of 170 kg each.

# Production in million bales 180 Kg. each.

### Production Scenario during Kharif 2017-18 (as per the First Advance Estimate).

**1.11** Given that monsoon rainfall was 5 percent lower than the LPA in 2017 as against 3 percent lower than LPA in 2016, there is a change in area covered under Kharif in 2017. Total area coverage under kharif foodgrains is estimated to have decreased to 703.52 lakh hectares as compared to 724.19 lakh hectares in 2016-17. Area coverage under rice is estimated to have decreased from 389.49 lakh

hectares in 2016-17 to 387.16 lakh hectare in 2017-18; area coverage under kharif coarse cereals decreased to 183.52 lakh hectares as compared to 191.26 lakh hectare during 2016-17. Further, area coverage under pulses is estimated to have decreased to 132.84 lakh hectares as compared to 143.44 lakh hectares during 2016-17. The comparative position of production of food grains, oilseeds, sugarcane and cotton during kharif 2017-18 vis-à-vis kharif 2016-17 is given below:

### Kharif production in 2016-17 and 2017-18 (Million Tonnes)

Crop	2016-17 (4 <sup>th</sup> Advance estimates)	2017-18 (1 <sup>st</sup> Advance estimates)	Absolute Difference (2017-18 over 2016-17)	Percentage Increase/decrease (+)/(–) in 2017-18 over 2016-17
Foodgrains	138.52	134.67	-3.86	-2.79
Oilseeds	22.40	20.68	-1.72	-7.68
Sugarcane	306.72	337.69	30.97	10.10
Cotton@	33.09	32.27	-0.82	-2.48
Jute*	10.09	9.83	-0.26	-2.60
Mesta*	0.51	0.50	-0.02	-3.35

@ 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

**1.12** As per the First Advance Estimates, total production of Kharif foodgrains during 2017-18 is estimated at 134.67 million tonnes. This is lower by 3.86 million tonnes as compared to last year's record kharif foodgrain production of 138.52 million tonnes (4<sup>th</sup> Advance Estimates). Total production of Kharif rice is estimated at 94.48 million tonnes. This is lower by 1.91 million tonnes than the last year's record production of 96.39 million tonnes. Production of maize is expected to be 18.73 million tonnes which is marginally lower by 0.52 million tonnes than that of last year's record production. The total production of coarse cereals in the country has decreased to 31.49 million tonnes as compared to 32.71 million tonnes during 2016-17 (4<sup>th</sup> Advance Estimates). The total production of kharif pulses is estimated at 8.71 million tonnes which is lower by 0.72 million tonnes than the last year's record production of 9.42 million tonnes. However, Kharif pulses estimated production is 2.86 million tonnes more than the last five years average production.

**1.13** The total production of Kharif oilseeds in the country is estimated at 20.68 million tonnes as compared to 22.40 million tonnes during 2016-17, i.e., a decrease of 1.72 million tonnes. Production of sugarcane is estimated at 337.69 million tonnes which is higher by 30.97 million tonnes than the last year's

production of 306.72 million tonnes. Despite higher area coverage, lower productivity of cotton is estimated to have reduced to a level of production of 32.27 million bales (of 170 kg each) as compared to 33.09 million bales during 2016-17.

**1.14 Capital Formation in Agriculture and Allied Sectors:** Gross capital formation (GCF) in agriculture and allied sector is estimated separately for public, private corporate and the household sectors. Items included in the estimates of GCF are:

- (i) Improvement of land and irrigation works.
- (ii) Laying of new orchards and plantations.
- (iii) Purchase of agricultural machinery and implements.
- (iv) Agriculture construction works.
- (v) Additions to livestock.
- (vi) Fishing boats and nets etc.

Gross capital formation (GCF) in agriculture and allied sectors relative to GVA in this sector has been showing a fluctuating trend from 16.5 per cent in 2012-13 to 16.4 per cent in 2015-16.

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

(Rs.in crore)

Year	GCF in Agriculture & Allied Sectors			GVA in Agriculture & Allied Sectors	GCF in Agriculture & Allied Sectors as percentage of GVA in Agriculture & Allied Sector		
	Public	Private	Total		Public	Private	Total
2012-13	36019	215075	251094	1524288	2.4	14.1	16.5
2013-14	33925	250499	284424	1609198	2.1	15.6	17.7
2014-15	36714	240701	277415	1606140	2.3	15.0	17.3
2015-16	44957	220081	265038	1617208	2.8	13.6	16.4

Source: Central Statistics Office, MOSPI

\*As per Advance Estimates for 2015-16 (latest available) released on 31.05.2017

### National Policy for Farmers (NPF), 2007:

**1.15** 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 was finalized and circulated to the Ministries/Departments concerned, as well as to all States/UTs for necessary follow-up action. An Inter-Ministerial Committee was constituted for the purpose. The committee identified 201 action points from NPF, 2007. Of the 201 action points identified, 192 numbers have already implemented.

**1.16** The Hon'ble Prime Minister has set a target before the country to double farmers' income by 2022. To achieve this target he has also advocated a seven point strategy. These are:

- i. Special focus on irrigation with sufficient budget, with the aim of "Per Drop More Crop".
- ii. Provision of quality seeds and nutrients based on soil health of each field.
- iii. Large investments in Warehousing and Cold Chains to prevent post-harvest crop losses.
- iv. Promotion of value addition through food processing.
- v. Creation of a National Farm Market, removing distortions and e-platform across 585 Stations.
- vi. Introduction of a New Crop Insurance Scheme to mitigate risks at affordable cost.
- vii. Promotion of ancillary activities like poultry, beekeeping and fisheries.

Hence, the Department of Agriculture, Cooperation and Farmers Welfare has constituted an Inter-Ministerial Committee to examine various aspects relating to doubling of farmers' income by year 2022. The Report is likely to be released this year.

**1.17** Parallely, 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 Card Scheme, Neem Coated Urea, e-National Agriculture Market etc. These are a few of our flagship programs that aim to improve the productivity and earnings of our farmers.

**1.18** The strategy of the Government is to focus on farmers' welfare by making farming viable activity. Farm viability is possible, when cost of cultivation is reduced, yield per unit of farm is increased and farmers get remunerative prices on their produce. The Government is realigning its interventions to move from a production-centric to a farmer income-centric approach.

#### **Pradhan Mantri Krishi Sinchayee Yojana (PMKSY):**

**1.19** 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 objective of PMKSY is 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. Cabinet decision was taken in July, 2016 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 Department of Agriculture, Cooperation & Farmers Welfare (DAC&FW).

**1.20** During 2017-18, an amount of Rs. 1610.00 crore and Rs. 594.90 crore has been released as on 31<sup>st</sup> December, 2017 to states for "Micro-irrigation" and for "Other Interventions" respectively under Per Drop More Crop

component. An area of about 4.97 lakh ha has been covered under Micro Irrigation and constructed 39808 water harvesting structure till 31<sup>st</sup> December, 2017.

### AGRICULTURE CREDIT

**1.21** Government announces annual target for agriculture credit in the budget every year. Agricultural credit flow has shown consistent progress every year. The agriculture credit flow target for the year 2016-17 was fixed at Rs. 9,00,000 crore and against this target the achievement was Rs.10,65,756 crore. The agriculture credit flow target for 2017-18 has been fixed at Rs.10,00,000 crore and till October, 2017 against this target a sum of Rs.6,71,113.42 crore has been disbursed.

### INTEREST SUBVENTION SCHEME

**1.22** The Department implements the Interest Subvention Scheme under which interest subvention is provided on short-term crop loans upto Rs.3 lakh for a period of one year which is made available to farmers at subvented interest rate of 7% per annum and in case of timely repayment, the same gets reduced to 4% per annum.

### CROP INSURANCE

**1.23** Various Crop Insurance programme 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% is to be 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 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:

**1.24** Commission for Agricultural Costs and Prices (CACP) was set up with a view to evolve a balanced and integrated price structure, is mandated to advise 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:

**1.25** 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 impact of MSPs on consumers, in addition to ensuring rational utilization of land, water and other production resources. Thus, pricing policy i.e. the exercise of MSP is not based on cost only though cost is an important determinant of MSP.

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## CHAPTER 2

# Functions and Organizational Structure

**2.1 Structure:** The Department of Agriculture, Cooperation & Farmers Welfare (DAC&FW) is one of the three constituent Departments of the Ministry of Agriculture & Farmers Welfare, the other two being Department of Animal Husbandry, Dairying & Fisheries (DAHD&F) and Department of Agricultural Research and Education (DARE). This Department is headed by Agriculture & Farmers Welfare Minister and 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, five Additional Secretaries including one Financial Adviser, Agriculture Commissioner, 13 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 (CACP) 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:** An Administrative Vigilance Unit (AVU) functions in the Department under a Joint Secretary, designated as Chief Vigilance Officer (CVO), 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 directions/guidelines of Central Vigilance Commission (CVC) and after authentication the complaints/allegations are reviewed through meetings, reports/returns etc. and necessary follow-up action is taken. 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. This year Vigilance Awareness week was observed from 30<sup>th</sup> October to 04<sup>th</sup> November, 2017.

**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 (Administration) who not only acts as Grievance Officer of the Department but 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 2017-18 (from 01.04.2017 to 30.11.2017) 3228 public grievance petitions/suggestions have been received through CPGRAMS portal and 945 cases were carried forward from previous year, out of which 3049 cases have been disposed of and 1124 cases were pending in this Department at the end of November, 2017.

**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](http://www.agricoop.nic.in)).

**2.6 Implementation of the Right to Information Act, 2005:** During year 2017-18 (as on 27.11.2017), 3383 physical & online RTI applications and 162 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 2017-18, various visitors from NGOs as well as from 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 regularly. In accordance with the guidelines issued by the Department of Official Language, a Joint Hindi Salahkar Samiti for all the three departments of the Ministry of Agriculture and Farmers Welfare has been reconstituted in consultation with the Department of Official Language under the Chairmanship of the Honorable Agriculture and Farmers Welfare Minister and first meeting of this Committee has been held in 2017.

**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, officers under the control of this Department, wherein 80 per cent of the officers and employees have acquired working knowledge of Hindi, were notified in the Gazette of India under Rule 10 (4) of the Official Language Rules, 1976.

**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. At present 2 stenographers and 3 M.T.S are undergoing training of Hindi steno and Hindi typing respectively.

**2.11** Five 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.

**2.12** 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<sup>st</sup> -15<sup>th</sup> September, 2017. On this occasion, the Honourable Minister for Agriculture and Farmers Welfare issued an appeal to all officers and staff of the Department of Agriculture 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.

**2.13** 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, 40 subordinate/attached offices have been inspected by the officers of the Hindi Division of Department of Agriculture, Cooperation and Farmers Welfare.

**2.14 Reservation for Scheduled Castes/ Scheduled Tribes /Other Backward Castes:** Department of Agriculture, Cooperation & 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 persons with disabilities (PwDs).

**2.15 Prevention of Harassment of Women Employees:** An Internal Complaints Committee on Prevention of Sexual Harassment of Women at Workplace has been constituted in 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.

**2.16** 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 complains received during 2017-18	No. of complaints disposed of during 2017-18	No. of cases pending for more than 90 days	No. of workshops/ programmes carried out	Nature of action taken by the employer
Nil	Nil	Nil	Nil	-

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## CHAPTER 3

# Directorate of Economics & Statistics

**3.1** Directorate of Economics and Statistics is an attached office of the DAC&FW. Its mandate is to collect, compile and disseminate economic and statistical data relating to agriculture and provide analytical inputs to the Department of Agriculture, Cooperation & Farmers Welfare for the formulation of better agricultural and economic development policies. Its mission is to provide important information on agricultural economics & statistics like area, production and yield of principal crops, minimum support prices (MSPs), monitor wholesale prices of agricultural commodities, implement schemes related to improvement of agricultural statistics, and carrying out agro-economic research studies. 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 generates a large body of literature on agricultural economics and statistical information and makes it available in the public domain for the use of all stakeholders.

## Major Programmes/Activities

### Agricultural Statistics Division

**3.2** This Division releases four advance estimates and final estimates of area, production and yield in respect of major food grains, oilseeds, sugarcane and fibers. This Division collects such information from State Agricultural Statistics Authorities (SASAs), which act as the nodal agencies responsible for the collection/compilation of agriculture statistics in the States. In addition to the inputs received from SASAs, the Division also utilizes

the forecasts of Mahalanobis National Crop Forecast Centre (MNCFC), Space Application Centre (SAC) and Institute of Economic Growth etc. of crops to firm up the estimates. The first advance estimates are released in the month of September. Second advance estimates are released in the month of February. By this time, the assessment for first advance estimates of Rabi crops is also available. The third advance estimates are released in April when the State Governments are ready with better assessment of production for both Kharif and Rabi crops. The fourth advance estimates are released in July-August. By this time, most of the Rabi crops are harvested and SASAs are also in a position to supply the yield estimates of both Kharif and Rabi seasons based on reasonable number of Crop Cutting Experiments. The final estimates are released in the month of February of the following year. The Fourth Advance Estimates for 2016-17 were released on 16.08.2017 (**Annexure-3.1**) and First Advance Estimates for 2017-18 were released on 22.09.2017. (**Annexure-3.2**)

**3.3** The Agricultural Statistics Division organizes a National Workshop on Improvement of Agricultural Statistics every two years. Officers from the State Departments of Agriculture, Revenue, Economics and Statistics, Horticulture, Agricultural Marketing and Central Ministries/Organizations participate in the Workshop. The Workshop deliberates on the ways and means to improve the collection, compilation, dissemination and use of agricultural statistics and the changes required in the light of changing



characteristics of agriculture with a focus on improving quality, timeliness and reliability of data. The National Workshop for the year 2016-17 was organized during 4 - 5 January, 2017 at National Agricultural Science Complex (NASC), Pusa, New Delhi.

**3.4** In addition, the Directorate coordinates with international bodies such as the Food and Agriculture Organisation (FAO) on global efforts to improve agricultural statistics. It is also responsible for providing necessary data to the Central Statistics Office (CSO) for GDP compilation and meets international obligations related to standards of data dissemination.

### Food Economics and Commercial Crops Divisions

**3.5** Food Economics Division examines the Kharif and Rabi Price Policy Report of Commission for Agricultural Costs & Prices (CACP). Commercial Crops Division examines the reports concerning Copra and Jute. 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) major crops and Fair and Remunerative Price (FRP) for Sugarcane based on the recommendations of the Commission for Agricultural Costs & Prices (CACP) and after considering the views of State Governments and Central Ministries/ Departments concerned. While recommending price policy, the 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. Government organizes purchase operations through public and cooperative agencies. The designated central nodal agencies intervene in the market for undertaking procurement operations with the objective that market prices do not fall below the MSPs.

**3.6** The Government has fixed the MSPs for Kharif crops and Rabi crops of 2017-18. The MSP of Paddy (common) for Kharif crops 2017-18 has been fixed at Rs. 1550 per quintal and of Paddy (Grade A) at Rs. 1590 per quintal, an increase of Rs. 80 per quintal each over the last year. The MSP of Jowar (Hybrid) has been fixed at Rs. 1700 per quintal and Rs. 1725 per quintal for Jowar (Maldandi); Bajra at Rs. 1425 per quintal; Maize at Rs. 1425 per quintal and of Ragi at Rs. 1900 per quintal. The MSP of Cotton has been raised by Rs. 160 per quintal and fixed at Rs. 4020 per quintal for Medium Staple and at Rs. 4320 per quintal for Long Staple.

**3.7** To incentivize cultivation of pulses and oilseeds in the country, Government has fixed MSPs of Arhar (Tur), Moong and Urad at Rs. 5450 per quintal, Rs. 5575 per quintal and Rs. 5400 per quintal respectively including a bonus of Rs. 200/- per quintal for each; MSPs of Sunflower seed, Sesamum and Nigerseed at Rs.4100/- per quintal, Rs. 5300/- per quintal and Rs. 4050 per quintal respectively including a bonus of Rs. 100/- per quintal for each; MSPs of Groundnut in-shell and Soyabean at Rs. 4450/- per quintal and Rs.3050/- per quintal respectively including a bonus of Rs. 200/- per quintal for each.

**3.8** The MSP of Wheat for Rabi crops 2017- 18 has been fixed at Rs. 1735 per quintal marking an increase of Rs. 110 per quintal over the last year's MSP. The MSP of Barley has been fixed at Rs. 1410 per quintal marking an increase of Rs. 85 per quintal over the last year's MSP. The MSP of Gram has been fixed at Rs. 4400 per quintal including a bonus of Rs. 150/- per quintal

marking an increase of Rs.400 per quintal over its last year's MSP. The MSPs of Masur (Lentil), Rapeseed/Mustard and Safflower have been fixed at Rs. 4250/- per quintal, Rs. 4000/- per quintal and Rs. 4100/- per quintal respectively including a bonus of Rs. 100/- per quintal for each.

**3.9** The Government has fixed the Minimum Support Price (MSP) for Copra for 2017 season at Rs. 6500/- per quintal for Fair and Average Quality (FAQ) variety of Milling Copra and Rs. 6785/- per quintal for FAQ variety of Ball Copra. For 2017-18 season the MSP for Raw Jute has been fixed at Rs. 3500/- per quintal for FAQ variety. The MSP for Toria to be marketed in 2018-19 season has been fixed at Rs. 3900/- Per Quintal including bonus of Rs. 100/- per quintal.

### Special Data Dissemination Standards (SDDS) Division

**3.10** The Division generates quarterly estimates of agricultural production for use in the compilation of quarterly National Accounts by the Central Statistics Office. This activity was undertaken in order to meet the obligations concerning supply of data to the International Monetary Fund. 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. The Division is also 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 at a Glance' 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>.

### Market Intelligence & Price Analysis Division

**3.11** The Division provides necessary market intelligence to the DAC&FW. Wholesale prices of 170 selected agricultural commodities are compiled on weekly basis from approximately 700 market centres spread all over the country. Of these, weekly wholesale prices of 101 agricultural commodities from 220 markets /centres spread all over the country (745 quotations) is provided to the office of Economic Adviser, Department of Industrial Policy & Promotion (DIPP), Ministry of Commerce & Industry, for preparation of monthly Wholesale Prices Index (WPI) as per the revised series of WPI with base year 2011-12.

**3.12** Monthly wholesale prices of certain agricultural commodities and animal products at selected markets / centers in India as well as international prices of selected agricultural commodities compiled in the Division are published in monthly journal, viz. Agricultural Situation in India. An annual publication "Agricultural Prices in India" compiling statistics on wholesale, retail and international prices of selected agricultural commodities is also brought out.

### Retail Prices

**3.13** Weekly retail prices of 45 food items from 87 market centers across the country are collected and compiled every Friday in the Division.

### Farm Harvest Prices

**3.14** The Division collects and compiles data on farm harvest prices of 36 major crops from all States / Union Territories through their State Agricultural Departments / Directorate of Economics & Statistics / Directorate of Land Records, etc. A publication "Farm Harvest

Prices of Principal Crops in India” is brought out annually.

### International Prices

**3.15** The Division maintains international data on the prices of 56 agricultural commodities across the world, compiled from the UK based international journal – the Public Ledger.

### Terms of Trade (ToT)

**3.16** Index of Terms of trade (ToT) between agriculture and non-agricultural sectors is also prepared on annual basis as per the methodology recommended by the Working Group headed by Prof. S. Mahendra Dev, Director, Indira Gandhi Institute of Development Research (IGIDR), Mumbai. This index is used as an input for price policy formulation of agricultural crops by Commission for Agricultural Cost and Prices (CACP).

### Agricultural Market Information System (AMIS)

**3.17** In order to maintain timely, accurate and transparent information for addressing food price volatility and to track global food availability, AMIS-FAO (Food and Agricultural Organization) prepares a Food Balance Sheet, where data on inputs of production, trade, food, feed and seed use as well as wastage of wheat, rice, maize, and soyabean are maintained globally. DES, being assigned as the focal point, provides the data at regular intervals to AMIS (FAO) in the required format.

**3.18** For strengthening the AMIS in India using innovative methods and digital technology, the FAO-funded AMIS Baby Project was initiated, jointly in collaboration with the Ministry of Agriculture and Farmers Welfare. The following activities were some important activities of the Baby Project:

- a) Field visits to selected mandis by a team of DES & FAO officials was undertaken.
- b) A five day Computer Assisted Personal Interviewing (CAPI) Training programme organized for selected technical staff and officers from DES at IASRI, New Delhi as part of capacity building and technology transfer. Using CAPI was not found feasible in the given contexts and, therefore, could not be adopted.
- c) A study visit of Indian officials to the Philippines Statistical Authority (PSA) and National Food Authority (NFA) of Philippines was organized by FAO for sharing experiences in Agricultural statistics as well to study methodology used by them.
- d) An international seminar on “Approaches and Methodologies for Food Grain Stock Measurement” was organized during 9-11 November, 2016 to evolve a standardized methodology for measuring private food grain stocks in India.
- e) A training was organized under AMIS India Project in February, 2017, which inter-alia was attended by the officers of Directorate of Economics & Statistics (DES), Ministry of Agriculture & Farmers Welfare including the field staff of Market Intelligence Units of DES for capacity development on Data archival.
- f) The FAO also organized the ‘Study tour of Indian officials on Grading and Standardization of Agricultural Commodities’ during 4-10 June, 2017 at Bangkok, Thailand. This was to provide an overview of the process in Thailand and ASEAN agricultural commodities trading in the sustainable food value chain, to understand the agricultural commodity grading system and to recognize the trading standard establishment and the certification process of agricultural commodities for trading domestically and internationally.

- g) A one day workshop on 'Agricultural Markets, Prices and Market Integration in India – Conceptual and Methodological Issues' was organized by FAO at New Delhi on 21<sup>st</sup> August, 2017 which was attended by the participants of the Directorate of Economics & Statistics, the Directorate of Marketing Intelligence and the Department of Consumer Affairs.
- h) The FAO also held a National Meeting of Experts on 11-12 September, 2017 with a view to improve the data systems for monitoring the agricultural prices. It provided a platform for experts to share their know-how and experiences on methods and tools of price data visualization, analytics, and early warning models.

### Agricultural Wages Division

**3.19** Statistics relating to daily wages paid to different categories of agricultural and skilled rural labour at selected centers are collected and compiled by the Division. These are published in an annual publication 'Agricultural Wages in India', and also in the monthly journal, viz. *Agricultural Situation in India* of the Directorate of Economics & Statistics.

### International Agriculture & Compilation Division

**3.20** 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. During the year 2017-18, IAC Division handled issues relating to food security & nutrition, bilateral and multilateral cooperation for improvement in agricultural statistics, IT applications in agriculture, etc., dealt by various bilateral and multilateral organizations, viz., G20, BRICS, FAO, etc. In addition, the Division carries out compilation

and manuscript preparation works related to the flagship publications of the Department, namely *Agricultural Statistics at a Glance* and *State of Indian Agriculture*. These publications are available on the website at [www.agricoop.nic.in](http://www.agricoop.nic.in) & <http://eands.dacnet.nic.in>.

### Publication Division

**3.21** Publication Division publishes the monthly Journal titled *Agricultural Situation in India* (ASI). It aims at presenting a factual and integrated picture of the Food and Agricultural situation in India on monthly basis. The journal seeks to provide a forum for academic work and also to promote technical capability for research in agricultural and allied subjects. It is mailed every month to State Agriculture Secretaries, libraries, Universities, AERC centers, and other Ministries. This division mainly involves itself in the preparation of the manuscript of the aforesaid journal. In this regard, data on various agricultural units are collected and compiled from different Divisions of DES and other Ministries on monthly basis. The contents of farm sector news are collated and edited from the website of Press Information Bureau. Articles received from agricultural economists, research scholars, professors across various Indian Universities are considered for publication in ASI. A summary report from an AER center, which is being monitored by DES, is usually incorporated in each publication of ASI.

The following are the major Columns of ASI:

- (i) Farm sector news
- (ii) General Survey of Agriculture
- (iii) Articles
- (iv) Agro-Economic Research
- (v) Commodity Reviews
- (vi) Statistical tables on wages, prices & crop production

This Division is also involved in publishing the following periodicals of DES:



- (i) Land Use Statistics At a Glance
- (ii) Agriculture Wages in India

### Coordination

**3.22** The Coordination Division's main work is to coordinate between Department of Agriculture, Cooperation & Farmers Welfare and Directorate of Economics & Statistics in matters relating to various issues. 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.

### Plan Scheme

**3.23** 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' which pertains to Agriculture Census Division of DAC&FW. The remaining five components are being implemented by the Directorate of Economics & Statistics. The details of these five components are as follows:

#### (i) **Comprehensive Scheme for studying the Cost of Cultivation of principal crops in India**

**3.24** 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.

**3.25** Comprehensive cost statistics are collected through 16 Agricultural/Central Universities/ Colleges in respect of Principal

crops Centers located in different States. Cost of cultivation data is transmitted to the CACP so as to enable them to recommend the MSPs of the crops under both Kharif and Rabi seasons.

**3.26** 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.

**3.27** The Scheme is implemented in 20 States namely Andhra Pradesh, Assam, Bihar, Chhattisgarh, Gujarat, Haryana, Himachal Pradesh, Jharkhand, Karnataka, Kerala, Madhya Pradesh, Maharashtra, Odisha, Punjab, Rajasthan, Tamil Nadu, Telangana, Uttar Pradesh, Uttarakhand and West Bengal. The studies in the States except newly created States of Chhattisgarh, Jharkhand, Uttarakhand and Telangana are undertaken by the parent State's Agriculture universities/colleges.

**3.28** During the block period 2017-20, the Scheme covers 25 principal crops, i.e., paddy, wheat, jowar, bajra, maize, ragi, barley, moong, urad, arhar, gram, lentil, groundnut, rapeseed and mustard, nigerseed, safflower, soybean, sunflower, sesamum, cotton, jute, sugarcane, onion, potato, and coconut. The combination of crops covered in each state (also known as crop complex) varies from state to state depending upon their importance in terms of its relative contribution in the production of the relevant crop at all-India level.

**3.29** The field data are collected on the basis of Cost Accounting Method by the 16 implementing agencies. Under the Scheme, daily entries of debit/credit for expenditure/income are made in order to assess the total cost/benefit incurred/accrued to each sample farmer. The field data is collected through a detailed questionnaire administered by

Fieldsman through direct interaction with the sample farmers of 10 selected farm holdings as per the sampling design. These consist of 2 each from 5 different size classes, viz. up to 1 hectare, 1-2 hectare, 2-4 hectare, 4-6 hectare and above 6 hectare allotted to each fieldman.

**3.30** In the year 2016-17 (July to June), 155 cost estimates were generated and provided to CACP. Out of these estimates, 39 for Rabi, 97 for Kharif, 6 for sugarcane and 13 for others were generated in respect of 25 mandated crops.

### Development of FARMAP 2.0 Software

**3.31** The Directorate is in the process of developing a web based FARMAP 2.0 software with the help of NIC. It will be utilized for online collection, compilation of cost data and generation of state wise reports on cost of cultivation and production estimates of 25 mandated crops. This new software will be helpful in reducing the time lag in generation of cost estimates. The data entry module of FARMAP 2.0 software has been officially rolled out from the block period 2017-18 onwards. During the year 2017-18, as against the allocated amount of Rs.50.25 crore, Rs. 30.79 crore has been released till 31.12.2017 in three installments to the implementing Agencies.

### (iii) Agro-Economic Research (AER) Scheme

**3.32** The Agro-Economic Research (AER) Scheme begun with 4 economic research centres in 1953-54, is a well evolved grass-root-research network set up to meet field-level research inputs on agricultural economic issue for sound agricultural development policy making. The AERCs carry out studies on a need or demand basis for Ministry of Agriculture and Farmers Welfare and allied sector Departments; and agriculture related Departments of MoRD, WR, Chemicals & Fertilizers. The Centres also cater to studies and economic analysis needed by the State Governments on agriculture sector and rural

development. The 12 Agro-Economic Research Centres (AERCs) are located at Allahabad, Bhagalpur, Chennai, Delhi, Jabalpur, Jorhat, Ludhiana, Pune, Shimla, Vallabh-Vidyanagar, Visva-Bharati and Waltair and 3 Agro-Economic Research Units are located at IEG-Delhi, ISEC-Bangalore and IIM-Ahmedabad. These AER Centres/ Units are functioning under the administrative control of their respective University/Institute.

**3.33** On an average, annually 35 research studies are conducted by these Units/Centres, which relate to various economic problems in agriculture, animal husbandry, water management, fisheries & horticulture, food processing, rural development, non-farm sector employment, etc. During the Twelfth Five Year plan, 169 studies have been conducted. In the current year 2017-18 till October, 2017, 17 studies have been conducted on various issues of which most important are Farmer's Suicides, Neem Coated Urea, Soil Health Card & Kisan Call Centre etc.

**3.34** The scheme is staff oriented and 100 percent funded through grants-in-aid by Government of India, Ministry of Agriculture & Farmers Welfare. Currently, the "Agro-Economic Research (AER) Scheme" an independent component is being funded under the "Integrated Scheme on Agriculture Census, Economics and Statistics" of Central Sector Plan Scheme.

**3.35** In 2013, Government of India decided to discontinue Grants-in-Aid Support to AER Centres/Units after 12<sup>th</sup> Five Year Plan, i.e., after March, 2017. The Department of Agriculture, Cooperation & Farmers Welfare, Ministry of Agriculture & Farmers Welfare had setup a Review Committee (Dr. S.M. Jharwal committee) to examine the various aspects of Agro-Economic Research Centres including the decision of discontinuation of grants-in-aid to the Agro-Economic Research Centres after the 12<sup>th</sup> Five Year Plan. The Committee

recommended that grants-in-aid support to AERCs needs to be continued and the existing arrangement of AERCs should not be substituted by contract/bidding system. The CCEA on 31-03-2017 has decided to extend Grant-in-Aid to AER Centres/Units for one more year i.e. upto March, 2018, pending final decision on the recommendations of the Review Committee.

For the Current Financial Year 2017-18, an allocation of Rs. 2250.00 lakh as Budget Estimate (BE) has been made (including Rs.250.00 lakhs for Northeast regions); out of which Rs.918.89 lakh has been released (including Rs.41.37 lakh for Northeast regions) by October, 2017. Details of programmes for North-East region are given at **Annexure-3.3**.

#### **(iv) Planning, Management and Policy Formulation**

**3.36** In order to assess the impact of changes on the farm economy with focus on the state of Indian farmers, Planning and Management of Agriculture, a Central Sector Scheme, was formulated during 1998-99. This was designed with a view to organizing conferences and seminars involving eminent economists, agricultural scientist, experts, etc., to conduct short term studies, engage consultancy services for preparation of new decentralized strategy for development of crops, animals, dairy, poultry, irrigation, soil and water conservation, etc., and to bring out papers/reports based on the recommendations of the workshops, seminars, conferences, and also to bring out papers/reports based on the recommendations of the workshops, seminars, conferences, etc.

For the year 2017-18, an allocation of Rs.70.16 lakh was made.

#### **(iv) Improvement of Agricultural Statistics**

**3.37** 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) Establishment of an Agency for Reporting of Agricultural Statistics (EARAS), iii) Improvement of Crop Statistics (ICS). From 2007-08 the scheme has been converted to Central Sector Scheme from Centrally Sponsored Scheme and is funded 100 percent by the Central Government. The Component-wise details of the scheme are as under:

#### **3.38 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 percent 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 also Union Territories of Delhi and Puducherry.

#### **3.39 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 and crop cutting experiments of 10,000 villages and approximately 30,000 experiments at harvest stage are undertaken. These sample are equally shared by the Central Agency i.e. National Sample Survey Organization; 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 of the Area under each crop recorded in Khasra Register of villages; and (c) Supervision of Crop Cutting Experiments at the harvest stage. This component is being implemented in all TRS states and the Union Territory of Puducherry. The performance of

the implementation of this component also is being closely monitored through quarterly and seasonal progress reports.

### **Establishment of an Agency for Reporting of Agricultural Statistics (EARAS):**

**3.40** This Component is being implemented in the permanently settled States of Kerala, Odisha 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 percent villages in each year. The performance of the implementation of the component is being closely monitored thorough quarterly and seasonal progress reports.

**3.41** For the financial year 2017-18, under Improvement of Agricultural Statistics Scheme against the total allocation of Rs. 111.92 crore, (BE) Rs. 81.41 crore has been released till 31<sup>st</sup> December 2017.

### **Activities Undertaken for Welfare of Women and North- Eastern States**

**3.42** As the main objective of the scheme is to collect and compile agricultural statistics and it is not a welfare oriented scheme, no specific activity either for women or for the North-eastern States are undertaken under the scheme. However, in North Eastern States (NES), the scheme is in operation in Arunachal Pradesh, Assam, Nagaland, Sikkim & Tripura. For the financial year 2017-18 under the Scheme Rs. 3.25 crore have been released to NES by 31<sup>st</sup> December 2017.

### **Main activities of the year:**

**3.43 Pilot study to IASRI:** In order to implement the recommendations of Professor Vaidyanathan Committee, set up by the Government for improving agricultural

statistics and to examine use of remote sensing applications in agricultural statistics, after the approval of CCEA, the Government has entrusted a pilot study to Indian Agricultural Statistics Research Institute (IASRI), PUSA, New Delhi. The basic objective of the study will be to examine the reliability of estimates of crop area and crop production at state and national level on the basis of sample sizes recommended by the Vaidyanathan committee report. The Study will be conducted in five States namely Assam, Gujarat, Karnataka, Odisha and Uttar Pradesh in a period of two years.

### **(v) Forecasting Agricultural Output using Space Agro Meteorology and Land Based Observations (FASAL)**

**3.44** 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 2007 with Partner Organizations, India Meteorological Department (IMD), New Delhi, Institute of Economic Growth (IEG), New Delhi and Space Application Centre (SAC), Ahmedabad to provide multiple-in-season forecast based on Agromet, Econometric and Remote Sensing based methodology. The mandate of FASAL scheme is to generate crop forecast in respect of 11 crops, namely; Rice (Kharif & Rabi), Jowar (Kharif & Rabi ), Maize, Bajra, Jute, Ragi, Cotton, Sugarcane and Groundnut (Kharif & Rabi), Rapeseed & Mustard and Wheat. Presently, the forecasts in respect of 8 crops are being prepared.

During the current financial year 2017-18, out of Budget Estimates (BE) of Rs. 1285.84 lakh under the FASAL scheme, the expenditure has been of Rs. 591.02 lakh till 31<sup>st</sup> October, 2017.



### 3.45 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) Ahmedabad and Indian Council of Agricultural Research (ICAR).

- The project aims at generating extended range deterministic and probabilistic rainfall and temperature forecasts for meteorological sub-divisions of India at monthly and seasonal scale.

#### Details of pending Audit Paras

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 first time	No. of ATNs sent but returned with observations and Audit is awaiting their resubmission by the Ministry.	No. of ATNs which have been finally vetted by audit but have not been submitted by the Ministry of PAC.
		Nil	Nil	Nil	Nil

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## CHAPTER 4

# National Food Security Mission

**4.1** National Food Security Mission (NFSM) 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 including coarse cereal crops.

**4.2** The basic strategy of the Mission is to promote and extend improved technologies, i.e., seed, micro-nutrients, soil amendments, integrated pest management, farm machinery and implements, irrigation devices along with capacity building of farmers. The major interventions/activities covered under NFSM include cluster demonstrations of rice, wheat, pulses and coarse cereals, distribution of improved varieties/hybrid seeds, need based inputs, resource conservation techniques / energy management, efficient water/application tools, cropping system based trainings and local initiatives; award for best performing districts etc.

**4.3** Beyond 12th Plan, in 2017-18, NFSM is being implemented in 638 districts of 29 states. NFSM-Rice is being implemented in 194 districts of 25 states viz. Andhra Pradesh, Arunachal Pradesh, Assam, Bihar, Chhattisgarh, Gujarat, Himachal Pradesh, Jammu & Kashmir, Jharkhand, Karnataka, Kerala, Madhya Pradesh, Maharashtra, Manipur, Meghalaya,

Mizoram, Nagaland, Odisha, Sikkim, Tamil Nadu, Telangana, Tripura, Uttar Pradesh, Uttarakhand and West Bengal; NFSM-Wheat in 126 districts of 11 states viz., Bihar, Gujarat, Haryana, Himachal Pradesh, Jammu & Kashmir, Madhya Pradesh, Maharashtra, Punjab, Rajasthan, Uttar Pradesh and Uttarakhand; NFSM- Pulses in 638 districts of all 29 States viz. Andhra Pradesh, Arunachal Pradesh, Assam, Bihar, Chhattisgarh, Gujarat, Goa, Haryana, Himachal Pradesh, Jammu & Kashmir, Jharkhand, Karnataka, Kerala, Madhya Pradesh, Maharashtra, Manipur, Meghalaya, Mizoram, Nagaland, Odisha, Punjab, Rajasthan, Sikkim, Tamil Nadu, Telangana, Tripura, Uttar Pradesh, Uttarakhand and West Bengal ; NFSM-Coarse Cereals in 265 districts of 28 States except Goa.

**4.4 Monitoring & Evaluation at National level:** A three-tier monitoring mechanism was inbuilt in NFSM at National, State and District levels. At National level, General Council (GC) under the chairmanship of Union Agriculture Minister and Farmers Welfare 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 Plan and the progress of the programme of each state. National Level Monitoring Teams (NLMTs) reconstituted for monitoring the National Food Security Mission (NFSM) activities in respect of NFSM States. Each team is comprised of experts in the field of rice, wheat, pulses and coarse cereals as per requirement, and the respective Directors

of the Directorates of Crop Development of Ministry of Agriculture and Farmers Welfare as Coordinator. Altogether, there are eight (8) National Level Monitoring Teams (NLMTs).

**4.5** 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.

**4.6** The Mid-Term Evaluation and the Impact Evaluation study of NFSM for 11th Plan and 12th plan were conducted by an independent agency to assess the impact of the programme in increasing production and productivity of rice, wheat, pulses and commercial crops. The finding of evaluation reveals that NFSM has helped to widen the food basket of the country with significant contribution coming from the NFSM districts. Significant outputs were recorded under NFSM since inception of the programme in 2007-08. The Mission achieved the fixed target of 11<sup>th</sup> and 12<sup>th</sup> plans as additional foodgrains production of 45 million tonnes within 4 years of its implementation.

**4.7 Funding pattern:-** Till 2014-15 the programme was implemented on 100% Central (GOI) assistance. However, from the year 2015-16, the programme is being implemented on 60:40 sharing basis between GOI and state in general states and 90:10 sharing basis for North Eastern and 3 Himalayan states.

**4.8 Interventions during 2016-17:** Recommended agronomic practices have been encouraged through various demonstrations of rice, wheat, pulses & coarse cereals in 17.06 lakh ha area. Nearly, 10.32 lakh quintals of high yielding varieties/hybrid seeds of rice, wheat, pulses and Coarse Cereals have been distributed. 19.53 lakh ha area has been treated with soil ameliorants (Micronutrients/

Gypsum/Lime/Bio-fertilizers) and 26.54 lakh ha area has been covered under Integrated Pest Management (IPM). Nearly 2.34 lakh improved farm machineries including pumpset & mobile raingun have been distributed. 0.16 lakh ha area has been covered under sprinkler system. 106.33 lakh metres water carrying pipes have been distributed. About 11464 cropping system based trainings were conducted for capacity building of farmers.

**4.9** A programme on additional area coverage of Pulses during Rabi/Summer 2017-18 has been launched with an allocation of Rs. 350.00 crores (GOI Share) to increase production of rabi/ summer pulses through area expansion of Rabi Pigeonpea, Gram, Pea and Lentil during Rabi and Green Gram and Black Gram during summer. The additional allocation has been made to 17 states covered under NFSM pulses for implementation of the above said programme during 2017-18.

**4.10 Revamped NFSM from 2014-15:** Cabinet Committee of Economic Affairs had cleared the continuation of NFSM programme in the XII Plan with approved outlay of Rs.12,350 crores with addition of coarse cereals and commercial crops. NFSM was revamped during the XII Plan to cover all food grain crops including coarse cereals. During XII plan, the target of additional 25 million tonnes of food grains consisting of 10 million tonnes of rice, 8 million tonnes of wheat, 4 million tonnes of pulses and 3 million tonnes of coarse cereals was fixed.

**4.11 Outcome of NFSM since inception:** The focused and target oriented implementation of mission initiatives has resulted in bumper production of wheat, rice and pulses in the country. During 2015-16, the productions of rice, wheat pulses and coarse cereals have been achieved at the level of 104.41 million tonnes, 92.29 million tonnes, 16.35 million tonnes and 38.52 million tonnes, respectively. As per 4th Advance Estimates during 2016-17, the production of wheat increased from 75.81

million tonnes in 2006-07 (pre-NFSM year) to 98.38 million tonnes, i.e. an increase of 22.57 million tonnes. Similarly, the total production of rice increased from 93.36 million tonnes in 2006-07 to 110.15 million tonnes in 2016-17 i.e. an increase of nearly 16.79 million tonnes. The total production of Pulses also increased from 14.20 million tonnes during 2006-07 to 22.95 million tonnes during 2016-17 with an increase of 8.75 million tonnes. There are the bumper production in these crops.

**4.12 New Initiative for Pulses:** From 2016-17, new initiatives like distribution of seed minikits, subsidy on production of quality seeds, creation of seed hubs, strengthening breeder seed production programme, cluster frontline demonstrations through KVKs are also being undertaken under NFSM for increasing the production and productivity of pulses in the country.

### Bringing Green Revolution to Eastern India (BGREI)

**4.13 Bringing Green Revolution to Eastern India (BGREI),** a sub-scheme of Rashtriya Krishi Vikas Yojana (RKVY) was initiated in 2010-11 to address the constraints limiting the productivity of “rice based cropping systems” in eastern India comprising seven (7) States namely; Assam, Bihar, Chhattisgarh, Jharkhand, Odisha, Eastern Uttar Pradesh and West Bengal. An amount of Rs. 400 crores each was allocated for the programme during 2010-11 & 2011-12 and an amount of Rs. 1000 crores each during 2012-13 to 2014-15. Till 2014-15 the programme was implemented on 100 % GOI assistance. However, from the year 2015-16, the programme is being implemented on 60:40 sharing basis between GOI and States and 90:10 sharing basis in NE State (Assam).

An amount of Rs. 450.00 crore as central share has been earmarked for implementation of the programme during 2017-18.

**4.14** Under this programme, interventions like (i) Block demonstrations of rice and wheat in cluster mode; (ii) asset building activities such as construction of shallow tube wells, Dug wells / Bore wells etc. (iii) need based site specific activities for facilitating petty works such as constructing renovation of irrigation channels/electricity for agricultural purposes and (iv) Marketing support are also included.

**4.15** During 2016-17, demonstrations on rice were conducted in 4.21 lakh ha area under line transplanting, SRI, Stress tolerant Varieties, Hybrid rice, Cropping System based demonstrations, Demonstrations on pulses and oilseeds in rice fallow areas. Similarly, 0.57 lakh ha area were covered under wheat demonstration. Under asset building component, 3526 bore wells were installed, 15 Drum Seeder, 1165 Seed Drills, 802 self Propelled Paddy Transplanters, 35019 Pump set, 34463 Conoweeder, 13196 Manual Sprayer, 10792 Power Knap Sack Sprayer, 34 Power Weeder, 4159 Paddy Thresher, 1032 Multi crop Thresher, 8772 rotavator, 292 tractor, and 3.76 lakh meter of water carrying pipe were distributed. For site-specific activities, 203 check dam, 5 Minor Irrigation Tank, 683 threshing floor and 230 water harvesting structures were constructed. For post harvest & marketing support, 5 Nos of marketing shed (100 % assistance), 47 Nos of godown, 85 Nos of Mini rice mill, 2864 Nos of improved low cost paddy and grain storage were constructed and 2869 Nos of Farm family level paddy processing unit and 2795 Nos of Manually operated grain drier were distributed.

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## CHAPTER 5

# Mission for Integrated Development of Horticulture (MIDH)

## Progress of Horticulture during XII Plan

**5.1** During XII Plan, with effect from 2014-15 Department of Agriculture & Cooperation and Farmers Welfare has launched Mission for Integrated Development of Horticulture (MIDH) by subsuming schemes on horticulture viz. (i) National Horticulture Mission (NHM), (ii) Horticulture Mission for North East and Himalayan States (HMNEH), (iii) National Bamboo Mission (NBM), (iv) National Horticulture Board (NHB), (v) Coconut Development Board (CDB), (vi) Central Institute of Horticulture (CIH), Nagaland.

**5.2** The budget allocation of Rs. 2329.13 crore has been earmarked for MIDH during 2017-18. As on 31<sup>st</sup> December, 2017 funds to the tune of Rs. 1391.75 crores have been released to the States NLAs and Union Territories for implementation of schemes of MIDH i.e. Rs. 562.09 crores under NHM, Rs. 145.00 crores under HMNEH, Rs. 450.35 crores under NHB, Rs. 147.00 crore under CDB, Rs. 7.81 crore under NABM and Rs. 2.20 crore under CIH.

### National Horticulture Mission (NHM)

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

through a cluster approach with the active participation of all stake holders. 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.

**5.4** 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, were the major programmes implemented during 2016-17.

**5.5 Financial progress:** During 2017-18 (as on 31.12.17) funds to the tune of Rs 414.89 crores have been released to States/Union Territories/NLAs implementing NHM scheme against BE of Rs.1002.53 crores.

The summary details of physical progress achieved so far during 2017-18 are given at **Table 1** below:



**Table 1: Physical Progress under National Horticulture Mission during 2017-18**

S. No.	Components	Unit	Progress during 2017-18 (As on 30th November, 2017)
1	Area Expansion	Ha.	58310
2	Rejuvenation	Ha.	3237
3	Protected Cultivation	Ha.	14857
4	Integrated Pest/Nutrient Management	Ha.	30097
5	Nurseries	No.	13
6	Water Resources	No.	1269
7	Beekeeping	No.	43994
8	Horticulture Mechanization	No.	2894
9	Post Harvest Management		
	(i) Pack House	No.	870
	(ii) Cold Storage	No.	69
	(iii) Primary/mobile processing units	No.	126

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

**5.6** Ministry of Agriculture & Farmers Welfare, Government of India, has been 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 the Mission

for Integrated Development of Horticulture (MIDH).

### Physical progress

**5.7** The summary details of progress achieved so far under MIDH during 2017-18 are given at **Table 2** below:

**Table 2: Progress under HMNEH**

S. No.	Components	Unit	Progress during 2017-18 (As on 30th November, 2017)
1	Area Expansion	Ha.	11116
2	Rejuvenation	Ha.	1000
3	Protected Cultivation	Ha.	1179
4	Integrated Pest/Nutrient Management	Ha.	19958
5	Nurseries	No.	16
6	Water Resources	No.	113
7	Beekeeping colonies	No.	9500
8	Horticulture Mechanization	No.	2172
9	Post Harvest Management		
	(i) Pack House	No.	129
10	Rural Market	No.	13

### Financial Progress

**5.8** During the current financial year 2017-18 (as on 31.12.17), funds to the tune of Rs. 145.00 crores have been released to States implementing HMNEH scheme against BE of Rs. 352.00 crores.

### National Agro forestry & Bamboo Mission (NABM)

**5.9** Funds amounting to Rs. 7.81 crores (till now) have been released to NABM implemented states against BE of Rs. 15.00

crores for maintenance of already created infrastructure under the sub-scheme.

### Coconut Development Board (CDB)

**5.10** During the current financial year, funds to the tune of Rs. 147.00 crores have been released to CDB for coconut development in the country against BE of Rs. 196.00 crores.

### National Horticulture Board (NHB)

**5.11** Funds amounting to Rs. 450.35 crores have been released to NHB against BE of Rs. 600.47 crores.

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

**5.12** Funds amounting to Rs. 2.20 crore have been released to CIH, Nagaland against BE of Rs. 9.25 crores.

### Area, Production & Productivity of Horticulture Crops

5.13 The comparative details of area, production and productivity of various horticulture crops during 2016-17 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 and Productivity**

(Area: '000 Ha., Production: '000 MT, productivity: Tonnes/Ha)

Crop	Area				Production				Productivity		
	2004-05	2016-17 (Final)	2017-18 (1st Est)	Annual Growth Rate % (2017/18 over 2016-17)	2004-05	2016-17 (Final)	2017-18 (1st Est)	Annual Growth Rate % (2017/18 over 2016-17)	2004-05	2016-17 (Final)	2017-18 (1st Est)
<b>Fruits</b>	5049	6373	6428	0.86	50867	92918	94884	2.12	10.07	14.6	14.8
<b>Vegetables</b>	6744	10238	10172	-0.64	101246	178172	180684	1.41	15.01	17.4	17.8
<b>Flowers</b>	118	306	308	0.65	659	2392	2510	4.93	5.58	7.8	8.1
<b>Aromatics &amp; Medicinal</b>	131	664	650	-2.11	159	972	1037	6.69	1.21	1.5	1.6
<b>Plantation</b>	3147	3598	3664	1.83	9835	17972	18053	0.45	3.13	5.0	4.9
<b>Spices</b>	3150	3671	3693	0.60	4001	8122	8163	0.50	1.27	2.2	2.2
<b>Others</b>	106				172	95	95	0.00			
<b>Total</b>	18445	24851	24916	0.26	166939	300643	305426	1.59	9.09	12.1	12.3

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

**5.15** Horticulture crops cover an area of 24.9 million ha (m. ha) at present by registering

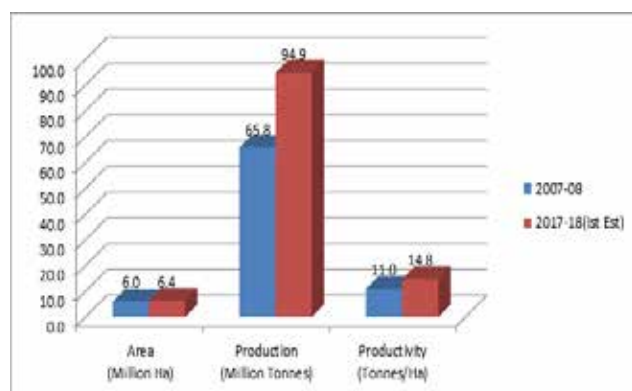
increase of about 23% as compared to 20.2 m ha in 2007-08. However, with a production of about 305.42 million MT, horticulture production has witnessed an increase of about 44.5% during the period 2007-08 to 2017-18. The significant feature is that there has been improvement of productivity of horticulture crops, which increased by about 17.7% during this period.

**5.16** Area, production and productivity of horticulture crops during past 10 years are given in **Table 4**.

<b>Table 4:-Area, Production and Productivity of Horticulture Crops</b>			
<b>(Area : m.Ha, Prod.: m. MT, Pnty. MT/ha)</b>			
Year	Area	Production	Productivity
2007-08	20.2	211.0	10.45
2008-09	20.5	214.4	10.46
2009-10	20.8	223.2	10.73
2010-11	21.8	240.4	11.03
2011-12	23.2	257.3	11.09
2012-13	23.7	268.8	11.34
2013-14	24.5	280.8	11.46
2014-15	23.2	277.7	11.96
2015-16	25.5	286.2	11.68
2016-17	24.8	300.6	12.1
2017-18 (1 <sup>st</sup> Est.)	24.9	305.4	12.3

**5.17** As per the First Advance Estimate the area under fruit crops during 2017-18 is likely to be 6.4 m. ha with a total production of 94.8 m. MT. During the period (2007-08 to 2017-18), production of fruits increased by about 44.6% while the area increased by about 9.7%. (2007-08 to 2017-18) Comparative details of area, production and productivity of fruit crops are given in **Figure 1**.

**Figure 1:-Area, Production and Productivity of Fruits**



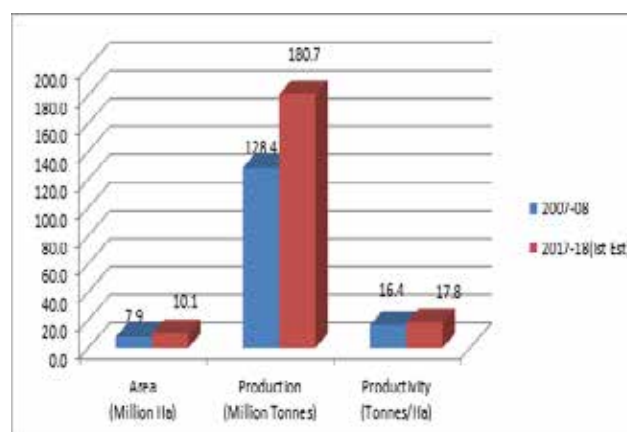
**Figure 1:-Area, Production and Productivity of Fruits**

**5.18** 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.

**5.19** Vegetables are an important crop in horticulture sector, occupying an area of 10.1 million ha during 2017-18 (1<sup>st</sup> Estimate) with a total production of 180.7 million tonnes with average productivity of 17.8 tonnes/ha. In fact vegetables constitute about 59% of horticulture production. During the period (2007-08 to 2017-18), area and production of vegetables increased by 30% and 41% respectively. The comparative details are depicted in the **Figure 2**.

**Figure 2:-Area, Production and Productivity of Vegetables**





## Figure 2:-Area, Production and Productivity of Vegetables

**5.20** India continued to be second largest producer of vegetables after China. India is a 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.

**5.21** Interventions in horticulture in the country, have led to increase per capita availability of fruits from 158 gm/person/day in 2007-08 to 201 gm/person/day in 2016-17. Similarly, per capita availability of vegetables has increased from 309 gm/person/day in 2007-08 to 385 gm/person/day in 2016-17.

**5.22** India has also made noticeable advancements in production of flowers, particularly cut flowers, which have a high potential for exports. Floriculture during 2017-18 (1<sup>st</sup> Adv. Est.) covered an area of 0.31 million ha with a production of 1.81 m. MT of loose flowers and 0.7 m. MT of cut flowers. There has been phenomenal growth in cut flower production, which is finding place in export market.

**5.23** India is the largest producer, consumer and exporter of spices and spice products, the total production of spices during 2017-18 (1<sup>st</sup> Adv. Est.) was 8.2 m. MT from an area of 3.71 m. ha.

## National Agro Forestry & Bamboo Mission (NABM)

**5.24** National Bamboo Mission (NBM) is a Centrally Sponsored Scheme of DAC&FW w.e.f. 2006-07 across the country except Haryana. It was subsumed under Mission for Integrated Development of Horticulture (MIDH) during 2014-15 and renamed as National Agroforestry & Bamboo Mission (NABM) in July, 2015. During 2016-17 & 2017-18, fund released

only for maintenance of plantations carried out during 2014-15 & 2015-16 under National Agroforestry & Bamboo Mission (NABM).

## National Horticulture Board

**5.25** 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 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.

**5.26** The Board is implementing the following schemes:

### 1) Development of Commercial Horticulture through Production and Post Harvest Management

- back ended subsidy @ 40% of the total project cost limited to Rs. 30.00 lakh per project in general areas and 50% of project cost limited to Rs. 37.50 lakh in NE and Hill States and Scheduled areas for open field cultivation of various fruit crops for projects more than 5 acres.
- back ended subsidy @ 50% of the total project cost limited to Rs. 56.00 lakh per project for protected cultivation projects for projects more 2500 sq.mt. (Board is permitted to take up projects under protected cultivation in an area of 1000 sqm. and above in NE States).
- back ended subsidy @ 35% of the total project cost limited to Rs.

50.75 lakh per project in general areas and 50% of project cost limited to Rs. 72.50 lakh in NE, Hill States and Schedules areas for post-harvest management projects/components.

## 2) Capital Investment subsidy scheme for construction/ expansion/modernization of cold storages for Horticulture Produce

- 35% subsidy of the capital cost of project in general areas and 50% in case of NE, Hill States and Scheduled Areas for setting up Cold Storages and CA Storages having size more than 5000 MT capacity (Board is permitted to take up cold storage projects in NE Area for capacity of 1000 MT or above).

## 3) Technology Development and Transfer for Promotion of Horticulture

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

- (i) Setting up of block / mother plant and root stock nursery (Area above 4 ha).
- (ii) Acquisition of technologies including import of planting material.
- (iii) Import of new machines and Tools for horticulture.
- (iv) Development & Transfer of Technology.
- (v) Long Distance Transport Solution
- (vi) Product Promotion and Market Development Services- Horti-fairs
- (vii) Exposure visit of farmers (Outside State)

(viii) Visit Abroad for Government Officers

(ix) Organization/Participation in Seminar/symposia/workshop for development of horticulture

(x) Accreditation and Rating of Fruit Plant Nurseries

## 4) Market Information Service for Horticulture Crops

Coverage of markets by NHB shall be increased from present 36 fruits and vegetables markets to 50 markets. This would be done by outsourcing existing marketing/professional agencies/unemployed Agriculture graduates or recognized/established brokers in Mandi etc. at a fixed monthly remuneration (including transport) per month as decided by the Board plus actual expenses on transmission of information to NHB (fax, internet and telephone). The NHB would identify these markets in consultation with concerned State Govts. An exclusive cell shall be set up at NHB, Gurugram for on-line receipt, data entry, analysis, dissemination and web-site management. The work relating to this proposed MIS cell shall also be undertaken by outsourcing services of selected professional agency. To deal with work of computerization, development of technology package, data feeding etc., outsourced staff such as Senior Programmer, Programmer and Data Entry Operators and horticulture assistant may be engaged as per need at approved rates under TSG component of MIDH. The cell will also be responsible for undertaking development of technology packages in electronic form and information dissemination through publicity, printed literature etc. and local advertisements.

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

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

This shall be done by NHB with or without services of outsourced experts and under this scheme, 100% financial assistance is provided through Nodal Organizations viz. NHB itself, State Governments/ UTs and Organizations under it, Central Government Organizations/ Agencies and other Organizations such as Quality Council of India/ NHRDF, etc.

### Photographs - NHB Assisted Projects



*Grapes Cultivation in open Field*



*Cucumber cultivation under protected condition*



*Tomato cultivation under protected condition*



*Colored Capsicum cultivation under poly house*

### Coconut Development Board

**5.27** 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. India being the largest producing country in the world occupies a 31% of global production. The Coconut palm provides food security and livelihood opportunities to more than 12 million people in India. It is also a fiber-yielding crop for more than 15,000 coir based industries which provides employment to nearly 6 lakhs workers of which 80 per cent are women folk. The crop contributes around Rs.2,50,000 million to the country's GDP and earns export revenue of around Rs.43,654 million. There are 5 million coconut holdings in the country and the average size of these holdings is less than one hectare. As per the All India estimate for the year 2016-17, the area and production of coconut in the country is 2.096 million hectares and 22237.99 million nuts respectively. The four southern states of Kerala, Tamil Nadu, Karnataka, and Andhra Pradesh accounted for 89 percent of the



coconut area and 91 percent of the coconut production in the country. Kerala, with the largest area under coconut cultivation and production accounted for 36.86 percent of the area under the crop and 33.57 percent of production at national level. The productivity of coconut at national level for 2016-17 is 10,611 nuts per hectare.

**5.28** The thrust areas identified by the Coconut Development Board programmes under MIDH are: production and distribution of quality planting material, expansion of area under coconut cultivation especially in potential and non-traditional areas, improving the productivity of coconut in major coconut producing states, developing technology in post-harvest processing and marketing activities, product diversification and by-product utilization of coconut for value addition and dissemination of information and capacity building in coconut sector.

**5.29** 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. Information & Information Technology**
- G. Infrastructure and Administration including Technical Service & Project Management**
- H. Technology Mission on Coconut**
- I. Rejuvenation and Replanting**
- J. Coconut Palm Insurance Scheme**
- K. Kera Suraksha Insurance Scheme**
- L. Centre of Excellence (CoE) for Coconut**
- A. 1 Production and distribution of quality planting material**
  - a. Establishment of Demonstration cum Seed Production (DSP) Farms** in different parts of the country for creating infrastructure facilities for production of quality planting materials besides demonstrating and educating the scientific coconut cultivation and processing to various stake holders in those regions. The Board has established 10 DSP Farms in the States of Kerala, Karnataka, Tamil Nadu, Andhra Pradesh, Maharashtra, Bihar, Assam, Chhattisgarh, Odisha and Tripura. It is targeted to produce 10 lakh coconut seedlings during 2017-18 from these ten Farms under the scheme Regional Coconut Nurseries.
  - b. Establishment of Regional Coconut Nurseries:** Extending support to the participating States for strengthening the seedling production programme of the concerned States by establishing

Regional Coconut Nurseries by way of extending financial assistance on 50:50 basis @ Rs.32/-per seedling. The current year allocation is production of 15 lakh coconut seedlings apart from the targets allocated to the DSP Farms. From the year 2017-18, the scheme 'Distribution of hybrids/dwarf seedlings in Govt./ Private sector' is clubbed with the scheme 'Establishment of Regional Coconut Nurseries'.

- c. Establishment of Nucleus Coconut Seed Garden:** The scheme is implemented on project basis to establish nucleus seed garden of selected cultivars in the private sector and Govt./Quasi Govt. to meet the future demand of quality coconut seedlings. Assistance is provided for establishing the seed gardens @ 25% of the total expenditure incurred limited to a maximum of Rs. 6 lakh over a period of 3 years, on a project basis in a maximum area of maximum 4 ha. The current year allocation is Rs. 30 lakh for establishing Nucleus Seed Gardens in various states on need basis.
- d. Establishment of Small Coconut Nurseries:** The scheme is implemented on project basis to encourage private sector and other agencies in seedlings production by providing financial assistance for establishing coconut nurseries. Financial assistance is 100% of the cost limited to Rs.2.00 lakh per unit of 0.4 ha over a period of two years (100% of the cost of seed nut and transport, maintenance of the nursery, other infrastructure

facilities etc.) for production of 25000 seedlings. Minimum eligible subsidy is Rs.50, 000/- over a period of two years for a unit to produce at least 6250 certified coconut seedlings annually. The current year allocation is Rs. 22.50 lakh for establishing Small Coconut Nurseries in various states on need basis.

**5.30** During the period under report, a total of 25 lakh quality coconut seedlings will be produced and distributed to farmers for new planting, replanting and under planting out of which 10 lakh seedlings will be produced in the Nurseries attached to DSP Farms of the Board, 15 lakh seedlings in the Regional Coconut Nurseries established by the Department of Agriculture/Horticulture of the participating states.

#### **A.2 Expansion of Area under Coconut**

**5.31** The objective of the programme is to extend adequate technical and financial support to the farmers to take up coconut cultivation on scientific lines in potential areas to attain a significant achievement in the future production potential. As per the revised guidelines of MIDH, the differential financial assistance followed. In Normal area, subsidy will be Rs.6500/- , Rs.6750/- and Rs.7500/- per ha for Tall, Hybrid and Dwarf respectively over a period of 2 years. In Hilly and scheduled areas, subsidy will be Rs.13750/- ,Rs.13750/- and Rs.15000/- per ha for Tall, Hybrid and Dwarf respectively over a period of 2 years.

**5.32** During the current year it is targeted for 3760 ha area coverage under new planting of coconut utilizing Rs. 250 lakh.

### A3. Integrated Farming for Productivity Improvement

**5.33** The objective of the programme is to improve production and productivity of the coconut holdings through an integrated approach and thereby increasing the net income from unit holdings with the following component programmes.

#### (a) Laying out of Demonstration Plots:

**5.34** Financial assistance of Rs.35,000/- per hectare in two annual installments is provided for adoption of integrated management practices in disease affected gardens. The objective of the programme is to encourage the farmers to adopt the technology developed for the management of coconut gardens. The Demonstration Plots will also help motivate farmers in adoption of result oriented production technologies. During the year 2017-18, it is proposed to implement the scheme in all coconut growing states through various State Governments and directly by the Board through Farmer Producer Organizations (FPOs) covering an area of 25818 ha and maintenance of 20387 ha of the previous year with a total financial outlay of Rs. 7370.45 lakh. An amount of Rs. 4134.32 lakh has been incurred upto 31.12.2017 under this scheme.

#### (b) Assistance for Organic Manure Units:

**5.35** The objective of the programme is to promote the use of organic manure like vermicompost,

coir pith compost etc in coconut holdings. Financial assistance @ 100% of the cost of Rs.60,000/- per unit is extended for establishing organic manure production unit measuring 60' x 8' x 2.5' with a production capacity of 80 tonnes/year in 4 cycles. The size of the units may vary and the subsidy is proportionate. The minimum subsidy under this scheme is Rs. 7500/- for a unit of size 15' x 5' x 2'.

Out of the total allocation of Rs. 40 lakh for establishment of 100 organic manure units during 2017-18, Rs. 36.30 lakh has been released upto December, 2017 for establishing 105 units for promoting the use of organic manures in coconut gardens in various states.

### A4. Technology Demonstration

**5.36** The CDB Institute of Technology (CIT) at Aluva, Ernakulam in Kerala is engaged in the development and demonstration of technologies for product diversification and by-product utilization of coconut. Training is being given to interested entrepreneurs and self help groups for acquiring technologies on post harvest coconut processing and process demonstration. Training imparted to 287 participants from April to October 2017. A fullfledged NABL accredited Quality Testing Laboratory (QTL) is operating at CIT for chemical and microbial analysis of coconut based products. The laboratory is equipped with advanced analytical instruments and modern facilities as per NABL requirements to carry out chemical/microbiological tests of coconut based products. During the period 301 Samples have been analysed for 1331 parameters

under Chemical Section and 165 samples have been analysed for 504 parameters under Microbiological Section. CIT has provided internship to 13 undergraduate and postgraduate students on various projects on value addition in coconut.

#### **A.5) Marketing, market Intelligence services, Statistics and Strengthening of Export Promotion Council**

1. The Board undertakes market promotion activities for the development of the coconut sector in the country and the industry as mandated by the Coconut Development Board Act. The major activities comprise of Market Promotion, Market Intelligence, Market Research, Market Development, formation of Coconut Producer Societies (CPSs), Federation of Coconut Producers' Societies (CPF), Coconut Producer Companies, and performing the responsibilities of Export Promotion Council and other enabling policies.
2. The Board submitted its recommendations for Minimum Support Price (MSP) for milling as well as ball copra in July 2017 for the computation of CACP for the season 2018 based on the cost of cultivation of coconut and the cost of conversion into copra. The existing MSP announced by the Government of India for Fair Average Quality (FAQ) milling copra is Rs. 6500 per quintal and that of FAQ of Ball Copra at Rs. 6785 per quintal for the season 2017.

#### **Farmer Producers organization (FPOs)**

**5.37** The Board facilitates the formation of Farmer Producer Organization with the main objective of socio economic development of coconut farmers through productivity improvement, cost reduction, efficient aggregation, processing for value addition, better by-product utilization and efficient

marketing of the produce. The Coconut Farmer Producer Organizations promoted by the Board have a three tier structure consisting of Coconut Producer Society (CPS), Coconut Producer Federation (CPF) and Coconut Producer Company (CPC).

**5.38** The Board has initiated the formation of CPSs by associating 40-100 coconut growers in a contiguous area with a consolidated minimum of 4000-6000 palms. CPFs are formed by aggregation of 15-25 CPSs as its members and having 1,00,000 bearing palms, and further to CPCs having 10 CPFs and 10,00,000 bearing palms.

**5.39** As on 31.12.2017, a total of 9510 CPSs, 735 CPFs and 67 CPCs have been registered with Board in different States.

#### **A.6 Information and Information Technology**

**5.40** The Board has several programmes under Information and Information Technology and HRD with a view to disseminate information on various aspects of coconut cultivation and industry through various media, publications etc besides organizing training programmes to impart skills and knowledge to farmers, unemployed youths and rural women in various fields viz., FoCT, Neera Technician and Handicraft training related to coconut. For recognizing outstanding performance in coconut sector a scheme of National Awards is also being implemented biannually. Production of publications, undertaking multimedia product promotional campaigns, participation in domestic and international exhibitions and fairs, management of MIS in the organization etc; are the major activities undertaken under the scheme.

**5.41** To create awareness, Board participates in several exhibitions, seminars etc. As part of awareness creation, Board has organised World Coconut Day celebrations on 2<sup>nd</sup>



September 2017 across the country through all unit offices.

**5.42** The major exhibitions participated by Coconut Development Board during the current financial year are Champaran Fair 2017 at Motihari East, Bihar, Annapoorna World Food 2017 at Mumbai, International Symposium on Horticulture Exhibition at IIHR – Hesaraghatta, Bangalore, International seminar on Traditional and Alternative medicine at Palai, Kottayam, Hotel Tech Kerala 2017 at Ernakulam, 6<sup>th</sup> edition of Agri Fest 2017 at Lucknow, Meri Dilli Utsav 2017 at New Delhi, Destination Himachal Pradesh Expo 2017 at Solan, Himachal Pradesh, Aahar – The Food and Hospitality Fair at Navi Mumbai.

**5.43** A total amount of Rs. 476.07 lakh has been spent upto 31.12.2017, out of the total allocation of Rs.750 lakh during the year under report.

#### **Friends of Coconut tree**

**5.44** With a serious view to tackle the problem of acute shortage of trained coconut palm climbers for harvesting and plant protection activities, the Board is conducting a massive programme, “Friends of Coconut Tree” to train underemployed youth in developing special skills and confidence in coconut palm climbing and plant protection activities for the benefit of the coconut community as a whole. As on 31.12.2017, 1750 youth have been trained during the year, leading to a cumulative total of 59880 persons under this programme.

#### **Neera Technician Training Programme**

**5.45** Board has undertaken the initiative of developing a pool of skilled Neera Technicians after the amendment of Abkari rule in Kerala and Andhra Pradesh. Extracting neera requires technically skilled persons to perform activities such as climbing tree, skillfully stimulating the inflorescence, application of disinfectant, wrapping the inflorescence etc in

a hygienic manner. Hence from the 2014-15, Board is organizing Neera Technician training programme. So far 2617 Neera Technicians were trained through FPOs.

#### **A7 Infrastructure & Administration including Technical Services & Project Management**

**5.46** During the year 2017-18, an amount of Rs. 3000 lakh is allocated under Infrastructure & Administration including Technical Services & Project Management and Rs. 2398.15 lakh has been spent upto December 2017. The recommendations of the 7<sup>th</sup> Central Pay Commission have been implemented during the year.

#### **B. Technology Mission on Coconut**

**5.47** Technology Mission on coconut was sanctioned during the financial year 2001-02 with the objectives of (a) development of technology for new value added coconut products and by-products by research, bring these value added products to commercial production by assisting to promising entrepreneurs (b) providing assistance for the controlling of specific disease/pest in any specific area including development of technology for controlling of specific disease/pest to ensure uninterrupted supply of raw materials to the coconut industry for the production of value added products and by products (c) develop and promote market for such newly developed value-added products and by-products including traditional products (ball copra, copra and oil) by research, surveys and brand promotion. The implementation of this scheme is on time bound project basis.

**5.48** An amount of Rs. 1500 lakh is allotted for implementation of the Technology Mission on Coconut during 2017-18. Against this, an amount of Rs. 1050.60 lakh has been released for 61 new projects and other ongoing projects to entrepreneurs, various Research

Institutions, State Governments, Co-operative Societies, etc. for development, demonstration and adoption of technology for product diversification and by product utilization, management of pests and diseases and market research and market promotion.

### **C. Replanting and Rejuvenation of Coconut Gardens**

**5.49** The main objective of the scheme is to enhance the productivity and production of coconut by removal of disease advanced, unproductive, old and senile palms and rejuvenating the remaining palms.

**5.50** The component wise subsidy has been revised from 2014-15 as per MIDH norms and the details are as follows: (i) Cutting and removal of all old, senile, unproductive and disease advanced palms: A subsidy @Rs.1000 per palm, subject to a maximum of Rs.32000/ha is provided for cutting and removal of old, senile, unproductive and disease advanced palms. (ii) Rejuvenation of the existing coconut palms by Integrated Management: For adoption of Integrated management practices a subsidy of Rs.17500/ha is provided in two installments of Rs.8750/- each. (iii) Assistance for replanting: For replanting, a subsidy of Rs.40/- per seedling subject to a maximum of Rs 4,000/ha is extended. During 2017-18, current year it is proposed to implement the scheme in a total area of 10240 ha in the States of Kerala, Karnataka, Tamil Nadu, Andhra Pradesh, Odisha, Gujarat, Maharashtra and Goa with a financial allocation of Rs. 5326.53 lakh and Rs. 1869.35 lakh has been utilised. First installment of funds for implementation of the programme in a total area of 6700 ha in the States of Karnataka, Tamil Nadu, Andhra Pradesh have been released upto December, 2017.

### **D. Coconut Palm Insurance Scheme (CPIS)**

**5.51** The Coconut Palm Insurance Scheme intends to provide Insurance coverage to coconut crop. Under the scheme all healthy yielding palms in the age group from 4 years to 60 years are eligible to get insurance coverage against natural perils leading to death / loss of palm becoming unproductive. The scheme is being implemented in association with the Agriculture Insurance Company Limited (AIC) and the Departments of Agriculture/ Horticulture of the State Governments concerned. 50% of the premium is borne by the Board and balance is shared between the concerned State Govt. and Farmers @ 25% each. The premium for the category of palms belonging to the age group of 4-15 is Rs. 9 per palm and that for 16-60 year age group is Rs. 14 per palm. The insured amount for the corresponding categories is Rs. 900 per palm and Rs. 1750 per palm, respectively. The scheme is implemented in selected districts of all coconut growing states. An amount of Rs. 40 lakh is earmarked under the scheme for the year 2017-18 to cover major coconut growing States and a total of Rs. 32.50 lakh has been spent upto December, 2017.

### **E. Kera Suraksha' Insurance Scheme for Coconut Tree Climbers (CTC)**

**5.52** The 'Kera Suraksha' Insurance Scheme provides insurance coverage to the coconut tree climbers @ Rs.2 lakh against 24 hours against accident related risk including death. The annual premium of the policy is only Rs. 94.40 of which Rs. 71.40 is borne by the Board and Rs. 23 is contributed by the CTC. The scheme is implemented in all coconut growing States.

**5.53** An amount of Rs. 8 lakh is allocated under the scheme for the year 2017-18 to cover maximum climbers in major coconut growing States. Upto December 2017, a total of 1846 palm climbers have been insured under the scheme.

## F). Establishment of Centre of Excellence (CoE) in Coconut:

**5.54** With an objective to serve as a demonstration centre of best practices to focus on sustainable coconut cultivation, adopting existing technologies in coconut farming for local farming conditions and sharing this knowledge with farmers to increase productivity of coconut and to bring about socio-economic improvement of coconut farmers & other stakeholders, to serve as a Capacity Building Centre with state-of-the-art facilities for theoretical & on-field practical trainings for farmers & other stakeholders from various parts of the globe, and to train simultaneously the govt. functionaries, NGOs, SHGs, processors/ entrepreneurs, marketers/ traders & farmers related with coconut cultivation/ industry/ consumer groups, production of quality planting materials of different cultivars of coconut, plant health clinic/ Biocontrol lab, etc. a Center of Excellence in Coconut is proposed to be established in Board's Demonstration cum Seed Production Farm located at Dhali village near Udumalpet in Tamilnadu.

**5.55** It is proposed to implement the scheme under MIDH with financial assistance of Rs. 300 lakh initially for initiating infrastructure development.

**5.56** During the current financial year, funds to the tune of Rs. 147 crore have been released to CDB for coconut development through the above programmes in the country against BE of Rs. 196 crore. Of which a total of Rs. 105.35 crore have been spent upto December, 2017. The implementation is under various stages of progress, periodically reviewed and the physical and financial targets allocated for the year would be achieved in full.

## Directorate of Arecanut and Spices Development, Calicut.

**5.57** The Directorate of Arecanut and Spices

Development (DASD) is a subordinate office under Ministry of Agriculture, Government of India, to look after the 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.

**5.58** During the year 2017-18, the directorate had an outlay of Rs. 11 crores under development programmes of MIDH. Following are the major activities of the Directorate in 2017-18

- 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.
- DASD is engaged in accreditation of nurseries to improve the quality of planting material disbursed through various nurseries across the nation. About 25 nurseries are recognised under DASD accreditation programme during the year.
- Value Chain Study on Turmeric in Telangana State was conducted based on which an action plan is proposed for enhancing value chain of turmeric in the state.
- Value Chain Study on Seabuckthorn in Jammu & Kahmir was conducted in association with Ladakh Autonomous Hill Development Council and the action plan prepared for development of seabuck thorn in Ladakh region.
- 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 Pilot project on establishment of seed production centres in ginger growing areas of Kerala in collaboration with FPOs is initiated
- Around 7500 farmers will be given awareness training on different aspects of cultivation, management, post harvest management and processing of spice crops . 190 units of Demonstrations were laid out across the country on advanced technologies in spice cultivation.
- DASD undertakes Skill Development Programme under MIDH Scheme. During 2017-18, skill training is imparted to rural unemployed youth in selected job roles such as Gardener, Vermicompost Producer, Coriander, Cultivator, essential oil extractor, green house operator, florist, floriculturist (protected cultivation) etc. About 475 beneficiaries were trained under this programme in 2017-18.

### Directorate of Cashewnut and Cocoa Development Kochi

**5.59** The Directorate of Cashewnut and Cocoa Development functioning at Cochin 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 was also entrusted to this Directorate in the year 1997. The Salient achievements under the scheme during 2017-18 are as follows.

- Under new plantation development, an additional area of 1550 ha under cashew and 750 ha cocoa with clones of high yielding varieties has been brought under MIDH with financial assistance. Around 3500 farmers benefitted under the scheme.
- Under replanting of senile cashew plantations, an area of 1120 ha old and senile cashew plantations owned by corporations of major cashew growing states have been replanted with high yielding varieties.
- Thirty two cashew/cocoa nurseries in the states of Andhra Pradesh, Karnataka, Kerala, Maharashtra, Odisha and Tamil Nadu were given accreditation by the Directorate based on the assessment made by the expert team constituted for this purpose.
- 150 ha of unproductive senile plantations was rejuvenated under the scheme during the current year.
- 30 Front line technology demonstration units were established in the states of Andhra Pradesh, Assam, West Bengal, Karnataka and Kerala.
- As part of publicity and crop promotion activities, one National level seminar, 6 field days and 25 district level seminars on cashew and cocoa will be organized in various states in association with State Agricultural Universities, KVK's, Corporations and ICAR institutes.



- Under the HRD programme, 1575 farmers and entrepreneurs will be trained on cocoa and cashew farming practices in association with SAU's and ICAR institutes.
- Under the programme, 600 unemployed women will be given training on preparation of value added edible products from cashew apple.
- The value chain study of cashew in Goa and Maharashtra has been assigned to Department of Agricultural Economics, University of Agricultural Sciences, Dharwad. Field survey and stake holders meeting has already been completed.
- The Directorate has prepared citizen/client charter in line with performance monitoring and evaluation system and sevottam guidelines to place in the website.

### Central Institute of Horticulture, Medziphema, Nagaland

**5.60** Central Institute of Horticulture, Nagaland is playing a vital role by providing Institutional support in order to tap the huge potential for horticulture development in the North-Eastern region. The main thrust areas of the Institute are demonstrations of identified technologies pertaining to the region; production and supply of quality seed and planting material; training and capacity building of state govt. officials, field functionaries and farmers, accreditation and certification of nurseries in NER, monitoring of centrally sponsored programmes in the area of horticulture, promotion of organic farming, certificate and skill development course, post harvest management, processing, value addition, marketing and agribusiness promotion.

#### Production of Quality Planting Material

**5.61** The number of rootstock raised at

the Institute during the reported period is Guava (var. local) - 5000, Citrus (var. Rangpur lime) - 2600, Mango (var. local) - 4520 and Cashew (var. local) - 12500. The numbers of crops propagated are Guava (var. L-49-6350, Allahabad Safeda-5800), Citrus (var. Khasi Mandarin-12000, Acid lime -4500), Cashew (var. V-4- 1400), Mango (var. Mallika, Langra & Dashehari - 6300), Strawberry (Sabrina, Gilli, Hader, Berak-2500), Dimenta-740, Clerodendron-850, Gypsophilla-1950), Chrysanthemum -1200. Besides these, three nursery units and two scion blocks under polyhouse is also being maintained.

#### Demonstration of Production Technologies (On And Off Farm)

**5.62** The demonstration activities carried out in the Institute during the reported year were organic cultivation of vegetables; Organic cultivation of turmeric (var. Megha turmeric1 & Lakadong) and ginger (var. Nadia) ; planting of pineapple under polymulch (var. Giant Kew); Planting of tissue culture banana (var. Grand Naine), Chrysanthemum, Gypsophila, Aloe Vera, fig; Intercropping of cowpea in fruit blocks; Seed sowing of cabbage (var. Savitri), broccoli (var. F1 Hybrid green magic), Marigold (var. Pusa Narangi) and brinjal (var. Pusa Purple Long)

**5.63** The activities carried out for off farm demonstration in the farmers field include establishment of demonstration plot of Litchi at Ralan, Wokha District, Nagaland in an area of 1 ha, establishment of demonstration plot of 1 ha Khasi Mandarin in Arunachal Pradesh and citrus rejuvenation programme in Manipur and Nagaland in an area of 2 ha. The Institute has also distributed 200 nos of litchi saplings to the Farmers Producer Organization (FPO), Kohima for demonstration. Vegetable seedlings of cabbage, broccoli, and brinjal are also raised in the nursery for distribution to the farmers.

#### Nursery Accreditation



**5.64** A total of nine (09) nurseries were inspected at Assam, Mizoram and Nagaland during the month of April- Nov, 2017. Out of nine nurseries, three nurseries were accredited with a rating **2 star** and six nurseries with **1 star** rating.

- Distributed 8 nos. of nursery accreditation certificates to nurserymen from north east states on 6th October 2017

### SKILL DEVELOPMENT & CERTIFICATE COURSE

**5.65** The course on “Gardener” commenced from 31<sup>st</sup> March 2017 with trainees from different districts of Nagaland. The course is of 260 hours duration and final assessment was completed on 2<sup>nd</sup> June 2017.

- The course on “Protected cultivation- floriculturist” was started from 6<sup>th</sup> June 2017 and completed on 18<sup>th</sup> July 2017 with a total of 20 trainees from Meghalaya.
- Skill development course on Gardener commenced from 4<sup>th</sup> August and completed on 9<sup>th</sup> October 2017 with 26 trainees.
- Commenced skill development course on “Protected cultivation- floriculturist” on 25<sup>th</sup> October 2017 with 30 trainees.

- Certificate course on Post Harvest Management of Horticulture Crops commenced on 6<sup>th</sup> June 2017 to 8<sup>th</sup> September 2017 with 15 trainees.

### EXTENSION ACTIVITIES

**5.66** The Institute has organized 32 farmers trainings which were attended by 1685 farmers and 1 trainers training (25 officials) in identified areas of horticulture. One exposure trip cum training on advanced technique in production of important fruits and flower crops was also organized for 34 ATMA field functionaries for the state of Manipur at CIH, Nagaland.

### EXHIBITION/ TRADE FAIRS/ MEETS

- Participated in exhibition during Field day cum Farmers Scientists Interaction on 8<sup>th</sup> June 2017 at ICAR Nagaland Centre.
- Co-organized and participated in exhibition during Pineapple Fest on 8<sup>th</sup> & 9<sup>th</sup> August 2017 at NER Agri Expo Site, Dimapur, Nagaland.
- Organized Farmers Interface Meet & exhibition on at CIH, Nagaland 6<sup>th</sup> October 2017 with 15 exhibitors.

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

**A. Production of quality planting material**



*Guava grafted plant*



*Mango grafted plant*

**B. Demonstration activities**



*Planting of pineapple var Giant Kew*



*Planting of Aloe Vera*

**C. Extension activities**



*Farmers training at Arunachal Pradesh*



*Farmers training at Manipur*



**D. Exhibition/ Meets**



**E. Nursery accreditation**



*Assessment of nursery in Assam*



*Assessment of nursery in Nagaland*

**F. Skill development & certificate course**



*Trainees of skill development course with Director CIH after assessment*



*Issue of certificates to trainees of PHM course during closing programme*



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## CHAPTER 6

# National Mission on Oilseeds and Oil Palm (NMOOP)

**6.1 Vegetable Oil Scenario:** Domestic Consumption of edible oils has increased substantially over the years and has touched the level of more than 23 million tonnes in 2016-17 (Prov), which is likely to increase further with enhancement in per capita income and population. The production of domestic edible oils (9.97 million tonnes) has not been able to keep pace with the growth in consumption and the gap between production and consumption is being met through imports worth of >Rs.73,048 crores (2016-17 prov.).

**6.2** Considering the importance of oilseeds, for encouraging cultivation of oilseeds including Oil Palm and Tree Borne Oilseeds (TBOs), the Govt. of India is implementing 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) since 2014-15. 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 producing agencies, supply of seed minikits to the farmers through central seed producing agencies, development of seed infrastructure at SAUs/KVKs farms, Front Line / Cluster Demonstrations through ICAR/KVKs, R&D activities and Kisan Mela etc.

with 100% Central assistance.

**6.3** During 2017-18, NMOOP programme is under implementation in 28 states comprising of three Mini Missions i.e MM-I (Oilseeds) in 27 states, MM-II (Oil palm) in 13 states and MM-III (Tree Borne Oilseeds) in 10 states involving 5 Central seed producing agencies and need based R&D through 7 R&D institutions with Budgetary Estimate (BE) of Rs.403 crore.

The Mini Mission wise salient features are given below:

### Mini Mission-I (Oilseeds):

**6.4** Under this Mission, financial assistance is being provided for Seed Components (production & distribution of certified seeds & minikits, variety specific targeted seed production); Inputs (Plant Protection Equipments/eco friendly, light-trap, 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), farmers and extension workers training etc. The scheme is being implemented through State Department of Agriculture. Mini Mission – I is also supporting ICAR institutes for undertaking FLDs on oilseeds crops and ICAR-KVKs for organizing cluster demonstration on oilseeds. The year-wise area, production and yield of oilseeds are as under:

## 6.5 The year-wise area, production and yield of oilseeds

(Area in million hectare. Production in million tonnes & Yield in Kg. per ha.)

Year	Kharif			Rabi			Total		
	Area	Prod.	Yield	Area	Prod.	Yield	Area	Prod.	Yield
2004-05	17.24	14.15	820	10.28	10.20	993	27.52	24.35	885
2014-15	18.20	19.19	1055	7.40	8.32	1125	25.60	27.51	1075
2015-16	18.86	16.68	884	7.22	8.57	1186	26.08	25.25	968
2016-17*	18.85	22.40	1188	7.35	9.70	1318	26.20	32.10	1225
2017-18**	17.42	20.68	1187						

\*As per 4<sup>th</sup> Advance Estimates

\*\*AS per 1<sup>st</sup> Advance Estimates (only kharif)

- Oilseeds production of 32.10 million tonnes has been achieved during 2016-17 which is the highest during past three years of implementation of NMOOP
- The yield of 1225 kg/ha of oilseeds has been achieved during 2016-17, which is the highest ever.

**6.6** A production target of 35.50 million tonnes of oilseeds (kharif -25.40 million tonnes and Rabi-10.10 tonnes has been fixed for 2017-18). The crop wise average production of nine major oilseeds during the XI Plan period and XII plan are given below:

(Production in million tonnes)

S. No.	Crop	Average XI Plan (2007-08 to 2011-12)	XII Plan					2017-18**
			2012-13	2013-14	2014-15	2015-16	2016-17*	
1	Groundnut	7.40	4.70	9.71	7.40	6.73	7.56	6.21
2	Castor	1.38	1.96	1.73	1.87	1.75	1.42	1.40
3	Sesame	0.74	0.69	0.71	0.83	0.85	0.78	0.66
4	Nigerseed	0.11	0.10	0.10	0.08	0.07	0.08	0.10
5	R & M	6.89	8.03	7.88	6.28	6.80	7.98	
6	Linseed	0.16	0.15	0.14	0.15	0.13	0.15	
7	Safflower	0.18	0.11	0.11	0.09	0.05	0.08	
8	Sunflower	0.93	0.54	0.50	0.43	0.30	0.24	0.09
9	Soybean	11.16	14.67	11.86	10.37	8.57	13.79	12.22
Total oilseeds		28.93	30.94	32.75	27.75	25.25	32.10	20.68

\* 4<sup>th</sup> Advance estimates of DES

\*\* 1<sup>st</sup> Advance estimates of DES for kharif 2017.



**6.7 The major interventions and initiatives under MM-1 (Oilseeds) during 2017-18 are as under:**

The major interventions targeted under oilseeds programme during the year (2017-18) are as follows:

- Approx. 6.76 lakh qtls of seed production of oilseed crops
- More than 6.59 lakh qtls of certified seed distribution
- More than 16.64 lakh seed minikit distribution
- 2.27 lakh ha block demonstrations
- 4377 farmers & officers training
- Supply of micronutrient over an area of 4.42 lakh ha
- Distribution of 0.87 lakh farm implements / equipments
- Coverage of about 5.0 lakh ha under IPM
- Distribution of 1.93 lakh (no) sprinklers and 108 lakh mt water carrying pipes

## Mini Mission-I (Oilseeds)



Polythene mulch demon. on  
Groundnut



Broad bed furrow planting of  
soybean



Plant protection of  
Rapeseed & Mustard



Broad Bed Ridge Method  
groundnut



Thinning in sunflower

Assistance available



Intercropping of arhar in  
soybean



Intercropping of arhar in  
sunflower



Pheromone traps



Sprinkler in g.nut

**6.8** In order to meet the enhanced production target of oilseeds during 2017-18, the following major initiatives have been taken by the Department

- **Enhanced subsidy** of seeds, pipe lines and age relaxation of varieties from 10 to 15 years to facilitate the states in implementation of activities of the Mission.
- **Distribution of seed minikits** of oilseeds were supplied free of cost through central agencies.
- **Involvement of ICAR-KVKs** in organizing FLDs and cluster demonstration on oilseeds which is about 525 no of KVKs during 2017-18.
- **Targeting Rice Fallow Areas (TRFA) in six Eastern states:**

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 under pulses and oilseeds in six Eastern states namely Assam, Bihar, Chhattisgarh, Jharkhand, Odisha and West Bengal covering 40 districts and 4000 villages in these states has been implemented under NMOOP with a production target of 2.43 lakh tn of oilseeds every year.

- **Alternate crop plan to combat wheat blast:**  
The Action Plan for alternate Crops to replace wheat by oilseed crops a project 'Alternate crop plan to combat wheat blast' has been approved for West Bengal state during 2017-18 crops for implementation in Murshidabad and Nadia districts of West Bengal.
- **Enhancement of import duty on oilseeds, vegetable oils and palm oil**

In order to benefit both oilseed growing farmers and oil industry & trade the following revision in import duty has been made w.e.f 17<sup>th</sup> Nov 2017:

Commodity	Previous duty (%)	Enhanced duty w.e.f. 17 Nov, 2017 (%)
(i) Soybean seed	30	45
(ii) Crude Palm Oil	15	30
(iii) Refined Palm Oil	25	40
(iv) Refined Sunflower Oil	20	35
(v) Crude Soybean Oil	17.50	30
(vi) Refined Soybean Oil	20	35
(vii) Rapeseed Oil including Canola	12.50	25
(viii) Refined Rapeseed Oil	20	35

**6.9** The enhanced duty is aimed to benefit the oilseeds growers and the vegetable oils traders as follow:

- Creation of competitive environment in the domestic market will improve the price of soybean and groundnut.
- Improvement in capacity utilization of Indian oil industry.
- Boost the confidence of farmers, who are compelled to grow oilseeds due to agro-climatic reasons and encourage them for higher investment on input application for productivity improvement.
- Area expansion under leguminous oilseeds like groundnut and soybean will improve soil health.
- The consumer will be forced to think about balanced use of edible oils.

- Balancing of trade deficit and saving of valuable foreign exchange by reducing the import and boosting the export of oilseeds.

### Mini Mission-II (Oil Palm)

**6.10** Oil palm is comparatively a new crop in India and is the highest vegetable oil yielding perennial crop. With quality planting material, irrigation and proper management, there is potential of 20-30 MT Fresh Fruit Bunches (FFBs) per hectare after attaining the age of 5 years which would yield 4-5 MT of palm oil and 0.4-0.5 MT palm kernel oil (PKO). In comparative terms yield of palm oil is 5-6 times the yield of edible oil obtainable from traditional oilseeds.

**6.11** Oil palm development programme was started in India during 1991-92 and continued till 2013-14, mainly for area expansion under oil palm in selected states through productivity of oilseeds and oil palm cultivation, Integrated Schemes of Oilseeds, Pulses, Oil Palm and Maize (ISOPOM) and Oil Palm Area Expansion (OPAE) programme.

**6.12** In order to bring more area under oil palm cultivation, Mini Mission-II component of National Mission on Oilseeds and Oil Palm (NMOOP) is under implantation from 2014-15 in 13 states.

**6.13** Under the Mission, financial assistance are being provided to the oil palm 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.

**6.14** 100% support is being provided to Indian Institute of Oil Palm Research (IIOPR), Pedavegi, Andhra Pradesh for Research & Development on oil palm.

**6.15** All these developmental efforts have resulted in area expansion under oil palm from 8585 ha in 1991-92 to 3.16 lakh ha by the end of 2016-17.

**6.16** 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 12.89 lakh and 2.20 lakh MT respectively during the year 2016-17.

**6.17** At present, Andhra Pradesh, Karnataka, Tamil Nadu, Mizoram and Odisha are major oil palm growing states.

**6.18** During 2017-18, oil palm programme is implemented with the major interventions as follow:

- Additional area coverage of 26,285 ha in 2017-18 has been targeted.
- About 68,700 ha will be under maintenance and intercropping.
- Coverage of 6530 ha under drip irrigation
- Distribution of 557 pump sets & 378 bore wells.

**6.19** The State-wise details of area achieved under oil palm cultivation and production of FFBs and CPO up-to the year 2016-17 are given below:

S. No.	State	Total Area Coverage up-to March, 2017 (ha.)	Production during 2016-17 (in MT)	
			FFBs	CPO
1.	Andhra Pradesh	156532	1136579	190854
2.	Telangana	16899	88549	19979
3.	Karnataka	42397	11912	2051
4.	Tamil Nadu	30311	7422	1115
5.	Gujarat	5721	853	NA
6.	Goa	953	NA	NA
7.	Odisha	20772	4965	NA
8.	Tripura	530	NA	NA
9.	Assam	1035	0	0
10.	Kerala	5778	34198	5929
11.	Maharashtra	1474	NA	NA
12.	Mizoram	27410	4796	626
13.	Chhattisgarh	3449	0	0
14.	Andaman & Nicobar	1593	NA	NA
15.	Arunachal Pradesh	573	0	0
16.	Nagaland	1173	0	0
	<b>Total</b>	<b>316600</b>	<b>1289274</b>	<b>220554</b>

### Frontier Technologies (Oil Palm)





**6.20** In order to encourage the production of oil palm the following major initiatives have been taken by the Government during 2017-18:

- Cabinet has approved the note on “Measures to increase oil palm area and production in India” in its meeting held on 12<sup>th</sup> April, 2017 with two major decisions as follows:

**Decision 1:** In order to encourage large scale plantation under Oil Palm cultivation assistance has been approved for undertaking plantation in more than 25 ha. area under Oil Palm.

**Decision 2:** Enhance of assistance under the components of oilpalm such as supply of planting material from Rs. 8000/- ha to Rs. 12,000/- ha., maintenance cost from Rs. 16,000/- ha to Rs. 20,000/- ha, intercropping from Rs. 12,000/- ha to Rs. 20,000/- ha and bore-well from Rs. 25,000/ per unit to Rs. 50,000/- per unit.

The above Cabinet decision will encourage big farmers, farmers co-operative, farmers organization for large scale oil palm plantation and the increased subsidy will motivate small and marginal farmers to grow more oil palm.

### **Mini Mission-III - Tree Borne Oilseeds (TBOs)**

**6.21** Assistance Under MM-III, is provided to promote 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.

**6.22** The interventions under MM-III are (i.) integrated development of nurseries & plantation on the wasteland, maintenance of TBOs plantation, incentives for undertaking intercropping with TBOs, (iv) research and

development, distribution of pre-processing, processing and oil extraction equipment, training of farmers, training of extension workers and local initiatives/contingency. During 2017-18, MM-III programme is being implemented in the states of Arunachal Pradesh, Chhattisgarh, Jammu & Kashmir, Madhya Pradesh, Maharashtra, Mizoram, Rajasthan, Tamil Nadu, Tripura and Uttar Pradesh.

### **Central Agencies**

#### **Seed production, distribution, minikits and FLDs on Oilseeds during 2017-18:**

**6.23** In order to encourage the adoption of newly released varieties and improved agro-techniques in oilseed crops support is provided under NMOOP to Central Agencies viz. NSC, KRIBHCO, HIL, NAFED and IFFDC for procurement of breeder seed (B/S), production of foundation seed (F/S) and production of certified seed (C/S), distribution of certified seed (D/S) and supply of seed minikits. During 2017 -18 (Kharif and Rabi) a total of 3,26,970.13 qtls of breeder seed, foundation seed and certified seeds were produced.

**6.24** Seed minikits of 8 oilseeds crops totaling 1809175 nos. were supplied during kharif, rabi and summer 2017-18 through Central Seed Producing Agencies.

**6.25** During kharif/ rabi/ summer 2017-18 a total of 73275 cluster FLDs have been planned through 516 KVKs of ICAR in different states covering (groundnut, soybean, rapeseed-mustard, sunflower, safflower, linseed, sesame, niger and castor).

#### **Research & Development (R&D) projects under NMOOP during 2017-18 :**

**6.26** Total Eight R&D projects on rapeseed & mustard, groundnut, castor and oil palm were approach during 2017-18 under NMOOP as given below:



S. No.	Oilseeds: R&D projects
1	Technology advancements and assessment for <b>rapeseed mustard</b> production in rice fallow area of Eastern India- ICAR-DRMR, Bharatpur (Rajasthan).
2	Innovation technology interventions for improving productivity and production of <b>rapeseed mustard</b> crop in Uttarakhand- state GBPUA&T, Pantnagar.
3	Enhancing income of oilseed growers through technology dissemination and marketing linkages for sesame and <b>canola rapeseed mustard</b> in Punjab –PAU, Ludhiana.
4	Commercialization of high oleic and high oil groundnut varieties meets demand from food industry and export market to enhance profitability of <b>groundnut</b> cultivation in India- ICRISAT, Hyderabad.
5	Area expansion and productivity enhancement of <b>castor</b> through quality seed production and adoption of BMPs -ICAR-IIOR, Hyderabad
6	Augmentation of <b>groundnut</b> seed production in Rajasthan and Eastern India to enhance productivity and seed replacement ratio- ICAR-DGR, Junagarh.
7	Promotion of Oilseed Crops in Northern Districts of West Bengal”, Uttar Banga Krishi Viswavidyalaya (UBKV), West Bengal
	<b>Oil palm R&amp;D projects</b>
8	Project on Biomass utilization, production technology, development of planting material, seed standards and training –ICAR-IIOPR, Pedavagi, A.P.

**6.27** The department is also organising Kisan Mela, seminar, workshop, Brain storming session, exhibition for mass awareness of NMOOP programme and activities among the stakeholders including farmers. The details of events during 2017-18, are as follow:

S N.	Event	Venue	Date
1	National Oilseed Kisan Mela	ICAR- IIOR, Hyderabad,	10.09.2017
2	Groundnut Farmers Fair –cum Exhibition	ARC-CSWRI, Bikaner by ICAR-DGR	07.10.2017
3	National Soybean kisan Mela	ICAR-IISR, Indore, (MP)	11.12.2017
4	National Workshop on Olive Research and Development in India	ICAR-CITH, Srinagar, (J&K)	24-25, October 2017
5	Brain Storming session –cum workshop	ICAR- IIOR, Hyderabad, (Andhra Pradesh)	26.09. 2017
6	Exhibition stall at World Food India 2017	India Gate New Delhi	3-5 Nov. 2017
7	Exhibition stall at India International Trade Fair-2017	Pragati Maidan, New Delhi	14-27 Nov 2017
8	National Mustard Kisan Mela	ICAR-DRMR, Bharatpur, (Rajasthan)	03.02.2018

**6.28** Head-wise allocation of funds under NMOOP to the States, Central Agencies and the R&D institutions during 2017-18 are as under:

Head	(Rs. in crore) Allocation of Central Share
Mini Mission-I	347.10
Mini Mission-II	76.76
Mini Mission-III	7.48
R&D institutions and Central Agencies	125.92
<b>TOTAL</b>	<b>557.26</b>

### Surplus Staff Establishment (SSE/ erstwhile NOVOD Board)

**6.29** Consequent upon repealing of the National Oilseeds and Vegetable Oils Development (NOVOD) Board Act, 1983 by Repealing and Amending Act, 2016 (No. 23 of 2016) dated 6<sup>th</sup> May, 2016, NOVOD Board has been wound-up by Ministry of Agriculture and Farmers Welfare notification no. S.O. 2925(E) dated 8<sup>th</sup> September 2016 and a Surplus Staff Establishment (SSE) has been created by order F.No 2-2/2013-C.A VI, dated 9<sup>th</sup> September 2016 of Oilseeds division of DAC&FW. As per the said order all the employees of erstwhile NOVOD Board have been transferred to the SSE w.e.f. 9<sup>th</sup> September 2016 and the services of the employees of erstwhile NOVOD Board are being utilized in the various sections/units of this Ministry. A budgetary allocation of Rs. 2.75 crore has been made during 2017-18, under NMOOP to meet the salary, pension, establishment and the administrative expenses of the employees of erstwhile NOVOD Board, under SSE unit of oilseeds division of DAC&FW.

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

**6.30** Notification for implementation of Direct Benefit Transfer (DBT) for NMOOP has been published vide SO 1343(E) dated 24<sup>th</sup> April, 2017. NMOOP-DBT portal has been created

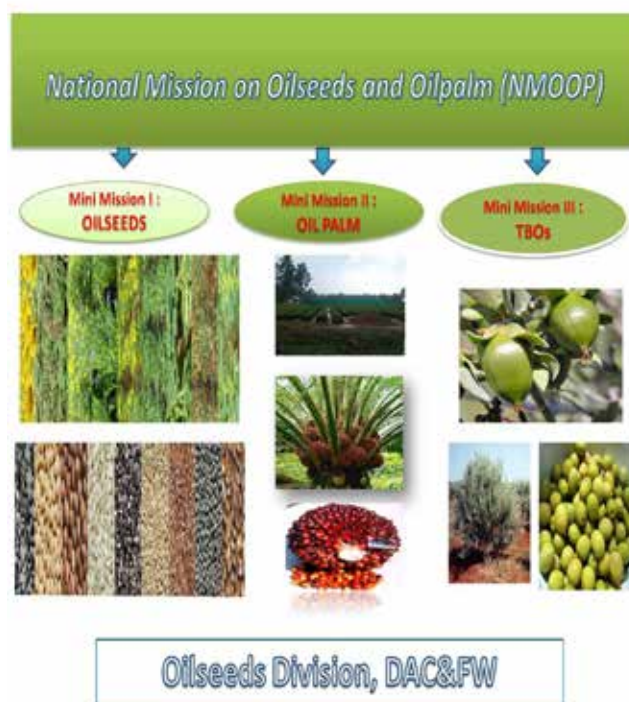
to facilitate the NMOOP implementing states for updating the beneficiary details. The DBT-NMOOP portal is used by the NMOOP implementing states for uploading of the DBT linked beneficiary details.

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

**6.31** The release of fund under NMOOP programme is made to the states with category wise break-up for SC/ST and also there is a special mention in the release letter that the funds earmarked for SC/ST category cannot be diverted for General category. Even while conveying the re-validation of previous year unspent balance of fund to the states it has the specific mention of category-wise (SC/ST) break-up of amount that is to be utilized by the state.

### Women beneficiaries:

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



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## CHAPTER 7

# National Mission for Sustainable Agriculture (NMSA)

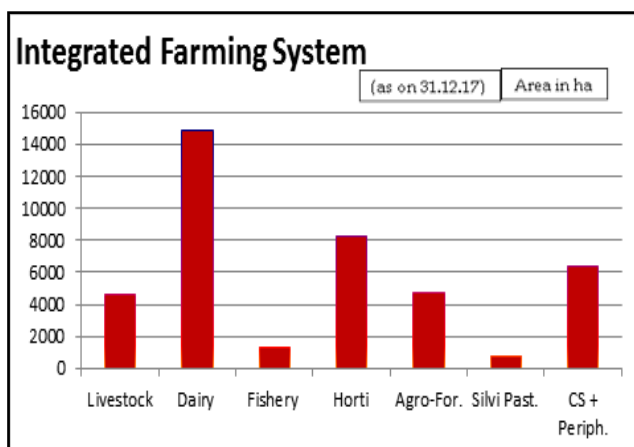
**7.1** National Mission for Sustainable Agriculture (NMSA) is one of the eight Missions outlined under National Action Plan on Climate Change (NAPCC) and aims at promoting sustainable agriculture through 17 deliverables focusing on 10 key dimensions of Indian agriculture. During 12th Five Year Plan, these 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.

### Major Components of NMSA are :

- **Rainfed Area Development (RAD):** RAD focuses on Integrated Farming System (IFS) for enhancing productivity and minimizing risks associated with climatic variabilities. Under this system, crops/cropping system is integrated with activities like horticulture, livestock, fishery, agro-forestry, apiculture etc. to enable farmers not only in maximizing farm returns for sustaining livelihood, but also to mitigate the impacts of drought, flood or other extreme weather events with the income opportunity from allied activities during crop damage.
- **Soil Health Management (SHM):** SHM is aimed at promoting location as well as crop specific sustainable soil health management including residue management, organic farming practices by way of creating and linking soil fertility maps with macro-micro nutrient management, appropriate land use based on land type.

### Rainfed Area Development (RAD):

**7.2** During 2017-18, RAD was implemented in 26 States of the country. Integrated Farming System (IFS) is being promoted under RAD including activities like horticulture, livestock, fishery, agroforestry, value addition along with crops/cropping system. As on 31.12.2017, Rs. 164.74 crores has been released to States for implementation of RAD and on 31.10.2017, IFS activities of about 23569 ha have been covered. The details of the area covered under various IFS activities are shown in the following graph.



**Details of Rainfed Area Development (RAD) programmes being executed in North-Eastern**

States during 2017-18 (BE) are given below:

Schemes/ Programmes	Budget Allocation (Rs. In crore)	Amount Released (Rs. In crore) as on 31.12.2017	IFS activities covered (Area in ha) as on 31.12.2017
Rainfed Area Development (RAD)	22.30	22.52	4875

**New Initiatives:**

**7.3** A website of NMSA (<http://www.nmsa.dac.gov.in/>) with static and dynamic

Management Information System with multi-nodal access features has been operationalized.

**Pradhan Mantri Krishi Sinchayee Yojana (PMKSY)**

**7.4** Pradhan Mantri Krishi Sinchayee Yojana (PMKSY) is being implemented with the objective of developing a long term solution for mitigating the effect of drought and increasing area under irrigation with Motto of Har Khet Ko Pani. This programme is being implemented in mission mode by three ministries with Ministry of Water Resources, RD&GR leading the mission.

**7.5** With an outlay of Rs. 50,000 crore for a period of 5 years (2015-16 to 2019-20), the scheme has been conceived amalgamating ongoing schemes viz. Accelerated Irrigation Benefit Programme (AIBP) of the Ministry of Water Resources, River Development & Ganga Rejuvenation (MoWR,RD&GR), Integrated Watershed Management Programme (IWMP) of Department of Land Resources (DoLR) and the On Farm Water Management (OFWM) of Department of Agriculture, Cooperation and Farmers Welfare. The major objective of PMKSY is 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 (More Crop Per Drop), promote sustainable water conservation practices etc. The aim of PMKSY is not only the creation of assured irrigation but to create protected irrigation by using rainwater by “Jal Sanchay” and “Jal Sinchan”.

**7.6** Various committees, as envisaged in the operational guidelines of the scheme, viz. National Steering Committee under the Chairmanship of Hon’ble Prime Minister and National Executive Committee under the Chairmanship of Vice chairman of NITI Aayog have been constituted. Department of Agriculture, Cooperation &



Farmers Welfare has been assigned to implement Per Drop More Crop component of PMKSY to focus on water use efficiency enhancement and supplementary drought proofing measures. It has two sub components viz. Micro Irrigation and Other Interventions.

7.7 During 2017-18, an amount of Rs. 1610.00 crore and Rs. 594.90 crore has been released as on 31<sup>st</sup> December, 2017 to states for “Micro-irrigation” and for “Other Interventions” respectively under Per Drop More Crop component. Status of Implementation of the scheme till 31<sup>st</sup> December, 2017 is as under:

Allocation (BE) (Rs. In crore)	Release (Rs. In crore)	Area covered under MI, ha	No. of Water Harvesting Structures	Potential Created for Protective Irrigation, ha
3400	2204.90	497285	39803	66785

**Detail of Per Drop More Crop Component of PMKSY being executed in North- Eastern States during 2017-18 are given below:**

Allocation (BE) (Rs. In crore)	Release (Rs. In crore)	Physical Achievement
340	35.60	Not Reported

### 7.8 New Initiatives

- The website of PMKSY (<http://www.pmkSY.gov.in>) with static features and dynamic Management Information System (MIS) with multi-nodal access features has been operationalized with integrating and capturing information of various Departments/ Ministries for PMKSY. District Irrigation Plans are cornerstone of planning and implementation of the scheme. As of now all the District Irrigation Plans (DIP) i.e. 675 DIPs have been prepared and uploaded on PMKSY portal.
- An Android based mobile application- ‘BHUVAN PDMC’ was developed in collaboration with NRSC, Hyderabad for geo-tagging of intervention/ assets created under PMKSY- Per Drop More Crop and work started.

### Sub-Mission on Agro-forestry (SMAF)

7.9 Ministry of Agriculture & Farmers Welfare, Government of India, brought out the National Agroforestry Policy in 2014 recognizing the

potential of agro forestry in supplementing farm income of farmers to bring about coordination, convergence and synergy among various elements of agro-forestry scattered in various missions, programmes, schemes and agencies. A dedicated Sub-Mission on Agroforestry (SMAF) under the framework of National Mission for Sustainable Agriculture (NMSA) was approved by Govt. of India in 2016-17 with an outlay of Rs. 935.00 crore for a period of 4 years. The objectives of SMAF are:

- To encourage and expand tree plantation in complementary and integrated manner with crops and livestock to improve productivity, employment opportunities, income generation and livelihoods of rural households, especially the small farmers.
- To ensure availability of quality planting material like seeds, seedlings, clones, hybrids, improved varieties etc.
- To popularize various Agroforestry practices/models suitable to different agro ecological regions and land use



conditions.

- To create database, information and knowledge support in the area of agroforestry.
- To provide extension and capacity building support to agroforestry sector.

**7.10** Liberalisation of transit rules by States for transport of timber grown on private lands by people is a precondition for availing the benefit of the programme. During 2016-17, an amount of Rs.22.50 crore has been released to Andhra Pradesh, Haryana, Himachal Pradesh, Gujarat, Punjab, Karnataka, Tamil Nadu & Madhya Pradesh those have notified liberalized transit rules for implementation of programme. During 2017-18, till September, 2017 eight more States have notified such relaxation under transit regulation and an amount of Rs. 24.3965crore has been released to States / agencies

#### Other initiatives

**7.11** Pilot research projects to demonstrate various aspects of Climate Change Adaptation practices in Agriculture are being supported under the Climate Change Sustainable Agriculture Monitoring, Modelling and Networking (CCSAMMN) component of NMSA. The following 5 pilot research projects have been sanctioned to various ICAR Institutes for conducting the studies.

- (i) Efficient groundwater management for enhancing adaptive capacity to climate change in sugarcane based farming system in Muzaffarnagar dist. (UP)

The project sanctioned to ICAR- Indian Institute of Water Mangement (IIWM), Bhubaneswar on 31<sup>st</sup> March, 2015 for the period of three years with an estimated cost of Rs. 459.0 lakhs and Rs. 274.00 lakh has been released as

on 31.12.2017. The aim of the project is to evaluate current and future risk to sugarcane based production system due to depleting ground water availability and technological interventions on a pilot basis for sustainable use of groundwater for enhancing adaptive capacity to climate change.

- (ii) Updating the District based Agricultural Contingency Plans

The project sanctioned to Central Research Institute for Dryland Agriculture on 12<sup>th</sup> July, 2016 for the period of three years with an estimated cost of Rs. 344.668 lakhs and Rs.100.3 lakh has been released as on 31.12.2017. The aim of the project is to update the District-based Agricultural Contingency Plans with improvements in management practices.

- (iii) Establishment of Climate Resilient Integrated Farming System (IFS) demonstration units in KVKs

The project sanctioned to Agriculture Extension Division, ICAR, Pusa on 8<sup>th</sup> August, 2016 for the period of one years with an estimated cost of Rs. 300 lakhs and Rs.150.00 lakh has been released as on 31.10.2017. The aim of the project is to establish Climate Resilient Integrated Farming System (IFS) demonstration units in 100 KVKs of various zones in the country.

- (iv) Development of Climate Resilient Farming System Models for Livelihood Improvement in East Champaran District of Bihar

The project sanctioned to ICAR Research Complex for Eastern Region, Patna on 17<sup>th</sup> November, 2016 for the period of three years with an estimated cost of

Rs. 273.19 lakhs and Rs.135.00 lakh has been released as on 31.12.2017. The project aims to reduce poverty in the Eastern Gangetic Plains (EGP) by improving productivity, profitability and sustainability of smallholder agriculture through development of climate resilient farming system models.

- (v) Development of Climate Resilient Sustainable Integrated Farming System Models for Optimizing Farm Productivity in Varanasi Dist. (UP)

The project sanctioned to ICAR-Indian Institute of Farming Systems Research Modipuram, Meerut on 30<sup>th</sup> June, 2017 for the period of three years with an estimated cost of Rs. 234.24 lakhs and Rs.50.00 lakh has been released as a first instalment. The project aims to establish Climate Resilient Sustainable Integrated Farming System Models for Optimizing Farm Productivity in 3 villages of Varanasi district of Uttar Pradesh.

### Gender Perspective in Agriculture- Rainfed Farming Systems Division

**7.12 Rainfed Area Development (RAD):** 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.

**7.13 Pradhan Mantri Krishi Sinchayee Yojana (PMKSY)-Per Drop More Crop:** Per Drop More Crop component (PDMC) of PMKSY is being implemented by Department of Agriculture, Cooperation & Farmers' welfare

from 1<sup>st</sup> July, 2015. PDMC mainly focuses on water use efficiency at farm level through precision/ Micro Irrigation (Drip and Sprinkler Irrigation).

**7.14 Sub Mission on Agro Forestry (SMAF):** Sub Mission on Agro Forestry (SMAF) under the framework of National Mission for Sustainable Agriculture (NMSA) 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".

**7.15** Guidelines of 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.'

### Integrated Nutrient Management

#### Assessment of Fertilizers:-

**7.16** 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.

**7.17** 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 Department of Agriculture, Cooperation & Farmers Welfare and Department of Fertilisers with the States through weekly Video Conference

**(a) Kharif 2017 Season:** Requirement of major fertilizers viz, Urea, DAP, MOP, Complexes and SSP for Kharif 2017

season was assessed at 151.19 Lakh Metric Tones (LMT), 47.91 LMT, 17.20 LMT, 47.73 LMT and 25.91 LMT respectively.

- (a) **Rabi 2017-18 Season:** Requirement of major fertilizers viz, Urea, DAP, MOP, Complexes and SSP for Rabi 2017-18 season was assessed at 162.35 Lakh Metric Toones (LMT), 50.83 LMT, 16.70 LMT, 50.46 LMT and 29.48 LMT respectively.

**7.18 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

### Soil Health Management (SHM)

**7.19** Soil Health Management (SHM) is one of the most important interventions under National Mission for Sustainable Agriculture (NMSA). SHM aims at promoting Integrated Nutrient Management (INM) through judicious use of chemical fertilizers including secondary and micro nutrients in conjunction with organic manures and bio-fertilizers for improving soil health and its productivity; strengthening of soil and fertilizer testing facilities to provide soil test based recommendations to farmers for improving soil fertility; ensuring quality control requirements of fertilizers, bio-fertilizers and organic fertilizers under

Fertilizer Control Order, 1985; up-gradation of skill and knowledge of soil testing laboratory staff, extension staff and farmers through training and demonstrations; promoting organic farming practices etc.

**7.20** The components under Soil Health include trainings for fertilizer dealers, foreign nationals, fertilizer inspectors and fertilizer laboratory staff, setting up of new static Soil Testing Laboratories (STLs), setting up of new Mobile STLs, strengthening of existing STLs, setting up of new Fertilizer Quality Control Laboratory (FQCL), strengthening of FQCL apart from trainings and demonstrations on balanced use of fertilizers.

**7.21** The components under INM and Organic include setting up of fruit/vegetable/agro waste compost production units, setting up of bio-fertilizer production units, setting up of bio-fertilizer & Organic Fertilizer Quality Control Laboratories, promotion of organic inputs, training on organic farming, etc.

**7.22** Under the scheme, strengthening of 161 STLs, Setting up of 1 FQCL, Strengthening of 10 FQCLs, 78 Trainings, promotion of Micronutrients in 53000 ha and setting up 3140 Mini Soil Testing Labs have been approved during 2017-18 under SHM component.

**7.23** A new scheme "Soil Health Card" has been approved for implementation during the remaining period of 12th Plan to provide 12 crore Soil Health Cards to the farmers in the country. Soil Health Card will provide information to farmers on soil nutrient status of their soil and recommendation on appropriate dosage of nutrients to be applied for improving soil health and its fertility. Soil health card will be issued every 2 years for all land holdings in the country so as to promote balanced and integrated use of plant nutrients. Under the scheme 2.53 crore soil samples collected and 10.23 crore soil Health Cards issued by States for the 1<sup>st</sup> Cycle (2015-16 – 2016-17). Similarly 2<sup>nd</sup> Cycle of the scheme has been commenced from May 2017 (2017-18-2018-19). In this cycle, 98.75 lakh soil samples collected and 99.51 lakh Soil Health Cards distributed to farmers.

It is expected to complete cycle-I (12 crore Soil Health Cards) and Cycle-II (6.24 crore Soil Health Cards) by March, 2018.

**7.24 Soil Health Management (SHM):** Ministry of Agriculture, Cooperation and Farmers Welfare, Department of Agriculture and Cooperation & Farmers Welfare is implementing Soil Health Management component under National Mission for Sustainable Agriculture. The main component under SHM are:

- Setting up of new Soil Testing laboratories (STL) (static/mobile/mini labs) and strengthening of existing Soil Testing laboratories
- Training of STL staff/extension officers/farmers/field functionaries and field demonstrations on balanced use of fertilisers etc
- Promotion and distribution of micronutrients
- Setting up of new Fertilizer Quality Control Laboratories (FQCL) and strengthening of existing state Fertilizer Quality Control Laboratories

**7.25** Funds amounting to Rs. 35.74 crore have been released till 31.12.2017 under Soil Health Management and Rs. 114.33 crore released under Soil Health Card Comparison of funds released during the current year (till December) with that of previous years is shown below:

(Rs. in crore):

Year	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18 (till 31.12.17)
Amount under Soil Health Management	8.51	19.24	63.98	44.39	60.31	35.74
Amount under Soil Health Card	0.00	0.00*	23.89	96.44	133.66	114.33
Total	8.51	19.24	87.87	140.83	193.97	150.07

\*commenced from 2014-15.



The likely expenditure upto March 2018 under both schemes is Rs. 220 Core.

**7.26 INM & Organic Farming:** Ministry of Agriculture, Cooperation and Farmers Welfare, Department of Agriculture, Cooperation & Farmers Welfare is implementing INM & Organic Farming component under National Mission for Sustainable Agriculture. The financial assistance on various components as below is provided under the said components:

- Setting up of mechanized Fruit/Vegetable market waste/Agro waste compost production units.
- Setting up of State of art liquid/carrier
- Setting up of Bio-fertiliser and Organic fertiliser testing laboratory or strengthening of existing laboratory under FCO.
- Promotion of Organic Inputs on farmer's fields.
- Support to research for development of organic package of practices specific to State and cropping system.
- Setting up of separate Organic Agriculture Research and Teaching Institute (against specific proposal).

### Paramparagat Krishi Vikas Yojana (PKVY)

**7.27** Paramparagat Krishi Vikas Yojana (PKVY) is one of the schemes under National Mission for Sustainable Agriculture (NMSA) to promote certified organic cultivation in 2 lakh ha covering 10,000 clusters. Financial assistance of Rs 50,000 per ha per farmer is provided in 3 years.

**7.28** Participatory Guarantee System (PGS) of certification is promoted in PKVY clusters. The financial assistance is provided to clusters on different sub components for mobilization of farmers, organic seeds, to harvest biological

nitrogen etc. It includes different components such as:

- I. Mobilization of farmers: training of farmers and exposure visit by farmers.
- II. Quality control: soil sample analysis, process documentation, inspection of fields of cluster members, residue analysis, certification charges and administrative expenses for certification.
- III. Conversion practices: transition from current practices to organic farming, which includes procurement of organic inputs, organic seeds and traditional organic input production units and biological nitrogen harvest planting etc.
- IV. Integrated manure management: procurement of Liquid Bio fertilizer consortia/Bio pesticides, Neem cake, Phosphate Rich Organic Manure and Vermicompost.
- V. Custom hiring centre charges: to hire agricultural implements as per SMAM guidelines.
- VI. Labelling and Packaging assistance & Transport assistance.
- VII. Marketing through organic fairs.

The funds released in 2015-16 is given in **Annexure 7.1.**

### B. Participatory Guarantee System (PGS) - India

- An alternative to Third party certification needed for export market-cumbersome for farmers
- PGS India is cost effective, farmer-friendly and hassle-free - caters to domestic market
- Promotes decentralized and participatory approach

- Prepares farmers to maintain process and product documentation to win market credibility.

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

**7.29** 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, to the 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, areas of 0.50 lakh ha have been targeted to be covered under organic farming in North Eastern Region of the country during 2015-16 to 2017-18.

#### Status of Scheme:

**7.30** An amount of Rs. 125 crore was allocated to the north eastern states during 2015-16 and Rs. 100 crore during 2016-17, and Rs. 100.00 crore during 2017-18. Released an amount of

Rs. 112.11 crore during 2015-16, Rs. 48.68 crore during 2016-17 and Rs. 34.26 crore during 2017-18 to 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, 2406 FIGs have been formed covering an area of 45863 ha and 44604 farmers in eight North-Eastern States so far 79 Farmers Producer Companies have been registered till date.

### Natural Resource Management

**7.31** Agriculture growth can be sustained by promoting conservation and sustainable use of the natural resources through adoption of appropriate location specific measures. Conservation of natural resources in conjunction with development of rainfed agriculture holds the key to meet burgeoning demands for foodgrain requirement of increasing population of the country.

**7.32** Land and Water are two important natural resources having implications on sustainable food production. Besides, frequent droughts, floods and climatic variabilities also impact soil fertility and cause land degradation, thereby, affecting food grain production across the country. As per available estimates of Indian Council of Agricultural Research (ICAR- 2010), out of total geographical area of 328.7 million hectare (m.ha), about 120.4 m.ha(37%) is affected by various kind of land degradation. This includes water and wind erosion (94.9 m.ha), water logging (0.9 m.ha), soil alkalinity/sodicity (3.7 m.ha), soil acidity (17.9 m.ha), soil salinity (2.7 m.ha) and mining and industrial waste (0.3 m.ha).

**7.33** Natural Resource Management (NRM) Division is implementing mainly two Central Sector Schemes namely, Soil and Land Use

Survey of India (SLUSI) and Soil Conservation Training Centre, Damodar Valley Corporation, Hazaribagh. The major mandates of Division are as under:-

- Technical input on soil & water conservation interventions for prevention of soil erosion & land degradation under various programmes/schemes of DAC&FW;
- Formulation of strategies, policies and programmes to address issues of degraded land, appropriate measures to combat adverse impact of such degradation on agricultural production;
- Reclamation & development of problem lands affected by alkalinity, salinity and acidity;
- Conducting various types of soil survey to provide scientific database on soil and land uses for planning & implementation of various land based interventions;
- Development of training and capacity of officials working in various States for soil and water conservation & management.

**7.34 Schemes/Programmes:** The details of the Schemes and Externally Aided Programmes being implemented by NRM Division are given in the succeeding paragraphs.

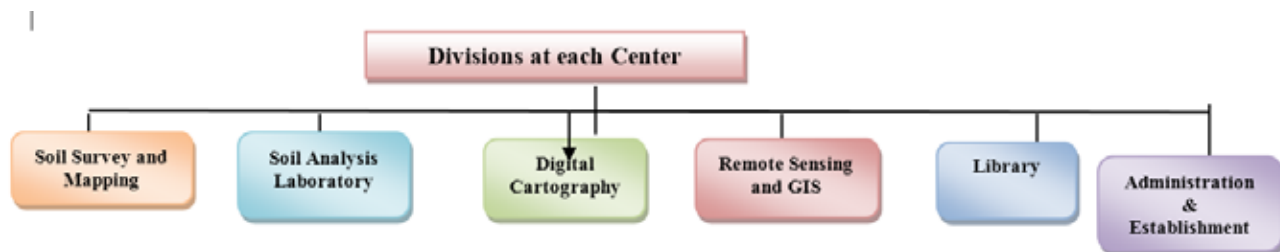
**(A) Central Sector Schemes:**

- a) Central Sector Scheme of Soil and Land Use Survey of India (SLUSI):

**Soil and Land Use Survey of India (SLUSI)**

**1. About SLUSI**

**7.35** Soil and Land Use Survey of India (SLUSI) governs and monitors all its activities from Head Quarter office situated at Indian Agricultural Research Institute (IARI) campus, New Delhi. After its inception in 1958, it carried out various types of soil survey at different scales to provide scientific input to policy makers, planners and implementing agencies for various agricultural developmental programs. Watershed being the main hydrological entity for all soil and water conservation activities, SLUSI has generated microwatershed ATLAS of all the States/Union Territories of the country except Jammu & Kashmir got digital. An advance technology of **Remote Sensing & Geographical Information System (RS & GIS)** and **Global Positioning System (GPS)** are being used to generate site specific soil and land information by its seven regional centres located at **Noida, Ranchi, Kolkata, Nagpur, Bengaluru, Hyderabad and Ahmedabad**. It has also established a **Remote Sensing Centre (RSC)** for leveraging applications of advanced technologies in soil survey programmes.



**7.36** The principal activity is the characterization of soils, soil properties, soil suitability for agriculture and presenting the locational information with their spatial extent in map form within the suitable framework

i.e. watershed of designated area/district etc. The generated information is instrumental in outlining the potential agricultural areas for the development, planning and management of that area. It also provides scientifically

based technical advice on **sustainable Land Management** and organizes trainings for **Capacity building** for the officials/officers of state user departments on mapping & management of micro-watersheds using **Space Technology** along with uses of database generated by SLUSI. The output of the survey is utilized both by Central and State Governments towards formulation of soil and water conservation working plans. SLUSI has also generated database at Rapid Reconnaissance level for **239.37 million ha** in the country.

**7.37** In view of launching of National Mission for Sustainable Agriculture (NMSA) by Department of Agriculture, Cooperation & Farmers Welfare organization has revised its mandate with special reference to Soil Health Management activities by generating **detailed scientific database** for planning and implementation of soil and water conservation and soil health management activities and for sustainable land use plan on micro-watershed basis on **1:10 K** scale.

**7.38** Inventory of Scientific Detailed Soil Resources database acquired through ground truthing using **High Resolution Satellite data** (LISS-IV), field survey comprises of **profile study & soil analysis and finalization of maps in GIS** to facilitate adoption of location and soil specific crop management practices for sustainable land management plan. The utility of data is enhanced by interpreting area for soil and land capability, irrigability and hydrological soil grouping etc. The database on land and soil characteristics through extensive field level scientific surveys is also helpful in Soil Health Management (SHM) through identification and mapping of degraded lands either due to Salinity/Alkalinity/Acidity or soil erosion with their intensity by suggesting reclamation / management plan.

**7.39** SLUSI also provides technical support to

**National Mission for Sustainable Agriculture** (NMSA) by making available generated maps and reports essentially required for integrated watershed development planning, management and monitoring of natural resources to State Governments.

**7.40** Training programs are organized by all centres of SLUSI in the states under their jurisdiction for capacity building and updating knowledge of officers of State Governments involved in different developmental programs viz. Integrated Watershed Management Program (IWMP), agriculture, horticulture, forestry, soil & water conservations and rural development etc.

#### **Soil Health Card data validation:**

**7.41** Soil & Land Use Survey of India (SLUSI) has been assigned the work of Soil Health Card data validation project for all the States of the Country. The organization has completed soil samples collection of 10 states (till Dec. 2017) and the rest of the states are under the progress. Similarly, the analysis of collected soil samples for their 12 parameters (pH, EC, O.C., N, P, K, S, B, Cu, Fe, Mn, Zn) for three states i.e. Karnataka, Maharashtra & Gujarat have been completed and results submitted to the Ministry. The analysis of rest of the states is under process.

#### **Pradhan Mantri Krishi Sinchai Yojna (PMKSY)**

**7.42** SLUSI is involved in completed irrigation projects in command areas under PMKSY. The organisation will coordinate & hand hold with State Irrigation department, State Agricultural University, State Agriculture department of the concerned projects for planning and monitoring of the projects. Presently, the seven irrigation projects are Maddigedda (Andhra Pradesh), Warna (Maharashtra), Dongargaon (Maharashtra), Upper Indravati (Odisha), Rukura-Tribal (Odisha), Extension of



Kandi canal Stage 2 (Punjab), Rehabilitation of 1<sup>st</sup> Patiala Feeder & Kotla Branch (Punjab) for preparation of crop plan.

## 2. Digital Data Development:

### (i) Geospatial Technology Application:

**7.43** Under Digital initiative, SLUSI has brought a paradigm shift in all Technical & cartographic mapping services from manual drawing and visual interpretation to direct 'ON-SCREEN' satellite data interpretation and digitization. Presently, all the centres of SLUSI are working on 'ON-SCREEN' pre-field and post-field interpretation of satellite data.

**7.44** Under the initiative digital database preparation for Detailed Soil survey in **5.47 lakh ha** for ongoing survey, **2.28 lakh ha** under **Soil Erosion Mapping in Punjab state** and for **Soil Resource Mapping 4.07 lakh ha area** have been completed during 2017-18.

### (ii) Digitalization:

**7.45** The organization has started digitization of all its old reports & maps through GIS to make it available in digital form for the users. The mandays of cartographical officials of all centres are being used to convert old hard copy maps and reports into digital format. Under this initiative, total **290 old hard copy reports and maps** have been digitized by different centers.

## 3. Consultancy Projects:

**7.46** SLUSI provides consultancy services for preparing soil and land resources inventory for sustainable land management and watershed development for different state/central departments. The following consultancy projects have been taken

during 2017-18:

➤ **Soil Erosion Mapping in Sub-mountain Siwalik Hills of Punjab on 1:5K scale** having 2,27,551 ha area in five districts of state to provide information of location wise area under different erosion, to demarcate the risk area susceptible for soil erosion and also priority fixation of villages based on assessed Runoff potential Index (RPI). The total cost of the project is **Rs. 56,88,777/-** which is funded by **Department of Forest & Wildlife Preservation, Government of Punjab.**

➤ **Soil Resource Mapping of Kerala on 1:50K scale:**

It is a continuous project of Kerala State for Soil Resources Mapping (1:50,000 scale) and assessment of Land capability and irrigability classification for assessing sustainability of present land use and area under different irrigation classes of the districts. The total cost of the project is **Rs. 4,56,515/-** which is funded by **Kerala State Land Use board (KSLUB)** for **Malappuram district.**

➤ **Detailed Soil Survey & Land Use/Land Cover Mapping on 1:10K scale along railway track from NTPC, SIPAT, Bilaspur to Dipka coal mines"** has been taken up by SLUSI using geospatial technology. The total cost of the project is **Rs. 2,26,765/-** which is funded by **NTPC, SIPAT, Bilaspur, Chhattisgarh.**

## 4. Publication of reports and maps:

**7.47** The soil database generated after survey is published in the form of soil survey reports and maps which include the details of soil type along with the interpretative grouping for its capability, soil and land irrigability, soil hydrological grouping and suitability for various other

uses have been suggested for different users. During the year 2017-18, SLUSI has published **21 reports of Priority delineation Survey, 41 reports of Detailed Soil Survey and 29 reports of Soil Resource Mapping** (till December, 2017) in various parts of the country.

**5. Generation of Digital Micro-watershed with Unique Nomenclature:**

**7.48** SLUSI is engaged in development of **digital Micro-watershed atlas (MWS)** of the country with unique code which will provide platform for the planners in designing location specific development plans under various agricultural and rural development programs in the country. The Micro-watershed atlas aims at identifying and recognizing each micro-watershed with **distinct spatial extent and Unique National code** in the country. This will also help in prevention of overlapping of planning and implementation of development activities by various agencies by adoption of web based transparent monitoring system. Micro-watershed Atlas of all states/Union Territories except Jammu and Kashmir has been completed.

**6. Simultaneously, these MWS atlas information has been uploaded under public domain through platform free basis on SLUSI website <http://slusi.dacnet.nic.in>.**

**7.49** The Micro-watershed Atlas of Bihar, Chhattisgarh, Goa, Gujarat, Haryana, Himachal Pradesh, Jharkhand, Karnataka, Kerala, Madhya Pradesh, Punjab, Sikkim, Tamil Nadu, Tripura, Uttarakhand, Telangana States and Andaman & Nicobar Islands, Dadra & Nagar Haveli, Delhi, Puducherry, Chandigarh, Daman & Diu U/T have been uploaded on website and

uploading for other completed States/UT is under progress.

The organization has published the **"Micro-watershed Atlas of Haryana State"** during 2017-18 & publication of Atlas for Uttarakhand is under progress.

**7. Physical targets of Soil Surveys:**

**7.50** SLUSI has fixed the target to complete Detailed Soil Survey (DSS) of **16.50 lakh ha in Rainfed districts** of various states during 2017-18. The DSS of **5.47 lakh ha** has been completed and survey of the rest of the area is under progress and will be completed within this financial year. Similarly, Ground truthing for **Soil Erosion Mapping in Sub-mountain Siwalik Hills of Punjab on 1:5K scale** having **2.28 lakh ha** area in Punjab state and **4.07 lakh ha** area in Soil Resource Mapping (SRM) of Kerala state have been completed under consultancy projects.

**During 2016-17**, Detailed Soil Survey (DSS) in Rainfed districts of **10.43 lakh ha** & Soil Resource Mapping (SRM) of **27.00 lakh ha** was surveyed by SLUSI.

**8. Short Courses/ Training Programs**

**7.51** SLUSI has planned to organize **seven short courses/ trainings** during 2017-18 in different parts of the country for the officials of user departments for capacity building and updating their knowledge towards application of data base on soil and land use under various development programs viz. Integrated Watershed Management Program (IWMP), agriculture, horticulture, forestry, soil & water conservations and rural development. Out of seven trainings to be organized, **three have been conducted by SLUSI i.e. one by**

**Ahmedabad centre for the officers of Gujarat State and by Noida Centre for the officers of Rajasthan State another by Bangalore centre for the officers of Kerala State till December, 2017** and rest of the trainings would be completed within this financial year by Hyderabad, Kolkata & Ranchi centres.

**b) Central Sector Scheme of Soil Conservation Training Centre-DVC, Hazaribag (Non Plan):**

**7.52** This Central Sector Scheme was created under Non-Plan for conducting training and capacity building including short orientation courses for soil & water conservation, land degradation, crop management, livelihood support through off farm activities, agro forestry, Integrated Farming System, Soil Health Management and Climate change adaptation and mitigation in agriculture and allied sectors which are essential for strengthening capabilities of field functionaries. During 2016-17, 11 training courses have been completed with an expenditure of Rs. 50 lakh, and 214 numbers of officials have been trained. During 2017-18, 11 training programmes have been planned with an expenditure of Rs 60.00 lakh. An amount of Rs. 30 lakhs has been released for this purpose. Upto November 2017, 8 training programmes have been completed and 156 Officials and Students are trained.

**Other NRM Related Interventions:**

**a) Watershed Development Fund (WDF):**

**7.53** The Union Government has established a Watershed Development Fund WDF during 2000 with a corpus of Rs.200 crore which includes Rs.100 crore by DAC and Rs.100 crore by National Bank for Agriculture and Rural Development

(NABARD) as matching contribution. The total corpus and its management is vested with NABARD. Objective of WDF is to promote participatory watershed development involving Watershed Community, State Government Departments, Banks and NGOs. Presently, WDF scheme is being implemented in Gujarat, Bihar, Maharashtra, Uttar Pradesh, Uttarakhand, Karnataka, Tamil Nadu, Rajasthan, Chhattisgarh, Odisha, Jharkhand, Madhya Pradesh, Himachal Pradesh, Jammu, Haryana, Andhra Pradesh and West Bengal. During 2006, after announcement of Prime Minister's Rehabilitation Package in 31 distressed districts in the States of Andhra Pradesh, Karnataka, Kerala and Maharashtra, it was decided to implement participatory watershed development programme in all these distressed districts through WDF. As per information reported by the NABARD, Mumbai, an amount of Rs 318.89 crores was released under WDF for the development of 5.94 lakh ha. in the selected states. In case of Prime Minister's Rehabilitation Package, the programme has been completed successfully. 673 projects have been completed covering an area of 8.76 lakh ha.. An amount of Rs. 807.78 crore has been released against the total sanction of Rs. 933.20 crore.

**Externally Aided Projects:**

**(A) World Bank assisted Projects:**

**7.54** World Bank assisted Projects in the states of Himachal Pradesh, Assam, Rajasthan and Uttar Pradesh are being implemented. DAC&FW is involved in supervision, coordination and monitoring of these projects. World Bank provides assistance for these projects directly to the State Governments. The details of the projects are given below:

**a) Himachal Pradesh Mid-Himalayan Watershed Development Project:**

The Himachal Pradesh Mid-Himalayan Watershed Development Project (Credit No. 4133 & 5159) became operational in February, 2006. This project aims at preventing degradation and protection of biodiversity, improving accessibility to rural areas and productivity of livestock etc. and envisages institutional strengthening, watershed development and management, enhancing livelihood opportunities, project management and coordination. The project covered 602 Gram Panchayats in 10 districts, namely, Sirmour, Solan, Bilaspur, Shimla, Kullu, Mandi, Hamirpur, Kangra, Chamba and Una. 108 new Gram Panchayats were added under Additional Financing in 2012. The project is implemented through HP Natural Resource Management Society. The project has successfully completed on 31.03.2017. The total expenditure incurred was Rs 657.10 crore (MHWDP=Rs 377.36 crore and Additional financing =Rs 279.74 crores).

**b) Rajasthan Agricultural Competitiveness Project:**

Rajasthan Agricultural Competitiveness Project (Credit No 5085) became operational in April 2013 and will close in March 2020. The objective of the project is to demonstrate at scale the feasibility of a range of distinct agricultural development approaches integrating technology, organization, institution and market innovations across selected

regions of Rajasthan, each marked by different agro-ecological, climatic, water resource and social conditions. The total project cost is Rs 832.5 crore. Total 20 clusters are targeted to be developed in selected locations. So far 12 clusters viz. Mokhampura in Jaipur, Ladnu in Nagaur and Bansur in Alwar, Pisangan in Ajmer, Gudha in Bundi and Z-minor in Sri Ganganagar, Bonli in Sawai Madhopur, Sangod in Kota, Phoolasar in Bikaner, Kheruwala in Jaisalmer, Orai & Bassi in Chittorgarh and Jakham in Pratapgarh have been selected. During the year 2016-17, an amount of Rs. 53.64 crore have been utilized and during 2017-18 (upto 15.12.2017), Rs. 58.43 have been utilized for the project, making the total expenditure on the project to Rs. 131.35 crores.

**c) Sodic Land Reclamation & Development Project with World Bank Assistance:**

Project proposal on "Uttar Pradesh Land Reclamation and Development Project" at an estimated cost of Rs.2,000 crore for reclamation and development of 3.10 lakh ha area was proposed for seeking financial assistance from World Bank. Technical and Financial agreement was signed in June, 2009 for development of 1.35 lakh ha of degraded land comprising 1.30 lakh ha of Sodic lands and 5,000 ha of Ravine lands at an estimated cost of Rs1,224 crore in 6 years. However, the actual implementation was started in 2010-11 and in 2015, the original closing date was extended by 2 years i.e. 31<sup>st</sup> December 2017.



Now, the World Bank has agreed to extend the closing date of project to 29<sup>th</sup> December, 2018. During the year 2016-17, an amount of Rs 132.61 crores have been utilized and during 2017-18 (up to 30<sup>th</sup> September, 2017), Rs. 38.23 have been utilized for the project, making the total expenditure on the project to Rs 1122.57 crores.

**(B) Crop Diversification in Himachal Pradesh with Japan International Cooperation Agency (JICA):**

**7.55** The Project for implementation of various interventions for Crop Diversification in Himachal Pradesh with JICA assistance at an estimated cost of Rs.321 crore for 7 years was signed on 1<sup>st</sup> October, 2010. After detailed deliberations and visit of experts to identified districts of Himachal Pradesh, Overseas Development Assistance (ODA) agreement was signed on 17<sup>th</sup> February, 2011 and agreed interventions are being undertaken in 5 selected districts namely; Kangra, Hamirpur, Bilaspur, Mandi and Una. Up to September, 2017, an amount of Rs 218.378 crores has been utilized for various approved interventions.

**National Rainfed Area Authority (NRAA)**

- National Rainfed Area Authority (NRAA) was established as an attached office of DAC &FW on 3<sup>rd</sup> November, 2006. As per approval of the Cabinet, NRAA has now been again placed under the Department of Agriculture, Cooperation & Farmer's Welfare (DAC&FW) with effect from 21<sup>st</sup> March 2015. Dr. Ashok Dalwai, IAS has joined as Chief Executive Officer (CEO), NRAA with effect from 1<sup>st</sup> August, 2017.
- NRAA is an 'Advisory Body' for policy and programme formulation and

monitoring of programmes/activities relating to integrated development of degraded/rainfed areas. The Cabinet Committee of Economics Affairs (CCEA) has vide decision dated 1<sup>st</sup> July, 2015 also approved the involvement of NRAA in providing 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 its management.

- Additional Information for NRAA: Group of Secretaries in its recommendation suggested activating the role of NRAA on knowledge Repository for Dry Land Agriculture & Focussing on Development of Strategies for 150 most vulnerable drought prone districts.
- Activities performed during the period 2017-18.
  - NRAA was allocated Rs.25.00 crore for pilot implementation of interventions for most vulnerable drought prone districts under RKVY for 2017-18.
  - A total of 24 districts spread across three states, namely, Karnataka, Andhra Pradesh and Rajasthan were selected for undertaking interventions for drought proofing. The criteria for selection of these districts was the declaration of drought for more than 10 times during the period 2000-2015. A meeting on 'Finalization of Action Plan for 24 Drought Prone Districts under Pilot Implementation Interventions for most vulnerable drought prone districts' was organized at NAAS, NASC Complex, New Delhi on 13<sup>th</sup> October, 2017

under the Chairmanship of CEO, NRAA. Representatives of all the three states viz Karnataka, Andhra Pradesh and Rajasthan, officials of CRIDA, Hyderabad and DAC & FW participated in the deliberations. The recommendations of the meeting are uploaded on NRAA ([www.nraa.gov.in](http://www.nraa.gov.in)) and DAC&FW ([www.agricoop.nic.in](http://www.agricoop.nic.in)) websites.

- One day Consultation Workshop was convened on 25<sup>th</sup> October, 2017 at NAAS, NASC Complex, New Delhi. The consultation chaired by the CEO, NRAA drew active participation from more than 40 scientists, administrators and policy makers, representing lead institutes and organizations. The purpose was to understand the nature and dimensions of rainfed systems in the country, the challenge of agriculture in these delineated areas and the approach to promoting sustainable, productive and income generating

agricultural system. It was a very useful and productive day. The proceedings have been uploaded on NRAA ([www.nraa.gov.in](http://www.nraa.gov.in)) and DAC&FW ([www.agricoop.nic.in](http://www.agricoop.nic.in)) websites.

### Reclamation of Problem Soils (RPS) as Sub Scheme of RKVY:-

**7.56** As per available estimates (ICAR-2010), the area under problem soils is about 243 lakh hectare., comprising alkali soil (37.00lakh ha.), saline soil (27.3 lakh ha.) and acid soil (179.3 lakh ha.). Accordingly, with a view to sustain soil fertility and productivity of such problem soil Department of Agriculture, Cooperation & Farmers Welfare (DAC&FW) has launched “Reclamation of Problem Soils (Alkali/Saline & Acid)” as a sub Scheme of Rashtriya Krishi Vikash Yojana (RKVY) on Pilot basis in 15 States having higher extent of problem soils with central share of Rs 50.00 crore. An amount of Rs. 16.66 crore has been utilized upto March, 2017. During 2017-18, an amount of Rs. 30 crore has been allocated as Central share for this programme.



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## CHAPTER 8

# National Mission on Agricultural Extension & Technology (NMAET)

## AGRICULTURE EXTENSION:

**8.1** The Sub Mission on Agricultural Extension (SMAE) under the National Mission on Agricultural Extension and Technology (NMAET) being implemented during the 12<sup>th</sup> 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 & Information Technology (IT) 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.

## I. SUPPORT TO STATE EXTENSION PROGRAMMES FOR EXTENSION REFORMS SCHEME (ATMA SCHEME)

**8.2** The erstwhile Scheme 'Support to State Extension Programmes for Extension Reforms (ATMA)' implemented since 2005 has now been included as a component of the Sub-Mission on Agriculture Extension (SMAE) under NMAET with some cost revisions and additional components. It is now under implementation in **676 districts of 29 States & 3 UTs** of the country. The scheme promotes decentralized farmer-driven and farmer accountable extension system through an institutional arrangement for technology dissemination in the form of an Agricultural Technology Management Agency (ATMA) at district level. Under the scheme grants-in-aid is released to states with an objective to support State Governments efforts of revitalization of the extension system and making available the latest agricultural technologies in different thematic areas to increase agricultural production through extension activities viz. Farmers Training, 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.

**8.3** In order to promote key reforms under the scheme, ATMA Cafeteria 2014 continues to support activities in line with the following policy parameters:

- **Multi-agency extension strategies:** **Atleast 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 **atleast 30%** of resources on programmes and activities are utilized for women farmers and women extension functionaries.

**8.4** The 'important features' of the 'Cafeteria of Activities' supported under Modified ATMA Scheme are as follows:-

- Support for specialists and functionaries at State, District and Block Level
- Innovative support through a 'Farmer Friend' at Village Level @ 1 Farmer Friend per two villages
- Farmers Advisory Committees at State, District and Block levels
- Farm Schools in the field of outstanding farmers being promoted at Block/ Gram Panchayat level by integrating the Progressive farmers into Agricultural Extension System (AES).
- Farmer-to-farmer extension support at the village level to be promoted through Farmers' Group.
- Funding window provided at both State and District levels for implementing innovative extension activities not specifically covered under the Programme.
- Farmers' Awards instituted at Block, District and State levels.
- Community Radio Stations (CRS) to be set up by KVKs being promoted under the Programme.
- For Non-Governmental implementing agencies, States have been given the flexibility of having State Extension Work Plans prepared and approved at the State level. Atleast 10 per cent of outlay of the Programme is to be utilized through



involvement of non-governmental sector. Non-governmental implementing agencies (excluding the corporate sector) are also eligible for service charge up to a maximum of 10 percent of the cost of the extension activities implemented through them. Apart from other NGOs financial assistance is also available for implementation of extension activities through agri-preneurs.

- Re-designating the Subject Matter Specialists (SMSs) as Assistant Technology Managers (ATMs).
- Increasing number of ATMs from existing two to average three ATMs per Block.
- Public extension functionaries are being made more effective through trainings and exposure visits. (MANAGE, Hyderabad offering PG Diploma in Agriculture Extension Management for public extension functionaries which is fully funded under the ATMA Programme).
- Use of interactive and innovative methods of information dissemination like pico-projectors, low cost films, hand held devices, mobile based service, etc.
- SEWPs of 31 States/ UTs have been prepared and approved based on District Agriculture Action Plans of 676 ATMA districts. As against the B.E. of Rs.650.00 crores, an amount of **Rs. 408.73 crores has been released** to the States up to 04<sup>th</sup> January, 2018 for implementation of the Scheme and total release since the inception of the scheme in 2005-06 to 04<sup>th</sup> January, 2018 has been to the tune of **Rs. 4032.42 crore**.
- Physical performance of the Scheme since its inception in 2005-06 (April 2005 to November 2017) is as below:
  - o Over 43356580 farmers including 10427917 farm women (24.05%) have participated in farmer oriented activities like Exposure Visits, Trainings, Demonstrations, Farm Schools & Kisan Melas.
  - o Over 231373 Commodity based Farmer Interest Group (CIGs)/ FIGs have so far been mobilized under the scheme.
  - o Over 119357 Farm Schools have been organized on the fields of outstanding farmers.

### Implementation Status

- Total 676 ATMAs have been constituted in 29 States and 3 UTs.
- Institutional arrangements viz. Inter Departmental Working Group (IDWG)/ in 29 States and 3 UTs, ATMA Core Committees – Governing Board (GB) & ATMA Managing Committee in 676 Districts; Block Technology Team (BTT) in 6024 Blocks & Block Farmer Advisory Committees (BFACs) reconstituted in 5544 Blocks; District FACs have been constituted in 561 districts and State Level FACs in 19 States.
- Progress of implementation during current financial year (up to November, 2017):
  - o 2598969 farmers including 611975 farm women (23.54%) have been reportedly participated in farmer oriented activities like exposure visits, trainings, demonstrations & kisan melas.
  - o 11535 CIGs/ FIGs organized.
  - o 9256 Farm Schools organized.
  - o 14063 specialists & functionaries

have been reported as deployed under ATMA upto November, 2017.

## II. MASS MEDIA SUPPORT TO AGRICULTURAL EXTENSION

**8.5** 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.

### 1. Telecast of Krishi Darshan Programmes on Doordarshan:-

Under this scheme, A 30 minute programme is being telecast 5-6 days a week through 01 National, 18 Regional Kendras and 180 High Power/Low Power Transmitters of Doordarshan. For telecasting success stories, innovations and for popularization change-setting technology and farming practices through the Saturday slot of Doordarshan's National Channel, DAC&FW is producing films, which would consciously project inter-alia positive aspects in agriculture and allied sector in India. During the period, 14 films (4 films on various horticulture practices and 10 success stories of the farmers) have been produced. With the view to disseminate service oriented real time information to the farming community, Dooradrashan

is telecasting regular Krishi Darshan Programme on 1 Nation Channel in Hindi language, 18 state level regional channels in respective regional languages five days a week and the 36 Narrowcasting Production Kendras producing two programmes a week and the same are being telecast through 180 High Power and Low Power Relay Transmitters. Keeping in view the importance of real time farm advisories, weather reports, early warning information, agriculture news and agriculture market trends, all Kendra of DD and AIR station are being telecasting/ broadcasting regular programmes on these subjects under respective segment of the programme.

### 2. 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 broadcasts separate programme in respective dialects/languages.

### 3. Telecast/ Broadcast of spots/ jingles advisories under 'Free Commercial Time (FCT)' on AIR and DD:

In addition to above regular programmes, the Free Commercial Time (FCT) available under Krishi Darshan and Kisanvani programme is being utilized for dissemination of Advisories on Rabi / Kharif season, Jingles on Cooperatives spots on Kisan Call Centers, Judicious use of fertilizers, safe use of Pesticides, Machinery and Technology, Farm School, NFSM, Kisan Credit Card and Agri -Clinic and Agri -Business Centers (ACABC), package of practices available to the farmers under National Food Security Mission (NFSM), and other important flagship programmes like Neem Coated

urea, Pradhan Mantri Krishi Sichai Yajana, Crop Insurance Scheme, National Agriculture Market, Soil Health Card, Bee Keeping, NHM, Parampagat Krishi Vikas Yojana and Organic Farming etc and , contingency plan developed by State Governments and emergent issues like Drought, Flood etc.

4. **Focused Publicity & Awareness Campaign through other media platforms:** Besides above, the '**Focused Publicity & Awareness Campaign** which would cut across all the Divisions of the Ministry was launched on July 5, 2010 to create awareness about the assistance available under various schemes of the Department of Agriculture & Cooperation. This campaign being 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 massive media campaign on above flagship programmes.
5. **Technical Support to DD Kisan Channel:** Recently launched DD Kisan, a 24 hour agriculture based channel is catering 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.
6. **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 CRS are operational in KVKs and NGOs under this scheme and broadcasting agriculture programmes.
7. **Print Media/ Social Media:** Curiosity of the stake-holders (particularly farmers) is expected to get whetted by the video and audio spots. More detailed inputs – preferably information having region specificity – will continue to be given through print advertisements and write-ups in regional languages through social media on facebook, twitter etc. The national and regional newspapers are being utilized based on their circulation figures.
8. **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.
9. **Financial Provisions:-** During the year 2017-18, the amount of Rs 160.50 Crores

has been earmarked under Central Sector Scheme 'Mass Media Support to Agriculture Extension' for Krishi Darshan and Kisan Vani Programmes being implemented through

10. Prasar Bharati including 'Focused Publicity and Awareness Campaign' through Radio/ TV /Print and other outdoor media platforms.

### III. ESTABLISHMENT OF THE AGRI-CLINICS AND AGRI-BUSINESS CENTRES (AC&ABC)

1. 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.
2. **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.
3. 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. So far, 56,542 candidates have been trained and 23517 agri-ventures have been established in the country during the period of implementation of the scheme (since inception till December, 2017). During the year 2017-18, starting from April, 2998 candidates have been trained and 270 agri-ventures have been established till December, 2017. Out of the ventures established since inception, 1841 no. has been subsidized as on December, 2017.
5. The Scheme has been on-boarded with DBT Bharat Mission on 18-04-2017. ATMA Scheme has been divided into two parts viz. (i) ATMA Farmers (ii) ATMA Functionaries. ATMA Farmers part has already been on-boarded on the DBT Portal on 29.12.2017. Aadhaar particulars have been made mandatory for getting benefits under the scheme. However, with a provision for exception handling mechanism in case of beneficiaries who do not possess Aadhar.
6. Development of software for complete online process is underway.
7. 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](http://www.agriclinics.net).

### IV. PRE-SEASONAL DAC-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. The Pre-Rabi 2017 DAC&FW Interface was organized in the month of September, 2017 and the group recommendations were shared with all States/UTs..

#### V. KISAN CALL CENTERS (KCC):

The KCC Scheme was launched on 21<sup>st</sup> 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 14 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. Since inception of the scheme till 31<sup>st</sup> December, 2017 over **353.75 lakh** calls have been registered in the KCCs. During the current year around **46.88 lakh** calls have been received upto 31<sup>st</sup> December, 2017. 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.

1. The restructured Kisan Call Centre programme has many good number of unique features viz. 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. The farmer calling KCC can also register for receiving SMSs from experts on the subject area.

#### VI. HRD SUPPORT

DAC has strengthened a network of training institutions in the country by supporting the National Institute of Agricultural Extension Management (MANAGE) at Hyderabad; four Regional Extension Education Institutes (EEIs) at the regional level and the State Agricultural Management & Extension Training Institutes (SAMETIs) at the State level.

1. **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, 102 training courses have been organized by MANAGE up to November, 2017. Against the budget estimate of Rs.1665.00 lakh, an entire amount of **Rs.832.50 lakh has been released** till December, 2017.

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 2017-18.

## 2. **Extension Education Institutes**

**(EIs):** Four Extension Education Institutes namely, Nilokeri (Haryana), Rajendranagar, 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 Governments 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 2017-18, a total of 185 training programmes have been approved by the Directorate of Extension, consisting of 100 On-Campus and 85 Off-Campus trainings. Against this, 132 training programmes with 3068 participants (80 on campus and 52 off campus) have already been conducted (till December, 2017). Against the budget grant of Rs. 1165.00 lakh an amount of Rs. 960.00

lakh has been released to the EIs till December, 2017.

EI set up at Jorhat (Assam) in 1987 has been providing training support at the regional level to the middle level functionaries in 8 States of North Eastern Region and West Bengal. During the year 2017-18 (till December, 2017), 22 courses have been organized with 649 participants. An amount of Rs. 215.00 lakh has been released to EI, Jorhat till October, 2017 as against the budget estimate of Rs. 250.00 lakh during 2017-18.

## 3. **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 developing technical skills of Subject Matter Specialists/Extension workers of agriculture and allied departments of the State Governments. During the current, financial year 65 Model Training Courses have been planned, out of which 51 training courses have been organized with 912 participants till December, 2017. Against the budget grant of Rs. 175.00 lakh an amount of Rs. 170.00 lakh has been released till December, 2017.

## 4. **Diploma in Agricultural Extension Services for Input Dealers (DAESI):**

DAESI is of one year (expanded to 48 weeks) regular course launched in 2003 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, and so far 6473 candidates have been trained till March, 2017. It has been decided to implement DAESI programme across the country through SAMETIs with involving Agribusiness Companies, ATMAs, KVKs, Agri. Collages & NGOs. During the current year 2017-18, as against the revised target of 149 programmes, 100 programmes have been started till December, 2017.

**VII. National Gender Resource Centre in Agriculture (NGRCA)** of the DAC&FW is established in Extension and supported under the Scheme of Extension Support to Central Institutes/DOE. 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.

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 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. The following activities have been taken up during the year:

1. The following Macro/ Micro level and Action Research Studies have been initiated by the Centre.
  - Study on Adoption of Gender Friendly Tools by Women Farmers and its impact on their lives".
  - Study on "Schemes for Improving Women Farmers Access to Extension Services and Gender Mainstreaming in Agriculture".
  - 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 as follow:
  - Compendium on Gender Friendly Tools/Equipments (Bi-lingual).
  - Farm Women Friendly Handbook (both in English & Hindi )

**Initiated:**

- 51 Success Stories of women farmers
  - Compendium on Woman Agri-preneurs
3. Preparation of separate chapter on Gender Prescriptive in Agriculture for the Annual Report and Gender Related Write up for the Outcome Budget of DAC&FW, Ministry of Agriculture & Farmers Welfare.
  4. Delivery of Gender Sensitization Module to the Extension functionaries at all levels

viz. Senior, Middle & Cutting edge level, Delivery of Capsule Module on Gender Learning & Maintenance of Gender Disaggregated Data.

5. Advisories are issued to the States for preparation of specific guidelines for wasteland development and its distribution to land less farm-women/women farmers, Women SHG for cultivating/livelihood purposes on long-term lease basis.
6. Developed Collaborative Project with ICAR Institutes for empowerment of women in agriculture & allied sectors. These projects shall be submitted for approval of Competent Authority after modification, if any required.
7. Periodic Updation of the Dashboard pertaining to the Empowerment of Women.
8. Collation of special provisions and package of assistance available for women under various on-going Scheme/Missions/Sub-Missions of DAC&FW, Ministry of Agriculture & Farmers Welfare.

#### **VIII. MONITORING AND EVALUATION:**

Support to State Extension Programme for Extension Reforms launched has a provision of third party monitoring termed as Concurrent Evaluation at State level. The Extension Division had also conducted the centralized evaluation of the scheme through an independent agency, Agriculture Finance Corporation (AFC). Important suggestions and issues for further improvements in ATMA schemes have already been dully addressed in the modified ATMA guidelines.

#### **IX. EXHIBITIONS**

Agricultural exhibitions / Fairs are an effective means of reaching to a large number of farmers. Department has sponsored /organized about 12 Kisan Melas in different parts of the country including participation in India International Trade Fair 2017 by setting up Agriculture Pavilion from 14<sup>th</sup> - 27<sup>th</sup> November, 2017 at Pragati Maidan, New Delhi, to disseminate relevant information and promote appropriate technologies and improved agronomic practices among the farmers and other stakeholders in agriculture and allied sectors. Financial assistance is provided for organization of Regional Agriculture Fairs (RAFs) to State Agriculture Universities and Indian Council of Agricultural Research (ICAR) institutes. Five (5) Regional Agriculture Fairs @ one in each region, namely, North, South, East, West and North East organised through State Agriculture Universities/ICAR Institutes during a year are supported with a maximum funding of Rs.15 lakh each. The Ministry of Agriculture and Farmers' Welfare also provides financial assistance to other institutions for organization of farmer-centric International/ National/ State level events.

Various steps like direct participation of farmers, Farmer-Scientist interactions in regional languages, demonstrating appropriate technologies directly and by way of organizing crop/ livestock demonstrations, web-casting of Agriculture Pavilion during IITF 2017 are being done to insure that benefit of melas /agri shows reaches more no. of farmers. Suitable infotainment shows like Skit shows with some technical



message are also included a part of the fair. Pre-event publicity through press releases, AIR, DD, Kisan Call Centre, Kisan Vani programme through FM Radio Station are also done during the year. DAC has participated in following events during the the year 2017-18.

Sl. No	Fairs/Exhibitions/Events	State	Exp. Incurred (Rs.)
1.	Participation in "Kisan Kalyan Mela" at Motihari, Champaran, Bihar from 15-19 April, 2017	Bihar	8,78,206
2.	Participation in "Vibrant North-East" at Guwahati from 4-6 May, 2017	Assam	5,720
3.	Participation in 7 <sup>th</sup> "Bundelkhand Srijan" at Tikamgarh, Madhya Pradesh from 6-7 May, 2017	Madhya Pradesh	72,000
4.	Participation in 8 <sup>th</sup> Krishi Fair- 2017 at Shree Jagannath Dham, Puri, Odisha from 15-19 May, 2017	Odisha	1,12,200
5.	Participation in Textile India, 2017 at Mahatma Mandir, Gandhinagar, Gujarat from 30 <sup>th</sup> June-2 <sup>nd</sup> July, 2017	Gujrat	54,660
6.	Participation in 21 <sup>st</sup> National Agriculture Exhibition at Kolkata from 24-27 <sup>th</sup> August, 2017	West Bengal	1,04,878
7.	Participation in Innovative farmers meets at Patiala, Punjab from 4 <sup>th</sup> May to 16 <sup>th</sup> June, 2017	Punjab	1,50,000
8.	Participation in North-East Calling 2017 at August Kranti Lawan (A), India Gate, New Delhi from 9 <sup>th</sup> -10 <sup>th</sup> September, 2017	NCT of Delhi	3,246
9.	Participation in Exhibition Cum Seminar on Horticulture/Agriculture at Pandit Deen Dayal Upadhyay Dham, Mathura U.P. from 22 <sup>th</sup> -25 <sup>th</sup> September, 2017	Uttar Pradesh	9,950
10.	Participation in Birth Centenary of Sh. Nanaji Deshmukh at campus of ICAR, Pusa, New Delhi Organized by Ministry of Rural Development from 10-11 <sup>th</sup> October, 2017	NCT of Delhi	1,47,500
11.	Participation in World Food India 2017 from 3 <sup>rd</sup> -5 <sup>th</sup> November, 2017	NCT of Delhi	1,000,0000
12.	Participation in IITF 2017 from 14-27 November, 2017	NCT of Delhi	79,50,000

**New Initiatives:**

**8.6** The Department has introduced a quarterly e-bulletin; monthly e-book and Farmer Friendly Hand Book on yearly basis. These documents are available on Department's website [www.agricoop.nic.in](http://www.agricoop.nic.in).

**PROGRAMMES OF NORTH-EASTERN STATES**

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

**a. 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

**8.8** During the current financial year 2017-18, Budget estimate of Rs. 6500 lakh was earmarked for North Eastern States for implementing the Scheme. Out of which, an amount of Rs. 4032.54 lakh has been released to Assam (Rs. 500.00 lakh), Arunachal Pradesh (Rs. 491.31 lakh), Manipur (Rs. 506.87 lakh), Meghalaya (Rs. 633.78 lakh), Mizoram (Rs. 443.15 lakh), Nagaland (Rs. 960.68 lakh), Tripura (Rs. 306.82 lakh) and Sikkim (Rs. 190.53 lakh) till January, 2017

**b. Mass Media Support to Agricultural Extension:**

**8.9** List of Narrowcasting and FM Kisan Vani Stations in the North Eastern Region is given below:

Sl No	Name of the State	Name of Narrowcasting Station	Name of the FM Kisan Vani Station
1	Arunachal Pradesh	-	Itanagar
2	Assam	Tinsukhia, Margheretia, Jorhat, Sonari, Nazira, Dibrugarh	Jorhat, Dhubri, Hafflong, Nowgong
3	Manipur	Imphal, Churachandpur, Ukhrul	--
4	Meghalaya	Shillong, Nongstoin, Jowai, Cherrapunjee	Jowai
5	Mizoram	AizwalLawangtlal Lunglei	Lunglei
6	Nagaland	Gangtok	Mokokchung
7	Tripura	AgartalaKailasahr Tellamura, Amarpur Jolaibari	Kailasahr, Belonia

These stations are producing/ broadcasting 30 minutes agricultural programmes, 5/6 days a week.

**c. Establishment of Agri-Clinics and Agri-Business Centres (AC&ABC):**

**8.10** 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 and during the current year is given below.

S.No.	State	Candidates Trained		Ventures Established	
		Since Inception	Current Year (As on 31 <sup>st</sup> October, 2017)	Since Inception	Current Year (As on 31 <sup>st</sup> October, 2017)
1.	Arunachal Pradesh	35	00	03	00
2.	Assam	735	35	218	08
3.	Manipur	438	00	128	00
4.	Meghalaya	35	00	03	00
5.	Mizoram	34	00	00	00
6.	Nagaland	184	00	21	00
7.	Sikkim	09	00	01	00
8.	Tripura	04	00	01	00
	Total	1474	35	375	08

**d. KisanCall Centers (KCCs):**

**8.11** 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 31<sup>st</sup> December, 2017 are, Arunachal Pradesh (8641), Assam (266587), Manipur (30103), Meghalaya (15814), Mizoram (7789), Nagaland (3308), Sikkim (11718) and Tripura (41379). The calls registered from these states during current year up to 31<sup>st</sup> December, 2017 are Arunachal Pradesh (2428), Assam (26245), Manipur (1470), Meghalaya (1016), Mizoram (99), Nagaland (285), Sikkim (1272) & Tripura

(3006).

**e. Extension Education Institute (EEI):**

**8.12** EEI set up at Jorhat (Assam) in 1987 has been providing training support at the regional level to the middle level functionaries of in 8 States of North Eastern Region and West Bengal. During the year 2017-18 (till October, 2017) 22 courses have been organized and 649 officers trained. An amount Rs. 215.00 lakhs has been released to EEI Jorhat till December, 2017.

**GENDER SPECIFIC INTERVENTIONS UNDER ATMA PROGRAMME:**

**8.13** ATMA programme provides that minimum 30% resources are to be utilized for women farmers. To improve participation of women in planning & decision making process, the

scheme provides for representation and active involvement of women at various decision making platforms viz. ATMA-Governing Body and ATMA-Management Committee at district level & Farmer Advisory Committees (FACs) at block, district and state level. Besides, scheme provides for enhanced involvement of women as 'Farmer Friend' in a mechanism promoted under the scheme for Farmer-to-Farmer extension. 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.

**8.14** Since inception of the scheme in 2005-06, total **1,04,27,917** farm women (24.05% of the total benefited farmers) have participated in farmer oriented activities like Exposure Visits, Training, Demonstrations & Kisan Melas including **6,11,975** women farmers benefited during 2017-18 (up to 30<sup>th</sup> November, 2017).

#### GENDER SPECIFIC INTERVENTIONS UNDER ATMA PROGRAMME:

Sl. No.	Activity/ Program	Details of Activities/ Programs in which women are involved	Tar-get	Achievements	Budget Allocation	Amount Utilized	Remarks
1	ATMA Program	Minimum 30% of resources meant for programmatic activities are to be utilized for women farmers.	-	6,11,975 women farmers have participated in farmers oriented activities during 2017-18 (till 30 <sup>th</sup> Nov., 2017).	30% of the budget earmarked for farmer oriented filed activities.	12262.03 lakh (Up to 4 <sup>th</sup> January, 2018)	To improve participation of women in planning & decision making process, the scheme provides for representation and active involvement of women at various decision making platforms viz. ATMA-GB & ATMA-MC at district level & Farmer Advisory Committees at block, district & state level. Farm Women's Food Security Groups (FGGs) @ at least 2 per block to be formed annually for ensuring household food and nutritional security providing assistance of Rs.10,000/ per group.



## Department of Agriculture Cooperation & Farmers' Welfare (IT Division)

**8.15** Ministry of Agriculture & Farmers' Welfare aims to improve awareness and knowledge 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.

### NATIONAL E-GOVERNANCE PLAN - AGRICULTURE:

**8.16** Ministry of Agriculture & Farmers' Welfare 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 the major miss. Lack of information at proper time causes a huge loss to farmers. NeGP-A aims to bridge this gap in communication by using technology. It provides an integrated approach to the delivery of services to the farming community using ICT. Under NeGP-A, around 60 online services have been developed and launched to provide ease of access and timely information to farmers. Some services are developed for monitoring of schemes so that quick analysis and reporting can be done.

### Digital Agriculture:

**8.17** Under Digital India interventions of the Government- Digital Agriculture (Agriculture 2.0) has been given the prominent place

for improving overall development of the Country through increasing the agricultural output by ensuring availability of information on various agriculture and allied sectors activities. Agriculture 2.0 (Digital Agriculture) directly falls under Pillar No. 5 of Digital India, i.e. eKranti - Electronic Delivery of Services and broadly caters to other pillars as well, like e-Governance: Reforming Government through Technology, Information for All and Early Harvest Programmes.

### MKisan-Use of basic mobile telephony:

**8.18** Since the penetration of *smart phones with internet* in rural areas is around 7-8% 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 around 2.5 crore farmers are registered and experts/scientists of different departments like IMD, ICAR, State Government, State Agriculture Universities send information to farmers in local languages.

**8.19** 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 1837 crore SMSs have been sent through mkisan since its inception in 2013.

### Farmers' portal ([www.farmer.gov.in](http://www.farmer.gov.in)):

**8.20** 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 etc. This information can be drilled down through the pictorial view of Map of India placed on the Home page as well.

**8.21** 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.

**8.22** This centralized repository is the backbone 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.

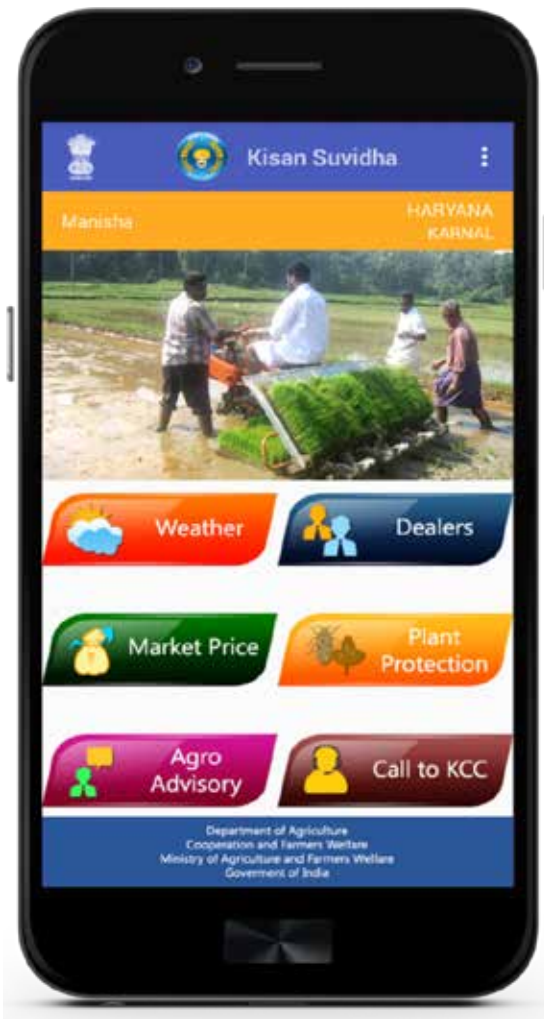
### Development of Mobile Apps:

**8.23** 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 the global food security issues. Many mobile apps have been developed for farmers. Some of them are listed below:

**8.24** KisanSuvridha: 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 five critical parameters—weather, input dealers, market price, plant protection and expert advisories. 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: 6,22,932





**8.25 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: 36047



**8.26 Agrimarket:** Agri Market mobile App can be used to get the market price of crops in market within 50 km of the devices location. This app automatically captures the location of person using mobile GPS and fetches the market price. There is another option to get the price of any market and any crop in case person does not want to use GPS location. This app will be beneficially for farmers, entrepreneurs, extension workers, researcher, NGOs and policy makers. Total downloads: 43140





### Personalized Information through Call Centres:

**8.27** There is a nation-wide toll free number 1800-180-1551 where farmers can call and speak to agriculture experts directly. Kisan Call Centre (KCC) enables farmers to have direct discussions with the subject matter experts who are able to analyse the problem effectively and provide the solution directly. KCC receives around 25,000 calls on daily basis. Currently Kisan Call Centres are available in 14 locations, which cover PAN India. The process is going on to expand it to 21 locations.

**8.28** It uses a backend data support system, which is inbuilt into the overall MIS (Management Information System). The MIS software captures callers' details and specifications of the query which helps in analysing area-wise and crop wise details within a time space framework and provides

preventive, advance action solutions.

### SEEDS:

#### SUB-MISSION ON SEED AND PLANTING MATERIAL (SMSP)

**8.29** "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 :

Sl no.	Intervention
1.	Strengthening for Seed Quality Control
2.	Strengthening of Grow Out Test(GOT) Facilities
3.	Support to Seed Certification Agencies
4.	Seed Village programme
5.	Certified seed production of oilseeds, pulses , fodder and green manure crops through seed villages
6.	Seed Processing Facilities
7.	Seed Storage Facilities
8.	Transport Subsidy on Movement of seeds to NE States etc
9.	National Seed Reserve
10.	Application of Bio-technology in Agriculture
11.	Public Private Partnership in Seed Sector
12.	Assistance for Boosting Seed Production in Private Sector
	Support to Sub-Mission Director and Survey / Studies
	PPV&FRA

**PRODUCTION OF BREEDER, FOUNDATION AND CERTIFIED/QUALITY SEEDS:**

**8.30** 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	11232.75 (Target)	195415	4194111

**STRENGTHENING OF SEEDS QUALITY CONTROL ORGANIZATIONS (STATE SEED CERTIFICATION AGENCIES AND STATE SEED TESTING LABORATORIES)**

**8.31** The responsibility 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 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.

**POLICY ON EXPORT/IMPORT OF SEEDS AND PLANTING MATERIALS**

**8.32** 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. 118 cases were recommended for issue of export and 76 cases were recommended for import during the year 2016-17. During the year 2017-18 ( upto November, 2017) 67 cases of export and 50 cases of import have been recommended to make available the best seed and planting to the farmers.

**Implementation of Protection of Plant Varieties and Farmers' Rights**

**8.33** 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.

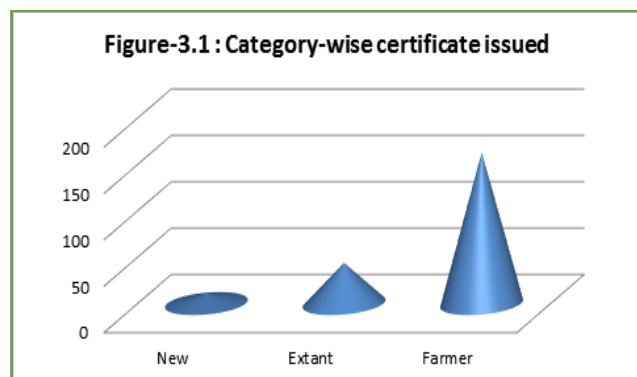
### Salient Achievements

**8.34** During 2017-18, the Authority received 1033 applications representing 76 genera/species belonging to 108 New, 47 extant and 878 farmer's categories. The highest number of application were received for 424 cereals, followed by 147 legumes, 107 cucurbits, 84 oilseeds, 92 fruits, 78 vegetables, 79 spices, 5 medicinal & aromatic, 5 tree sp. , 4 flowers, 3 fiber crops and 3 other crops. The applications were also received during this year seeking registration of plant varieties belonged to 12 different plant families.

**8.35** Strong linkages have been developed with seed industry and, as of now, 30 stakeholder including 18 private companies, have submitted applications for registration with the Authority.

**8.36** The Authority issued 243 certificate of registration for 24 crop species. The highest number of certificates were issued in Rice (180), followed by cotton (11), Wheat (6), Okra/Lady's Finger (6), Chilli (5) Tomato (4), Millet (8), Maize (4), Sorghum (2), Turmeric (2), Brinjal (1) and other crops.

**8.37** Out of 243 certificates of registration issued during 2017, 18 belonged to New category, 32 to Extant Notified, 12 to Extant VCK, and 178 to farmers' category.



**8.38** The three categories of awards: **Plant Genome Saviour Community Awards, Plant Genome Saviour Farmers' Rewards and Plant Genome Saviour Farmers' Recognition** were conferred during the Plant Genome Saviour Awards Ceremony which was conducted on 19<sup>th</sup> April 2017 at Mothihari, Champaran, Bihar. Shri. Radha Mohan Singh, Minister for Agriculture and Farmers Welfare, Government of India graced the occasion by his august presence. A total of thirty-five awards amounting to Eighty Five Lakhs Rupees were presented to farmers and farming communities from different parts of India.

The Authority is also operating the National Gene Fund constituted by the Government of India under section 45 of the Act, Rule 70(2) (a) of PPV&FR Rules, 2003 which provides that Gene Fund could be utilized to support and reward farmers particularly the tribal and rural communities engaged in conservation, improvement and preservation of genetic resources of economic Plants and their wild relatives, particularly in 22 *Agro-biodiversity hotspots across 7 agro-geographical zones*.

### National Seed Research and Training Centre (NSRTC), Varanasi

**8.39** 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 assure 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, NSRTC has analyzed **14999** nos. of seed samples under 5% re-testing programme. Besides, **52** Nos. of court referred seed samples have also been analyzed in the CSTL as and when received from the respective Hon'ble Courts of India. Further, NSRTC has received and tested **09** Nos. of seed samples under PT programme from ISTA, Switzerland.

**8.40** During 2017-18, NSRTC has organized 09 National Training Programme on various seed related issues for the benefit of various stakeholders of Govt., Public and Private Sector etc.

#### **International Rice Research Institute (IRRI), South Asia Regional Center (ISARC):**

**8.41** 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 2<sup>nd</sup> August, 2017. Gazette Notification has been issued on 3<sup>rd</sup> 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 is expected to be operationalised soon.

#### **NATIONAL SEEDS CORPORATION**

**8.42** 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 2016-17 NSC earned Profit After Tax (PAT) of Rs. 51.80 Crores as compared to Rs. 49.71 Crores during 2015-16. NSC declared

dividend @ 30% on effective Profit After Tax of Rs. 14.48 Crores in 2016-17 (including dividend distribution tax) against Rs. 13.80 crores @ 20% in 2015-16 on the paid up capital of the Corporation. 21.47 Lakhs quintal seeds have been produced/procured during the Financial Year 2016-17. 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 2016-17 NSC has distributed 14.60 Lakh qtls of seed in the country. During the current financial year 2017-18 NSC has distributed 3.95 lakhs quintals of seed in Kharif 2017 season.

#### **USE OF BT. COTTON HYBRID SEEDS**

**8.43** 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 85.29 lakh ha. in 2016-17 (81% of total cotton area)

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. The Price of Bt Cotton seed was fixed at Rs. 635/- per packet of 450 grams for BG-I and Rs. 800/- per packet of 450



grams for BG-II for the year 2016. Similarly, the Department has notified the MSP of Bt. Cotton for 2017-18 (vide SO No. 802(E) dated 10<sup>th</sup> March, 2017) in which Rs. 635/- per 450 grams of Bt. Cotton seed plus 120 gram of refugia for BG-I version Bt. Cotton and Rs. 800/- for BG-II version of Bt. Cotton Hybrid. There is no trait value for BG-I version, however, the MSP of BG-II includes Rs. 49/- as trait value.

### NATIONAL SEED RESERVE

**8.44** The Establishment & Maintenance of Seed Bank Programme has been re-structured as National Seed Reserve for implementation during 12<sup>th</sup> 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 and 2016-17 are as under:-

Year	Targets of Physical quantity (in lakh quintals)	Physical Achievement (in lakh quintals)	Amount released to implementing agencies (Rs. in crores)
2015-16	3.65	2.76	21.48
2016-17	3.65	2.77	19.12
2017-18*	3.66	1.91	11.39

\* only kharif 2017

### SAARC Seed Bank

**8.45** 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 ensure; and to act as a regional seed security reserve for the Member States.

**8.46** 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 contain 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.

**8.47** 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.

#### SEED VILLAGE PROGRAMME :-

**8.48** 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 :

- 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.
- 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)
- 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.
- 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 is as under: -

Year	Number of Seed Village Organized	Quantity of Seed Produced (In Lakh Quintals)
2006-07	10,778	22.961
2007-08	18,121	40.070
2008-09	35,212	58.009
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	24093	56.99
2017-18 (as on 03.01.18)	23147	31.24

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

#### BOOSTING SEED PRODUCTION IN PRIVATE SECTOR

**8.49** 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 31.10.2017.

**8.50 PROGRAMME BEING IMPLEMENTED IN THE NORTH-EASTERN STATES:** - Details of the programmes being implemented in the NE region is at **Annexure 8.1**.

### MODIFICATIONS IN NEW POLICY ON SEED DEVELOPMENT

**8.51** 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

**8.52** 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.

**8.53** The Department of agriculture and cooperation has become a member of OECD Seed Scheme from 23<sup>rd</sup> October, 2008 and 231 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.



### GENDER PERSPECTIVE IN THE IMPLEMENTATION OF SMSP:

**8.54** 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.

### AGRICULTURAL MECHANIZATION:

#### Sub Mission on Agricultural Mechanization (SMAM)

**8.55** 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.

**8.56** As per the Agriculture Census 2010-11, the average size of all land holding is 1.15 ha which 1.23 was ha in the last Agriculture Census of 2005-06. About 85 % of the total land holdings are in small and marginal size groups which need special efforts for its mechanization.

**8.57** Subsequently, 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 Centers' to offset the adverse economies of scale arising due to small land holding and high cost of individual ownership;
- Creating hubs for hi-tech & high value farm equipments;
- Creating awareness among stakeholders through demonstration and capacity



building activities;

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

#### Financial assistance in SMAM under its various components:

**8.58.** The financial assistance as cost subsidy to the tune of 25-40% 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 of Rs 43200/horse power to Rs 63,360/Horsepower 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.

**8.59** 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.)
2004-05	2,47,531	17,481
2005-06	2,96,080	22,303
2006-07	3,52,835	24,791
2007-08	3,46,501	26,135
2008-09	3,42,836	35,294
2009-10	3,93,836	38,794
2010-11	5,45,109	55,100
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

**8.60** 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 expected to cross 2.02 kW/ha by 2017-18.

#### Training of Farmers & Technicians

**8.61** 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)	Phone : 07564-234729	E-Mail : fmti-mp@ nic.in Website: http:// fmttibudni.gov.in/
2.	Northern Region Farm Machinery Training & Testing Institute, Sirsa Road, Hisar (Haryana)-125001	Phone : 01662-276984	E-Mail : fmti-nr@ nic.in Website: http://nrfmtti.gov.in/

3.	Southern Region Farm Machinery Training & Testing Institute Tractor Nagar, P.O. Garladinne-515731 Distt. Anantpur (Andhra Pradesh)	
	Phone : 08551-286441	E-Mail : fmti-sr@hub.nic.in Website: http://srfmtti.dac-net.nic.in/
4.	North Eastern Region Farm Machinery Training & Testing Institute P.O. Biswanath Chariali -784176, Distt. Sonitpur, (Assam)	
	Phone : 03715-222094	E-Mail : fmti-ner@hub.nic.in Website: http://nerfmtti.nic.in/

**8.62** During the year 2016-17, total 9523 trainees were trained till 31<sup>st</sup> March, 2017 against the annual target of 6000 in different courses. During the current financial year, 2017-18, total **7952** trainees have been trained till 31<sup>st</sup> December 2017 against the annual target of 6000 trainees. 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.



CFMTTI, Budni- TRAINING ON PADDY TRANSPLANTER

## Testing and Evaluation of Farm Machinery & Equipment

**8.63** 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 2016-17, the four FMTTIs altogether have tested 358 machines of various categories, including tractors, power-tillers, combine harvesters, and other machinery and equipments, till 31<sup>st</sup> March, 2017 against the target of 165. During 2017-18, total 239 farm machines have been tested till 31<sup>st</sup> December, 2017 against the annual target of 165 machineries.



Drawbar Performance Test of Tractor with Load Car at CFMTTI, Budni





**8.64** To cope up with the ever increasing demand of testing of agricultural machines and equipments, DAC&FW has designated 31 testing centers at State Agricultural Universities (SAUs), ICAR Institutions and State Agricultural Departments as Authorized Testing Centers to test selected type of agricultural machinery and equipments under different categories of farm machinery. Relevant information has been made available on the departmental website <http://farmech.gov.in> for wider publicity among the users/manufacturers and other stake holders. Central Institute of Agricultural Engineering (CIAE), Bhopal and Punjab Agricultural University (PAU), Ludhiana has been designated as authorized testing centers in addition to FMTTI, Hisar and Budni to test tractor mounted combine harvesters. Central Institute of Agricultural Engineering (CIAE), Bhopal and Junagarh Agricultural University (JAU), Junagarh, Farm Machinery Testing, Training and Production Centre, Department of FM&P, Dr. PDKV, Akola, Maharashtra, College of Agricultural Engineering and Technology, Dr. Balasaheb Sawant Konkan Krishi Vidyapeeth, Dapoli Maharashtra, has been designated as authorized testing centers in addition to FMTTI, Hisar to test plant protection equipments. Central Institute of Post harvest Engineering and Technology (CIPHET) Ludhiana and SLFMT&TC, Agricultural Department, Government of Odisha, Bhubaneswar, have

been designated as authorized testing center for testing all types of post harvest technology equipments and machinery.

### Demonstration of Newly Developed Agricultural/ Horticultural Equipment

**8.65** 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 203 field demonstrations have been conducted till December, 2017 by the FMTTIs during the current financial year 2017-18.



DEMONSTRATION UNDER SAGY AT YEDDUNUTHULA VILLAGE, TELANGANA BY S.R.F.M.T.&T.L, ANANTAPUR, (A.P.)

### Custom Hiring Centres

**8.66** 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 140.65 crores as cost subsidy, has already been released to States in the first installment to establish 1834 Farm machinery Banks for providing the custom hiring services in the country till December, 2017.



Jai Maa Vaishno Swayam Sahayta Samooch (F.M.B.), Gram-Devkali Post-Sidhor, District-Barabanki.



Land Laser Leveling operation, District-Barabanki.

### Farm Mechanization Programmes under various schemes of Agriculture:

**8.67** Financial Assistance in the form of subsidy at the rate of 25-40 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

### Activities in the North-Eastern States

**8.68** 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 2016-17 total 1027 trainees were trained at this NERFMTTI at Biswanath Chariali, Assam against the target of 800 and have tested 30 nos. of agricultural implements and machinery against the annual target of 25. During the current financial year 2017-18, till December 2017- total 804 trainees have been trained against the target of 800 and tested 17 nos. of agricultural implements and machinery against the annual target of 25. 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. 40.30 crores has already been released in the first installment to NE States under the different components of SMAM.

### Gender Friendly Equipment for Women

**8.69** Under the component 1 of SMAM, Agricultural Mechanization through Training, Testing, and Demonstration, a total 2239 women have been trained during the current Financial Year 2017-18, till December, 2017. 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.



### State Agro Industries Corporations

**8.70** 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, Odisha,

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.

### PLANT PROTECTION AND PLANT QUARANTINE :

#### Sub Mission on Plant Protection and Plant Quarantine (SMPP):

**8.71** 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)

**8.72** 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.

**8.73** 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 undertaken 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.

**8.74** During 2017-18 Pest Risk Analysis (PRA) of 50 agricultural commodities was carried out, technical information provided for export of 35 commodities to the 10 concerned National Plant Protection Organizations. 78,915 Import Release Orders (IROs) were issued for seed and plant material and screening of 111 lakh Metric tons of imported agricultural commodities was undertaken. Phytosanitary inspection for export of 153 lakh Metric tons of plant and

Plant materials was conducted and 2,38,870 Phytosanitary Certificate (PSC) issued. 604 Pest Control Agencies have been accredited for undertaking fumigation with methyl bromide as on 31.10.2017 including 27 new agencies and 453 agencies have been accredited for Forced Hot Air Treatment (FHAT) for wood and wood packing material including 35 new agencies.

**8.75** Further, 439 Pest Control Agencies have been accredited for undertaking fumigation with Aluminum Phosphide under NSPM-22 including 36 new agencies. In addition to the above, 111 Rice Processing Mills for export of Rice to USA and 42 for China & 67 units for peanut Processing and 32 pack houses for fresh fruit and vegetables have been registered to ensure pest free export of agri commodities to the foreign countries. Pest interception recorded in imported commodities from various countries into India during 2017-18 are *Aonidiellaaurantii*, *Pseudococcuscomstocki*, *Callosobruchuschinensis*, *Cladosporiumparacidosporoides*, *patemonachus*, *Lyctoderma-coomani*, *Silvanus bidentatu*, *Trogoxylonparallelipedum*, *Trogoxylonaequale*, *Xylionadustus*, *Xylothripsflavipes*, *Gnatocercusornutus*, *Lepidosaphesbeckii* & *Diplodiaseriata*, in RPQS, Chennai; *Lyctusbrunneus* & *Silvanus bidentatus* in Tuticorin Plant Quarantine Station; *Ahasverusadvena*, *Oriusspand* & *C. solstitialis* in RPQS, Kolkata.

**8.76** The web based Plant Quarantine Information System (PQIS) is now providing plant quarantine services relating to online issuance of Import Release Orders (IRO) and Phytosanitary Certificate (PSC) to the traders. PQIS is fully operational at 51 Plant Quarantine Stations (PQSS). The restructuring of remaining PQSS is underway. Integration of PQIS with customs gateway (ICEGATE) is being implemented to facilitate importers and exporters to file their clearance documents at

a single point. India customs single window project being implemented by the Ministry of Finance, Govt. of India and Plant Quarantine Division is actively involving for the effective implementation of single window project and adopted the necessary measures to create an environment for ease of doing business and trade facilitation. Identified 168 agricultural commodities having lower phytosanitary risk mapped with HS Codes, common names and qualifying descriptions for tagging into Customs EDI System (ICEGATE) to facilitate PQ reduced import inspection of 5 % at random under ease of doing business. Additional 20 commodities, listed under similar materials (Soil) have also been proposed to DAC&FW for PQ reduced inspection of 5% random.

**8.77** 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.

**Annual Meeting of Plant Quarantine Stations held at ICAR Research Complex for NEH Region during 28<sup>th</sup> - 30<sup>th</sup> April 2017**



**Strengthening and Modernization of Pest Management Approach (SMPMA)**

**8.78** 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)”.



**8.79** 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. 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 2017-18 (Up to December), 480 FFSs were conducted in which 14,400 farmers were trained. Apart from conducting FFS, the CIPMCs carry out pest/disease monitoring and conservation, production and release of bio-control agents. Pest and disease situation have been surveyed in 7.00 lakh hectares. 16.50 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 725.00 thousand hectares. Under short duration HRD programme total 68 (two days) and 6 (five days) programmes were also organized. 02 numbers of Season Long Training Programmes (SLTPs) were also organized in coconut and apple crop through which 80 Master Trainers were trained. Eighty-seven (87 Nos.) 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 DACFW websites as well as on farmers' portal.

**8.80** 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 of Agriculture Co-operation and Farmers Welfare (DAC&FW) 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 misuse of chemical pesticides in agriculture. Farmers and pesticide dealers are sensitized through display hoarding and distributing literature. Special surveys were conducted by special teams constituted by DAC&FW comprising officers / officials from Central Government, CIPMCs, State Department of Agriculture, SAUs and ICAR on various crop pest, like wheat blast in West Bengal, Pink boll worm and white fly in Maharashtra, Andhra Pradesh, Gujarat, Karnataka, Punjab and Telangana, Army worm in Odisha, Assessment of pesticide poisoning in Yavatmal in Maharashtra etc. Besides, Dte. has organized various Krishi Melas and Seminars viz. Exhibition cum Seminar in Mathura, KrishiUnnatiMela in New Delhi, Bundelkhand Sarjan in Teekamgarh, Raipur etc.

#### Field Activities:



*Installation of Pheromone Trap*



*Pest monitoring with Sweep Net*





*Installation of Trichogramma Sp.*



*Yellow sticky Trap in Cabbage Crop*



*FFS*



*5 Days HRD*



### IMPLEMENTATION OF INSECTICIDES ACT, 1968:

**8.81** 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 its 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) in Computerized Registration of Pesticides (CROP) Software. Label/leaflets of pesticides containers have been revised to facilitate farmers for safe use of pesticide.

### CENTRAL INSECTICIDE LABORATORY (CIL)

**8.82** 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/IEC 17025:2005. 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.

### TECHNO-LEGAL CELL (TLC)

**8.83** Techno-Legal Cell (TLC) co-ordinates between Directorate, RPTLs, DAC&FW and States for various purposes like NABL accreditation of the laboratories, 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. Techno-legal cell also provides support to states pertaining to various technical issues like supply of reference standards and methods of analysis etc. NABL accreditation has been achieved for both the Regional Pesticides Testing Laboratories i.e. RPTL Chandigarh & RPTL Kanpur and State Pesticides Testing Laboratories (SPTL) in Punjab (03 Nos), Maharashtra (03 Nos), and in Karnataka state (04 Nos). The cell is also involved in notification of Central Insecticide Inspectors (CIIs) in official Gazette of Govt. of



India. Sincere efforts are being made by TLC to prevent manufacturing and sale of spurious pesticides with the help of these inspectors and with co-operation of all State Govt. For this purpose, CIIs are notified for conducting raids/inspection in manufacturing, distribution and trading premises etc. in routine and on specific complaints received from various sources.

**8.84** A total grant-in-aid of Rs 239 lakh was provided for setting and strengthening up of State Pesticide/Bio-pesticide testing laboratories in the States of Arunachal Pradesh, Nagaland, Jharkhand, Rajasthan and Manipur during 2015-16. Similarly, a grant in aid of Rs 60 lakh has also been provided to the states of Andhra Pradesh for strengthening up of Bio-pesticides testing laboratories in the state during 2016-17. Teams were deputed for conducting inspection and verification of complaints related to spurious pesticides in various states like Maharashtra, West Bengal, Rajasthan, Karnataka and Gujarat. Efforts have been made by TLC to prevent activities related to illegal import of pesticides in the country. There are instances where Consignment of pesticides imported illegally by Indian firms were detained by the custom authorities on the directions of TLC. Necessary action as per the provisions of the Insecticide Act, 1968 is being taken against all those firms which have been found to be involved in illegal import of pesticides. A total of 486 samples of Chemical pesticides, 09 samples of Bio-products and Bio-pesticides and 08 samples of pesticides from imported consignments have been drawn during the year 2015-16. Prosecution against firms which have been found to be involved in illegal import and manufacturing of pesticides during 2015-16 have either being launched or in progress. Central insecticide inspectors have drawn 161 samples of pesticides during the year 2017-18 until date and 05 numbers of cases have been launched. Further, launching of prosecution is in progress in 27 other cases

of misbranded and illegal import found in the year 2015-16.

### LOCUST CONTROL & RESEARCH

**8.85** The scheme Locust Control and Research is being implemented through an Organization known as Locust warning Organization (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 the States of Punjab and Haryana. The scheme has 10 Locust Circle Offices (LCOs) located at Bikaner, Jaisalmer, Barmer, Jalore, Phalodi, Nagaur, Suratgarh, Churu in Rajasthan and Palanpur & Bhuj in Gujarat with its field Headquarters at Jodhpur and Central Headquarter at Faridabad. Besides, there is one Field Station for Investigation on Locust (FSIL) situated at Bikaner. To strengthen the locust monitoring and forecasting, an advanced device viz. e-locust3 to monitor the Desert Locust activities in the fields and software RAMSES to prepare vegetation maps and collect survey data based on satellite imageries for locust forecasting has been adopted. LWO maintains its own wireless network for exchanging of 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 equipments, wireless sets, GPS, eLocust3 and trained technical and mechanical staff. India continued to remain free from any Solitary / gregarious phase of desert locust activities during the period up to October 2017. A close liaison was maintained throughout the period under report with FAO Hqrs Rome, regional and international agencies/organizations associated with the locust control through exchange of fortnightly Locust situation Bulletins.



Interactions on Locust situation and related activities during 4<sup>th</sup> Indo-Pak Border Meeting



Conducting of FFS (Farmer Field School)



Lecture during Two days National Training Workshop On Desert Locust on June 29<sup>th</sup> & 30<sup>th</sup> June, 2017.



Mass rearing lab of Desert Locust at FSIL, Bikaner



Exchange of approved proceeding of meeting during 1<sup>st</sup> Indo-Pak Border Meeting

### Monitoring of Pesticide Residues at the National Level:

**8.86** 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:

**8.87** National Institute of Plant Health Management (NIPHM) as part of its mandate has trained around 1300 agricultural field functionaries and farmers in the past 6 months, apart from research and extending technology support to the farmers and other functionaries at various levels from across the country. During the year 2017-18 (for the period from April to December, 2017), 103 regular training programs were conducted, wherein 1156 and 756 officers and farmers were trained respectively.

**8.88** Various initiatives were taken up as part of capacity building training programmes under IPM model village project, which is approved by the Tamil Nadu State Planning Commission. Around 300 farmers from Tamil Nadu were trained under this initiative. As part of CROPSAP project, 73 participants from Maharashtra were trained in field diagnosis for Integrated Pest Management. NIPHM has become the first All India Coordinated Research Project (AICRP - Nematology) Centre on Nematodes in Telangana State. As part of the DAC&FW Project on “Impact of Indiscriminate use of chemical fertilizers and pesticides”, a review meeting of the project was conducted on 28<sup>th</sup> and 29<sup>th</sup> June, 2017 and the work done report for the rabi 2016 was presented by the project implementation universities.

**8.89** NIPHM, in collaboration with MANAGE is implementing the District Pest Management Plan (DPMP), which is a district specific pest management plan developed with an aim to bring convergence between the different agencies to disseminate the timely control measures for tackling various constraints caused by pests and diseases of important crops, viz., Paddy, Cotton and Chilli in the case of Warangal Urban and Warangal rural districts. As part of the project, functionaries

from NIPHM conducted around 50 field visits and disseminated 85 weekly SMS messages to the farmers and functionaries. NIPHM, as one of the participating centers under the National Project on “Monitoring of pesticide Residues at National Level” has analyzed 1107 samples sent to CIPMC, Hyderabad and Bhubaneswar during the period. 19.55% samples were detected with pesticide residues and 1.58% of samples were detected with residues above MRLs. During the period, 106 pesticide formulation samples were received and analyzed for active ingredient and other parameters and 10 microbial bio-pesticide samples from various insecticide inspectors.

**8.90** NIPHM has developed a modified low cost “Burrow Smoke Generator” to control rodent pest at farmers’ fields. Research on development of alternative fumigation treatment to Methyl Bromide for pulses, wheat and wood is apace resulting in some encouraging observations being recorded. Project studies on Distribution Pattern of rodents in three agro-climatic zones of Telangana and Andhra Pradesh using geo special tools is under process with collaboration of ICAR. A two-day National Workshop on “Weed Risk Assessment” was organized at NIPHM on 30<sup>th</sup> and 31<sup>st</sup> August 2017 with the objective to analyze current status of invasive alien plants and their impacts, importance of WRA w.r.t. international trade and SPS issues.

**8.91** NIPHM, for the first time has conducted “Feed The Future India Triangular Training (FTF ITT) International Training Program on “Plant Health Management Technologies and Approaches” in collaboration with MANAGE and USAID. A total of 24 executives from 10 countries participated in the program conducted from 04<sup>th</sup> – 18<sup>th</sup> Sep’ 17. DAC & FW, Government of India in collaboration with Department of Agriculture and Water Resources, Government of Australia has organized a three-day training program on

“Managing Biosecurity Treatment Systems” at NIPHM from 07-09-2017 to 09-08-2017. The aim of the program is to promote increased trade in agricultural commodities by improving biosecurity treatment methods that may be required by importing countries.



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## 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 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. To enlarge the coverage in terms of farmers, crops and risks, National Agricultural Insurance Scheme (NAIS) was notified/ implemented with effect from 1999. Weather Based Crop Insurance Scheme (WBCIS), Coconut Palm Insurance Scheme (CPIS) and Modified NAIS (MNAIS) were introduced on pilot basis from Kharif 2007, 2009-10 and Rabi 2010-11 respectively. To make the crop insurance schemes more farmers' friendly, a re-structured Central Sector crop insurance scheme namely, "National Crop Insurance Programme (NCIP)" was implemented by merging erstwhile Pilot schemes of Modified National Agricultural Insurance Scheme (MNAIS), Weather Based Crop Insurance Scheme (WBCIS) and Coconut Palm Insurance Scheme (CPIS) (as its components) with some improvements for its full-fledged implementation from Rabi 2013-14 season throughout the country. National Agricultural Insurance Scheme (NAIS) was to be discontinued after implementation of NCIP from Rabi 2013-14 season, but due

to some inherent issues under NCIP, at the option of States, NAIS was also allowed for implementation upto 2015-16. The erstwhile crop insurance schemes have further been reviewed in consultation with various stakeholders including States/UTs. and a new scheme namely, **Pradhan Mantri Fasal Bima Yojana (PMFBY)** has been approved for implementation from Kharif 2016 along with pilot Unified Package Insurance Scheme (UPIS), Restructured Weather Based Crop Insurance Scheme (RWBCIS) and Coconut Palm Insurance Scheme (CPIS).

**9.2** The Crop Insurance Schemes remain optional for State Governments and they also have the option to notify crops and areas according to their priorities. The existing Schemes of PMFBY & RWBCIS are being implemented in the country on 'Area Approach' basis where yield of notified areas under PMFBY and weather data of notified Reference Automatic Weather Stations (AWSs) under RWBCIS are taken as one unit for assessment/ payment of claims for widespread calamities/ defined perils respectively. However, claims due to localized calamities of hailstorm, landslides and inundation and post-harvest losses under PMFBY and add-on/ index-plus coverage for hailstorm and cloudburst under RWBCIS, are being assessed & paid on the basis of losses at the level of individual farms. During 1<sup>st</sup> year of its implementation, the

penetration/ coverage of these schemes has achieved the target of 30% of Gross Cropped Area (GCA) of the country. Target for coverage during 2017-18 and 2018-19 has been fixed at 40% and 50% of the GCA respectively.

**9.3** 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
2012-13	1549.68
2013-14	2551.52
2014-15	2598.35
2015-16	2982.47
2016-17	11054.63
2017-18	8058.75*

\* As on 20.12.2017

Brief details of the crop insurance schemes being implemented in the country are given below:

#### **Pradhan Mantri Fasal Bima Yojana (PMFBY)**

**9.4** 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) along with pilot Unified Package Insurance Scheme (UPIS) and Restructured Weather Based Crop Insurance Scheme (WBCIS), which are being implemented in various States/ Union Territories of the country from Kharif 2016. These Schemes are being implemented during 2017-18 by 18 General Insurance Companies including all the 5 Government Sector Companies. Under the PMFBY, a uniform maximum premium of only 2% 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.

**9.5** 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.

**9.6** 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 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 at unit area level.

**9.7** For effective implementation, an integrated 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, it is proposed to Directly Transfer the Benefits (Claims) to farmers account from Kharif 2018 season. Other features of PMFBY are given as under :

- PMFBY provides a comprehensive insurance cover against failure of the crops due to non-preventable natural



calamities thus helping in stabilising the income of the farmers and encouraging them to adopt innovative practices.

- The Scheme envisages coverage of all Food & Oilseeds crops and Annual Commercial/Horticultural Crops for which past yield data is available and for which requisite number of Crop Cutting Experiments (CCEs) will be conducted being a part of the General Crop Estimation Survey (GCES).
- The scheme is compulsory for loanee farmer obtaining Crop Loan /KCC loans for notified crops. However, voluntary for Other/non loanee farmers who have insurable interest in the notified crop(s).
- The seasonality discipline is same for both loanee and non-loanee farmers.
- The scheme is implemented by 18 empanelled insurance companies including AIC, all the 4 companies of General Insurers' Public Sector Association (GIPSA) and other private general insurance companies. Selection of Implementing Agency (IA) is being done by the concerned State Government through bidding process.
- The revamped State Level Co-ordination Committee on Crop Insurance (SLCCCI), Sub-Committee to SLCCCI and District Level Monitoring Committee (DLMC) are responsible for proper management of the Scheme in the concerned State.
- The Scheme is implemented on an 'Area Approach basis'. The unit of insurance shall be Village/Village Panchayat level for major crops and for other crops it may be a unit of size above the level of Village/Village Panchayat.
- The Threshold Yield (TY) is the benchmark yield level at which Insurance protection is being given to all the insured farmers in an Insurance Unit Threshold of the notified crop is moving average of yield of last seven years excluding yield upto two notified calamity years multiplied by indemnity level.
- Three levels of Indemnity, viz., 70%, 80% and 90% corresponding to crop Risk in the areas is available for all crops.
- The Loss assessment for crop losses due to non-preventable wide-spread natural risks is on Area approach.
- However losses due to localised perils (Hailstorm, landslide & inundation) and Post-Harvest losses due to specified perils, (Cyclone/Cyclonic rain & Unseasonal rains) are assessed at the affected insured field of the individual insured farmer.
- In case majority of insured crops of a notified area are prevented from sowing/planting due to adverse weather conditions the insured crop is eligible for indemnity claims upto maximum of 25% of the sum-insured.
- There is also a provision of on account claims in case of adverse seasonal conditions during crop season viz. floods, prolonged dry spells, severe drought, and unseasonal rains. On account payment upto 25% of likely claims will be provided, if the expected yield during the season is likely to be less than 50% of normal yield
- State governments have to use Smart phone apps for video/image capturing CCEs process and transmission thereof with CCE data on a real time basis for timely, reliable and transparent estimation of yield data

- The cost of using technology etc. for conduct of CCEs etc. is being shared between Central Government and State/ U.T. Governments on 50:50 basis.

### **Restructured Weather Based Crop Insurance Scheme (RWBCIS)**

**9.8** With the objective to bring more farmers under the fold of crop insurance and to overcome the shortcoming regarding delay in settlement of claims etc 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.

**9.9** During 2016-17 (i.e. Kharif 2016 and Rabi 2016 seasons) about 571 lakh farmer applications were provided crop insurance for a sum of Rs. 2,02,231 crore under PMFBY & RWBCIS. State-wise coverage details under PMFBY and RWBCIS are given at **Annexure 9.1**.

### **Coconut Palm Insurance Scheme (CPIS)**

**9.10** The Coconut Palm Insurance Scheme (CPIS) is implemented since the year 2009-10

in the selected areas of Andhra Pradesh, Goa, Karnataka, Kerala, Maharashtra, Odisha and Tamil Nadu. The scheme was implemented as a full-fledged component scheme of NCIP from Rabi 2013-14 season and is still under implementation in all coconut growing States. The scheme is administered by Coconut Development Board. Insurance coverage is extended to the total loss of the individual palm in the age group of 4 to 60 years for dwarf and hybrid and 7 to 60 years for tall variety, leading to either death of palm or the palm becoming useless due to various natural and other perils. The farmers should have at least 5 healthy nut bearing palms in the age group of 4 to 60 years in contiguous area/ plot and should have been enrolled by State Agriculture/ Horticulture Department or Coconut Development Board or any other such agency under rehabilitation/ development/ expansion scheme. The Sum Insured is based on the average input cost of the plantation and the age of the specific plant. The Sum Insured varies from Rs. 900 per palm (in the age group of 4-15 years) to Rs. 1725 per palm (in the age group of 16-60 years). The premium rate per palm ranges from Rs. 9.00 (in the age group of 4 to 15 years) to Rs. 14.00 (in the age group of 16 to 60 years) and it varies on sum insured per year, considering the age of specific palm. Fifty per cent of premium is contributed by GOI; 25% by the concerned State Government and the remaining 25% by the farmer. The Insurance Company i.e. Agriculture Insurance Company (AIC) of India Ltd. is the implementing agency of the scheme. The CPIS is being administered/ implemented by the Coconut Development Board (CDB).

9.11 The details of coverage under CPIS as on 11.12.2017 are as under:-

(Rs. In lakh)						
State	No. of farmers	No. of Palms	Sum insured	Premium	Claims Paid	Farmers benefitted
Andhra Pradesh	845	55623	1368	15	0	0
Goa	240	59643	693	4	2	14
Karnataka	704	96422	1068	6	3	72
Kerala	52464	2096851	22705	120	336	7343
Odisha	687	21558	354	3	0	3
Maharashtra	14659	1066749	12845	90	29	396
Tamil Nadu	4085	855105	8073	58	47	398
West Bengal	692	28558	328	2	0	0
Total	74376	42,80,509	47,433	298	417	8,226

### Unified Package Insurance Scheme (UPIS)

9.12 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. Two flagship schemes of the Government viz. Pradhan Mantri Swasthya Bima Yojana (PMSBY) & Pradhan Mantri Jeevan Jyoti Bima Yojana (PMJJBY) have been included apart from insurance of assets. Premium of PMSBY & PMJJBY is to be transferred to insurance companies which have tie up with the concerned banks. Processing of claims (other than Crop Insurance) is done on the basis of individual claim report.

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**Audit Para: Observations made in C & AG Report No. 7 of 2017 – Performance Audit of Agriculture Crop Insurance Schemes laid in the Parliament on 21st July, 2017**

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. Major Observations of the Report are Annexed.	Nil	All observations in Report No.7 of 2017 – Performance Audit of Agriculture Crop Insurance Schemes	Nil



**Observations made in C & AG Report No. 7 of 2017 – Performance Audit of Agriculture Crop Insurance Schemes laid in the Parliament on 21<sup>st</sup> July, 2017**

Chapter 1 of this report provide background information of the schemes and the audit approach. Chapters 2, 3 and 4 provide audit findings with respect to financial management, implementation of schemes, monitoring and awareness of these schemes respectively. Important findings are given below:

**(A) Financial management**

- (i) Though DAC&FW invariably released their share on time, instances of delayed release by state governments were observed. Such delays impacted on the release of insurance compensation to affected farmers defeating the objective of providing timely financial assistance to the farming community.

(Para no. 2.2)

- (ii) The guidelines were silent on the utilisation of savings, if any, due to difference between premium collected and claims payable by AIC under NAIS and AIC retained the savings.

(Para no. 2.3)

- (iii) AIC failed to exercise due diligence in verification of claims by private insurance companies before releasing funds to them.

(Para no. 2.4)

- (iv) AIC failed to take reinsurance

cover on behalf of GOI and state governments under NAIS despite requirement in the guidelines. At the same time, AIC took reinsurance cover for its own share of claim liability.

(Para no. 2.5)

- (v) AIC furnished Utilisation Certificates (UCs) to DAC&FW only at the time of demand for fresh funds and not within a week of release of funds as required in the guidelines.

(Para no. 2.6.1)

- (vi) Since implementing agencies did not ensure submission of UCs by Bank/FIs, even the minimum assurance that claims had been distributed to beneficiary farmers is lacking.

(Para no. 2.6.2)

**(B) Implementation of schemes**

- (i) Scheme guidelines did not require the GOI and state governments to maintain databases of insured farmers despite substantial financial contribution by way of premium subsidy (₹ 10,617.41 crore) and claim liability (Rs. 21,989.24 crore). Consequently, GOI and the state governments were dependent on information furnished by loan disbursing branches of Bank/FI and IAs (AIC and private insurance companies).

**(Para no. 3.2)**

- (ii) Coverage of farmers under the schemes was very low compared to the population of farmers as per Census 2011. Further, coverage of non-loanee farmers was negligible.

**(Para nos. 3.3.2 and 3.3.4)**

- (iii) Coverage of small and marginal farmers under the schemes was very low compared to the population of farmers as per Census 2011.

**(Para no. 3.3.6)**

- (iv) No data of sharecroppers and tenant farmers was maintained despite the fact that the guidelines provided for their coverage under the schemes.

**(Para no. 3.3.8)**

- (v) Though the annual budget allocations included specific provisions for coverage of SC/ST category, no data of such coverage and utilisation of funds for this category was maintained.

**(Para no. 3.3.9)**

- (vi) It was noticed that 97 per cent of the farmers had opted for sum insured equivalent to loan amount under NAIS indicating that either the loanee farmers were intent on covering the loan amount only (in which case, the scheme acted more as loan insurance than as crop insurance) or were not aware or were not informed appropriately by loan disbursing Bank/FIs about the full provisions of the scheme.

**(Para no. 3.3.10)**

- (vii) Even though the schemes provided

for notifying the lowest possible unit of defined area, only **Odisha** has achieved this by defining the village as the unit for paddy.

**(Para no. 3.4)**

- (viii) There were delays in issue of notifications, receipt of declaration from Bank/FIs within cut-off dates, delays in receipt of yield data from state governments, delay in processing of claims by IAs, and irregularities in disbursement of claims by Bank/FIs to farmers' accounts.

**(Para nos. 3.5, 3.6, 3.11.3 and 3.12)**

- (ix) Deficiencies were noticed in Crop Cutting Experiments (CCEs) and functioning of Automatic Weather Stations.

**(Para nos. 3.7 and 3.8)**

- (x) There were discrepancies in the data relating to area sown and area insured. Further, the integrity of the data provided by the state governments in this respect and used by AIC was not ensured.

**(Para no. 3.10)**

**(C) Monitoring and awareness of schemes**

- (i) Monitoring of the schemes by GOI, state governments and Implementing Agencies was very poor as (i) Technical Support Unit (TSU), an independent agency under the guidance of DAC&FW, has not been set up to monitor implementation of the crop insurance schemes, (ii) Periodical Appraisal Reports were not prepared by the DAC&FW despite 14 years of operation

of the schemes, (iii) State Level Coordination Committees on Crop Insurance and District Level Monitoring Committees did not carry out the work allocated to them effectively, and (iv) Implementing Agencies also did not carry out the monitoring of the schemes as assigned to them effectively.

**(Para nos. 4.2 & 4.3)**

- (ii) Despite provision of large amount of funds under the schemes to private insurance companies, there was no provision for audit by the Comptroller and Auditor General of India (even though WBCIS provided for oversight agency by independent government agency).

**(Para no. 4.4)**

- (iii) Capping of premium under NCIP, introduced with the aim

of restricting the liability of the governments under the schemes, also resulted in loanee farmers being denied their full entitlement.

**(Para no. 4.5)**

- (iv) Two-thirds of the farmers surveyed during audit were not aware of the schemes.

**(Para no. 4.6)**

- (v) Grievance redressal systems and monitoring mechanisms for speedy settlement of farmer's complaints at GOI and state government levels were inadequate.

**(Para no. 4.7)**

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## CHAPTER 10

# Integrated Scheme on Agriculture Census & Statistics

**10.1** The Agriculture Census Scheme a component of Integrated Scheme on Agriculture Census, Economics and Statistics is aimed to collect information related to structural characteristics of operational holdings in the country. As part of World Agriculture Census (WCA) programme, first comprehensive Agriculture Census was carried out in the country with Agricultural Year 1970-71 as the reference year. Since then, the Agriculture Census is conducted at five yearly intervals and the current Agriculture Census 2015-16 is tenth in the series.

**10.2** The concepts and definitions used in the Indian Agriculture Census are broadly in conformity with those adopted in the World Census of Agriculture. The constituent activities of the Agriculture Census Programme are carried out in three distinct Phases which are statistically linked together. The basic statistical unit for data collection in Agriculture Census is 'Operational Holding' rather than 'Ownership Holding', as the farm level decisions are taken by persons who operate land and not by those who own it.

**10.3** Time series data generated through the Agriculture Census provides valuable information on structural changes on characteristics of Agricultural operational holdings in the country. Periodic Agriculture 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, pattern of input use etc.

**10.4** 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.

**10.5** 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. 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.

**10.6** Agriculture Census Scheme was converted from a Centrally-Sponsored Scheme to a Central Sector Plan Scheme during 2007-08.



Accordingly, 100 per cent financial assistance is provided to States/ UTs for payment of salaries, office expenses, honoraria, tabulation and printing of schedules, etc.

### Agriculture Census 2015-16

**10.7** The tenth Agriculture Census with reference year 2015-16 is progressing in the country. The progress of constituent activities of Agriculture Census 2015-16 is given below:

- Field work for Phase-I of the Census has been completed in all States, except for a few.
- Data for Phase-I of the Census have been tabulated and trial results generated for 14 States / UTs. In the remaining States, data collected /compiled and processed for generation of results.
- The collection and compilation of data for Phase-II of the Census is also progressing in various States/UTs.
- Data collection instruments, (schedules, manual of instructions etc.) for Input Survey 2016-17 finalized and training programme for all State Technical Officers conducted.
- After completion of the reference year in July, 2017, data collection for Input Survey 2016-17 started.
- National level review meetings on Agriculture Census 2015-16 organized to assess status of various constituent activities, to provide guidance, and to streamline the constituent activities.
- At the State / UT level, the State Level Coordination Committee (SLCC) under the Chairmanship of State Agriculture Census Commissioner reviews the work of Agriculture Census for timely completion.

- Other measures taken for monitoring the work of Agriculture Census include field visits, regular interaction with implementing agencies, fortnightly and monthly reports on physical and financial progress etc.

### Gender Perspective in Agriculture Census

**10.8** Since 1995-96 following 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 have 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 2010-11 and Agriculture Census 2005-06 is given in the following table-

Sr. No.	Size Group	2005-06*	2010-11
1	Marginal (Below 1.00 ha.)	12.60	13.63
2	Small (1.00-2.00 ha.)	11.10	12.15
3	Semi-Medium (2.00-4.00 ha.)	9.61	10.45
4	Medium (4.00-10.00 ha.)	7.77	8.49
5	Large (Above 10.00 ha.)	6.00	6.78
	All Size Groups	11.70	12.78

\* Excludes Jharkhand

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.

**Agriculture Census in North Eastern States (NE):**

**10.9** Agriculture Census is conducted in all the North Eastern States. The constituent activities of current Agriculture Census with reference year 2015-16, are progressing in all the N-E States. In the States of Manipur, Mizoram and Nagaland, the trial results for Phase-I of the Census have been generated and are scrutinized for finalization. For the remaining States, collection / compilation and processing of data are in progress.

**Appendix-II**

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 first time	No. of ATNs sent but returned with observations and Audit is awaiting their resubmission by the Ministry	No. of ATNs which have been finally vetted by audit but have not been submitted by the Ministry to PAC
So far as Agriculture Census is concerned nothing is pending.					

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## CHAPTER 11

# Agricultural Marketing

**11.1.** The Government has been playing an important role in developing Agriculture Marketing system in the country. The Marketing Division of Department of Agriculture, Cooperation & Farmers Welfare (DAC&FW) is entrusted with implementation of policy and programme relating to Agricultural Marketing. Agriculture sector needs competitive and well-functioning markets for farmers to sell their produce. 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. There is a need to enhance private sector investment in development of post-harvest marketing infrastructure for which various schemes are also implemented.

## 11.2 Agricultural Marketing Reforms:

- a) 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
- b) As a part of reform agenda, Department with the objectives to create barrier free market, enhance competition & transparency in transactions and widen choices to farmers for sale of their produce, launched National Agriculture Market (e-NAM) on 14<sup>th</sup> April, 2016. Only those States/UTs are eligible to link their markets to e-NAM portal, which have undertaken reforms in their APMC Acts in respect of (i) e-trading; (ii) single point levy of market fee across the State; (iii) single unified trading license valid across the State. To strengthen the reform process, revamp other reforms agenda and back up this e-NAM project through facilitative legal framework & policy in this sector, Department has formulated a new Model APLM Act 2017.
- c) Status of progress of reforms with respect to 7 vital areas identified by the Department is given in the table below –

Table – Reform Status as on 31.12.2017 –

SN	Area of Reforms	States adopted the suggested area of marketing reforms
1	Establishment of private market yards/ private markets managed by a person other than a market committee.	Andhra Pradesh, Arunachal Pradesh, Assam, Chhattisgarh, Gujarat, Goa, Himachal Pradesh, Karnataka, Maharashtra, Mizoram, Nagaland, Odisha (excluding for paddy / rice), Rajasthan, Sikkim, Telangana, Tripura, Punjab, UT of Chandigarh, Jharkhand, Uttarakhand, West Bengal .
2	Direct purchase of agricultural produce from agriculturist (Direct purchasing from Producer).	Andhra Pradesh, Arunachal Pradesh, Assam, Chhattisgarh, Gujarat, Goa, Haryana (for specified crop through establishment of Collection Centres) Himachal Pradesh, Karnataka, Madhya Pradesh, Maharashtra, Mizoram, Nagaland, Rajasthan, Sikkim, Telangana, Tripura, Punjab, UT of Chandigarh, Jharkhand, Uttarakhand and West Bengal .
3	Establishment of farmers/ consumers market managed by a person other than a market committee (Direct sale by the producer)	Arunachal Pradesh, Assam, Chhattisgarh, Gujarat, Goa, Himachal Pradesh, Karnataka, Maharashtra, Mizoram, Nagaland, Rajasthan, Sikkim, Tripura, Jharkhand, Uttarakhand and West Bengal.
4	Contract Farming	Andhra Pradesh, Arunachal Pradesh, Assam, Chhattisgarh, Goa, Gujarat, Haryana, Himachal Pradesh, Jharkhand, Karnataka, Maharashtra, Madhya Pradesh, Mizoram, Nagaland, Odisha, Punjab (separate Act), Rajasthan, Sikkim, Telangana, Tripura, Uttarakhand
5	Promote and permit e-trading.	Andhra Pradesh, Chhattisgarh, Gujarat, Jharkhand, Haryana, H.P., Karnataka, Rajasthan, Sikkim, Goa, Madhya Pradesh, Maharashtra, Mizoram, Telangana, Uttarakhand, Uttar Pradesh, Chandigarh (UT- in Bye-laws) Tamil Nadu, Punjab, Odisha.
6	Single point levy of market fee across the State/ UT	Andhra Pradesh, Rajasthan, Gujarat ( for processor, grader, packer, value addition and exporter), Goa, Haryana, Himachal Pradesh, Chhattisgarh, Karnataka, Madhya Pradesh, Maharashtra, Nagaland, Jharkhand, Sikkim, UT of Chandigarh (Rules), Punjab, Mizoram, Telangana, Uttar Pradesh, Uttarakhand, Tamil Nadu and Odisha.
7	Unified Single Trading License valid across the State/ UT.	Andhra Pradesh, Goa, Gujarat, Haryana, Himachal Pradesh, Karnataka, Rajasthan, Chhattisgarh, West Bengal, Madhya Pradesh, Maharashtra, Jharkhand, Mizoram, Nagaland, Telangana, Sikkim, Uttar Pradesh, Tamil Nadu, Uttarakhand ( in Rules), Punjab and Odisha.

d) Deregulation of marketing of Fruits & Vegetables - Fruits & vegetables being perishable crops need different set of markets and marketing system with reduced supply chain and adequate marketing infrastructures including cold storages & cold chain. Existing

organised system of marketing through network of APMC markets used to be attributed for 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 outside the market yard so as to facilitate emergence of various channels of marketing. In addition to these innovative channels, APMC Market should also be available as one of the alternative choices to the farmers. Till now, 14 States (Madhya Pradesh, Himachal Pradesh, Delhi, West Bengal, Odisha, Rajasthan, Chhattisgarh, Gujarat, Maharashtra, Haryana, Karnataka, Assam, Nagaland, Meghalaya) have moved in this direction, though varied forms.

- e) Department in consultation with NITI Aayog and States formulated a holistic and facilitative model Act “The ----- State/ UT Agricultural Produce and Livestock Marketing (Promotion & Facilitation) Act, 2017” popularly known as Model APLM Act 2017, which was released on 24<sup>th</sup> April, 2017 by the Hon’ble Union Agriculture Minister in the meeting of State Agricultural Marketing Ministers held at New Delhi, for adoption by the States. The model Act, *inter-alia*, provides for declaration of whole State as one unified market, warehouses/silos/ *cold storages* as market sub-yards, rationalisation of market fee and commission charges. It also provides such a model legal frame work to facilitate business model for development of wholesale and retail private markets, direct interface of farmers with processors, exporters and bulk-buyers with retail outlets, etc.
- f) Considering the importance of integrating fruits and vegetable growers with agro-processing units for better price realization and reduction of post-harvest losses, Union Finance Minister

has announced in his Budget speech of 2017-18 for preparation of a “Model Contract Farming Act”. In pursuance, Department under Chairmanship of CEO, National Rainfed Area Authority (NRAA) has constituted a Committee to draft a Model Contract Farming Act. Amongst the members of the Committee, representatives from progressive States, revenue department and NITI Aayog have been included. The draft Act is in final stage of readiness after a series of meeting with various stakeholders.

### 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 Agricultural Marketing (NIAM), Jaipur,

while the fifth and sixth sub schemes are implemented by Small Farmers Agri-Business Consortium (SFAC), New Delhi.

### **Directorate of Marketing and Inspection (DMI):**

**11.4** The Directorate, set up in the year 1935 as an attached office of the Ministry of Agriculture, is responsible for integrated development of marketing of agricultural and allied produce in the country with a view to safeguard the interests primarily of the producer-sellers as well as of the consumers. It maintains a close liaison between the Central and the State Governments in implementation of agricultural marketing policies in the country.

a) The Directorate is headed by the Agricultural Marketing Adviser to the Government of India (AMA). It has its Head Office at Faridabad (Haryana), Branch Head Office at Nagpur (Maharashtra), 11 Regional Offices located at Delhi, Kolkata, Mumbai, Bhopal, Chennai, Kochi, Hyderabad, Guwahati, Lucknow, Jaipur and Chandigarh, 26 Sub offices spread all over the country, the Central Agmark laboratory at Nagpur and 11 Regional Agmark Laboratories (RALs) at Delhi, Kolkata, Mumbai, Rajkot, Bhopal, Chennai, Kochi, Guntur, Kanpur, Jaipur and Amritsar.

b) Major functions of DMI:

- To guide States/UTs on reforms in their Agricultural Marketing Regulations and for development and management of agricultural produce markets.
- Implementation of sub schemes of Integrated Scheme for Agricultural Marketing (ISAM) viz. (i) Agricultural Marketing

Infrastructure (AMI) (ii) Marketing Research and Information Network (MRIN); (iii) Strengthening of Agmark Grading Facilities (SAGF).

- Promotion of Standardization and Grading of agricultural and allied produce under the Agricultural produce (Grading & Marking) Act, 1937 as amended in 1986.
- Marketing Extension including the AGMARKNET portal.
- Training of Personnel in Agricultural Marketing.

### **11.5 Agricultural Marketing Infrastructure (AMI):**

a) Agricultural Marketing Infrastructure (AMI) sub-scheme of Integrated Scheme for Agricultural Marketing (ISAM) is being implemented since 01.04.2014. The erstwhile two schemes of DAC&FW (i) Grameen Bhandaran Yojana (GBY) implemented since 01.04.2001 and (ii) Scheme for Development/Strengthening of Agricultural Marketing Infrastructure, Grading & Standardization (AMIGS) implemented since 20.10.2004 are subsumed into one sub-scheme known as Agricultural Marketing Infrastructure (AMI).

b) Under the AMI sub-scheme, there are two components (i) Storage Infrastructure (ii) Marketing Infrastructure other than Storage. The main objectives of the AMI schemes are to develop agricultural marketing infrastructure for effectively managing marketable surplus of agriculture including horticulture and of allied sectors including dairy, poultry, fishery, livestock and minor forest produce, promoting innovative and latest technologies and competitive alternative

agricultural marketing infrastructure by encouraging private and cooperative sector investments, direct marketing, creation of scientific storage capacity, Integrated value chains (confined up to primary processing stage only) and to provide Infrastructure facilities for grading, standardization and quality certification of agricultural produce. In addition the scheme aims to create general awareness and provide training to farmers, entrepreneurs, market functionaries and other stakeholders on various aspects of agricultural marketing including grading, standardization and quality certification.

- (c) The scheme is reform linked and State agency projects of those States/Union Territories that have undertaken reforms in their respective APMC Acts to allow/ permit (i) 'Direct Marketing', (ii) 'Contract Farming' and (iii) agricultural produce markets in private and cooperative sectors will be eligible for assistance under the sub-scheme. Notwithstanding the reform status, state agencies in all States/UTs will be eligible to avail assistance for storage infrastructure projects.

However, Projects promoted by private entrepreneurs other than State agencies are eligible to avail assistance under the sub-scheme, irrespective of the reforms undertaken by the State Government/ UTs in their respective APMC Acts.

- (d) The assistance under the sub-scheme is available to Individuals, Group of farmers / growers, Registered Farmer Producer Organisations (FPOs), Partnership/ Proprietary firms, Companies, Corporations, Non-Government Organizations (NGOs), Self Help Groups (SHGs), Cooperatives, Cooperative

Marketing Federations, Autonomous Bodies of the Government, Local Bodies (excluding Municipal Corporations for storage infrastructure projects), Panchayats, 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.

- (e) Under the Storage Infrastructure component of AMI sub scheme for the projects in special category areas of North Eastern States, Sikkim, UTs of Andaman & Nicobar and Lakshadweep Islands & Hilly areas, subsidy @33.33% with a subsidy ceiling of Rs. 1333.2 per tonne with a maximum subsidy ceiling of Rs. 400 Lakhs is extended. For the projects of Registered FPOs, Panchayats, Women, SC & ST beneficiaries or their cooperatives/ Self Help Groups, in other areas, subsidy @33.33% with a subsidy ceiling of Rs. 1166.55 per tonne up to 1000 MT and Rs. 1000 per tonne for more than 1000 MT, with a maximum subsidy ceiling of Rs. 300 Lakhs is extended. For all other categories of beneficiaries in other areas, subsidy @25% with a subsidy ceiling of Rs. 875 per tonne up to 1000 MT and Rs. 750 per tonne for more than 1000 MT, with a maximum subsidy ceiling of Rs. 225 Lakhs is extended.

**11.6** For other than Storage Infrastructure component of AMI sub scheme in special category areas of North Eastern States, Sikkim, States of Uttrakhand, State of Himachal Pradesh, Jammu & Kashmir, UTs of Andaman & Nicobar and Lakshadweep Islands, Hilly and tribal areas, subsidy @ 33.33% with a subsidy ceiling of Rs. 500 lakhs is extended. For the projects of Registered FPOs, Women, SC & ST

beneficiaries or their cooperatives, in other areas, subsidy @33.33% with a maximum subsidy ceiling of Rs. 500 lakhs is extended. For all other categories of beneficiaries in other areas, subsidy @25% with a maximum subsidy ceiling of Rs. 400 lakhs is extended.

**11.7** Since inception of the Scheme and up to 30.11.2017, a total of 38,755 storage infrastructure projects (including erstwhile GBY) having a capacity of 65.01 million MT were sanctioned and subsidy to the tune of Rs. 2763.68 crores was released against the total sanctioned subsidy of Rs. 3403.59 crore under the scheme. In addition to this, a total of 18,513 Agricultural Marketing Infrastructure Projects other than storage infrastructure (including erstwhile AMIGS Scheme) have been also been sanctioned and subsidy of Rs. 1741.34 crore has been released against total sanctioned subsidy of Rs. 2076.47 crore under the scheme, since inception and up to 30.11.2017.

#### **11.8 Marketing Research and Information Network (MRIN) :**

a) This scheme was launched as Central Sector Scheme in March, 2000 with objective to collect and disseminate information on price, arrival and other market related data for the benefit of farmers and other market users. DMI has been implementing the scheme in collaboration with Agricultural Marketing Boards/Directorates, APMCs and NIC. Wholesale prices and arrivals information in respect of more than 300 commodities and 2000 varieties are being disseminated through the portal on daily basis. 3289 wholesale markets have been linked to the AGMARKNET portal (<http://agmarknet.gov.in>) and more than 2700 markets have been reporting the data. In addition to price, several other market related information like accepted standards/grades,

labelling, sanitary and phyto-sanitary requirement, physical infrastructure of storage and warehousing, marketing laws, fees payable etc. are being provided.

b) Marketing Extension: Quality control programme under Agmark as well as different Plan schemes of the Directorate are given wide publicity through mass media. The information is disseminated through documents, video spots, printed literature, exhibition, conferences, seminars and workshops. The Directorate is conducting National Consumer Day celebration on 24<sup>th</sup> December and World Consumer day celebration on 15<sup>th</sup> March by Field Officers, participating in IITF from 14-27 November at Pragati Maidan, New Delhi and Ahar at New Delhi from 10-14 March. The Directorate is also organising National Agmark Exhibition every year in important cities.

#### **11.9 Strengthening of Agmark Grading Facilities (SAGF) :**

a) The Agricultural Produce (Grading and Marking) Act, 1937 provides for the grading and marking of agricultural produce. It involves framing of grades, standards and certification of agricultural commodities included in the scheduled appended to the Act. This programme requires analysis of check samples and research samples in Agmark Laboratories. SAGF scheme aims to meet the expenditure for the purchase of equipment, chemicals, glassware and apparatus, AMC of the equipments as well as renovation and repair works in the Agmark Laboratories/ Regional and Sub offices. With this support, 11 Regional Agmark Laboratories and a Central Agmark Laboratory, Nagpur are carrying out analysis of check samples and research samples for developing and promoting grading and standardization of



agricultural commodities under Agmark.

- b) As on date, 105 Grading and Marking Rules covering 222 commodities, have been notified under the provisions of AP (G&M) Act, 1937. These include fruits and vegetables, cereals, pulses, oil seeds, vegetable oils, ghee, spices, honey etc. Grading and marking of agricultural commodities is voluntary as per provisions of the Act.

### **CCS National Institute of Agricultural Marketing (NIAM):**

**11.10** CCS NIAM is an autonomous body working under the aegis of the Ministry of Agriculture and Farmers Welfare, Government of India. It was set up as a registered Society in 1988 to cater to the needs of agricultural marketing personnel in India. The Institute is playing a pivotal role in creating awareness amongst farmers, building capacity of wide range of stakeholders, undertaking research on contemporary issues, consultancy and policy support for decision makers in government, cooperative and private sector for bringing efficiency in the agricultural marketing sector.

### **Post Graduate Diploma in Management (Agribusiness Management) PGDM (ABM):**

**11.11** 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 2016-18, 46 students had taken admission to the 14<sup>th</sup> batch of PGDABM. 100% placement of the 2015-17 batches was achieved by CCS NIAM.

### **11.12 Training, Research and Consultancies Activities:**

- a) The agricultural marketing has become important in helping farmers diversify towards high value crops like

fruits and vegetables. Taking this into consideration, CCS NIAM has conducted programmes on wide range of aspects for this sector namely: National Agriculture Market, Crop Insurance, Value chain analysis & development, Agribusiness opportunity & marketing strategy for organic produce, Marketing of medicinal plants, Farmer Producers Organisations.

- b) Aggregation through FPOs has been studied and a three month residential certificate course has been designed for CEO's and other office bearers of farmer Producer Organisation (FPOs) by the Institute in association with Bankers Institute of Rural Development (BIRD), Lucknow to implement business plans and bring sustainability to their operations.
- c) Farmer Business School is an initiative of the Institute to help farmers enhance their income. The initiative is based on the concept developed by FAO and focusses on bringing paradigm change in training primary producers mainly smallholders to enable them become efficient managers and entrepreneurs.
- d) CCS NIAM in collaboration with Andhra Pradesh State Warehouse Corporation, Hyderabad started a unique initiative of organizing a series of training programs on agri-warehousing and Scientific Storage Practices for warehouse managers, other officers and staff of the Corporation. In the series, three training programs for a total of 60 participants were organized at Tirupati, Vijayawada and Vishakhapatnam during the year 2016-17.
- e) A workshop was organized by CCS NIAM in collaboration with Bihar Agricultural University, Sabour at Agriculture College,

Purnea. This workshop was attended by more than 175 Makhana cultivators, processors, wholesalers and other stakeholders from different districts like Purnea, Katihar, Darabhanga, Madhepura, Supaul, Saharsa and Kishanganj.

- f) Entrepreneurship Development Programme were organized for rubber growers in North East Region to improve entrepreneurial skill of the small and marginal growers. The program oriented participants to think beyond their regular cultivation aspects and consider rubber cultivation as a business.
- g) Realising that agriculture markets have potential to contribute in big way towards “**Swachh Bharat Abhiyan**” of Government of India, a training program was designed by the Institute to implement the principles of “**Swachh Bharat Abhiyan**” in Agricultural Marketing leading to enhanced cleanliness in mandies and reduction in post-harvest losses. The program was well received by the participants and the state government encouraging CCS NIAM to implement the component at large scale in future.
- h) CCSNIAM has conducted one International Training Program on emerging trends in fruits and vegetable marketing funded by USAID, New Delhi. In the program, 27 participants were enrolled from 09 countries namely Liberia, Kenya, Malawi, Botswana, Mozambique, Afghanistan, Mongolia, Indonesia and Cambodia with an aim to understand new trends in marketing of fruits and vegetables so that the producers and markets and their users in Africa and Asia can be prepared to face challenges and participate in emerging opportunities.

- i) During this period the Institute has organized 51 training programs, 04 Consultancies, 02 Professional Course and 06 Survey and Research and 01 Conference on Pradhan Mantri Fasal Beema Yojana. In total, 64 programs were conducted and a total of 2088 stakeholders were trained in the field of agricultural marketing.

### **Small Farmers’ Agribusiness Consortium (SFAC):**

**11.13** SFAC was set up as a registered society on 18 January, 1994. Currently, the members of SFAC include RBI, SBI, IDBI, EXIM Bank, Oriental Bank of Commerce, NABARD, Canara Bank, NAFED etc. SFAC is implementing a Central Sector Scheme for Agribusiness Development through Venture Capital Assistance (VCA) to qualifying projects, which promotes linkages with farmers for procurement of their produce as raw material and provides employment in rural areas and has term-loan sanctioned by any Notified Financial Institution such as Nationalized Banks, IDBI, SIDBI, NABARD, NCDC, NEDFI, Exim Bank, RRBs and State Financial Corporations. The mission of the Society is to support innovative ideas for generating income and employment in rural areas by promoting private investment in agri-business projects.

#### **11.13.1 Venture Capital Assistance (VCA)**

SFAC is implementing the Central Sector Scheme for agribusiness development in association with 43 Commercial Banks as on date for providing (i) Venture Capital to agribusiness projects, and (ii) assistance to farmers / products groups for preparing bankable Detailed Project Reports (DPR). Since the inception of the Scheme, DAC&FW released an amount of Rs. 575.76 crore till 10.11.2017, against which the expenditure of Rs. 542.45 crore had been incurred. SFAC

has assisted total 1793 agribusiness projects and sanctioned/released Venture Capital Assistance of Rs. 528.01 crores generating private and institutional investment of Rs. 6303.86 crore, which will provide an assured market to 1.57 lakhs farmers for their produce and create direct employment for 84185 persons. During the year 2017-18 up to 30.11.2017, SFAC has sanctioned Venture Capital amount of Rs. 47.64 crore to 170 agribusiness projects across the country with total private & institutional investment of Rs. 518.23 crore. **Farmers Producer Organizations (FPOs)-**

### 11.13.2 Formation of Farmer Producer Organization:

SFAC was mandated by Department of Agriculture, Cooperation and Farmers Welfare, Government of India to support State governments in formation of Farmer Producer Organizations (FPOs). The initiative which started in 2011-12 under the two Central Sector Schemes for Vegetables for Urban Clusters (VIUC) and Integrated Development of Pulse Villages in Rain fed Areas has expanded in its scope and covers special FPO projects being undertaken by some State Governments under general RKVY funds as well as under the National Demonstration Project under National Food Security Mission (NFSM) and Mission for Integrated Development of Horticulture (MIDH). As on 31<sup>st</sup> December 2017, 693 FPOs have been registered and 109 are under the process of registration.

### 11.13.3 Equity Grant Scheme and Credit Guarantee Fund Scheme for Farmer Producer Companies :

a) SFAC is also taking up the implementation of the Equity Grant and Credit Guarantee Fund Scheme for Farmer Producer Companies to increase their equity capital and leverage

institutional borrowing from banks as approved by the EFC during 2013-14. Equity Grant Scheme will enable registered farmer producer companies to access matching equity grant up to a maximum of Rs.10.00 lakh per FPC. The Credit Guarantee Fund has been set up with the primary objective of providing a Credit Guarantee Cover to Eligible Lending Institutes (ELIs) providing loans to Farmer Producer Companies (FPCs) without collateral up to Rs.1.00 crore. An outlay of Rs.150.00 crores has been sanctioned during 2013-14 for the Scheme (Rs. 50.00 crore for Equity Grant and Rs. 100.00 crores for Credit Guarantee Scheme).

- b) Banks have signed MoU with SFAC under Credit Guarantee Fund Scheme for FPCs. (Canara Bank, State Bank of India, NABARD, IDBI, NABARD Financial Services, PNB, Indian Bank, Bank of India, NABKISAN Finance Ltd., RBL Bank, HDFC Bank, Yes Bank & Sarva Haryana Gramin Bank, Assam Gramin Vikash Bank, Axis Bank Ltd., Oriental Bank of Commerce, Corporation Bank, Pallavan Grama Bank, Bank of Baroda, Pragathi Krishna Gramin Bank and Bank of Maharashtra). SFAC is organizing awareness camps to publicize the Equity Grant and Credit Guarantee Fund Scheme all over India.
- c) So far, SFAC has sanctioned Equity Grant to 154 farmer Producer Companies (FPCs) amounting to Rs. 8.54 crore and Credit Guarantee to 26 FPCs for Rs. 11.78 crores. SFAC is organizing awareness camps to publicize the Equity Grant and Credit Guarantee Fund Scheme all over India.

State-wise sanctioned project- Credit Guarantee fund scheme from 2014-15 to 2017-18

SN	Bank-wise	No. of cases	C.G. cover sanctioned (Rs. In lakhs)
1	Haryana	1	42.50
2	Rajasthan	2	39.10
3	Madhya Pradesh	8	467.36
4	Tamil Nadu	12	484.30
5	Maharashtra	2	80.75
6	Kerala	1	63.75
7	Total	26	1177.76

Bank-wise sanctioned project - Credit Guarantee fund scheme from 2014-15 to 2017-18

S.N.	Bank-wise	No. of cases	C.G. cover sanctioned (Rs. in lakhs)
1	IDBI Bank Limited	6	346.66
2	NABARD	4	152.80
3	State Bank of India	2	62.90
4	Canara Bank	5	195.50
5	Yes Bank	1	21.25
6	NABKISAN Finance Ltd	3	160.65
7	Indian Bank	5	238.00
8	Total	26	1177.76

### 1.13 National Agriculture Market (e-NAM):

a) Ministry of Agriculture, Department of Agriculture & Cooperation (DAC) have mandated Small Farmers' Agribusiness Consortium (SFAC) to act as the Lead Promoter of NAM. Under the scheme, a pan India electronic trading portal (e-NAM) is being deployed in selected regulated wholesale markets in reformed States across the country. To facilitate assaying of commodities for trading on

e-NAM, common trade able parameters have been developed for 90 commodities. E-NAM platform is deployed for markets in those States which have provided for 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 it free of cost to the States. DAC&FW is also providing grant as one time fixed cost subject to the ceiling of Rs. 30.00 lakh per market for Computer & IT hardware and assaying equipment. Union Finance Minister in his budget speech for 2017-18 has announced enhancement of assistance up to Rs. 75 lakh per market for additionally providing cleaning, grading & packaging facilities and bio-composting units in e-NAM markets.

c) Under the ambitious National Agriculture Market (e-NAM) project, 585 wholesale regulated markets are proposed to be linked to e-NAM portal by 31 March 2018. As on 31<sup>st</sup> December 2017, 470 markets in 14 States have been integrated to e-NAM portal. Department has vigorously engaged itself with the States to smoothly implement the e-NAM project for farmers to reap its benefits.



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## CHAPTER 12

# Agricultural Cooperation

## AMENDMENT TO THE CONSTITUTION IN RESPECT OF COOPERATIVES:

**12.1** Amending the State Cooperative Societies Acts in tune with the provisions of the 97<sup>th</sup> 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.

## 12.2 ASSISTANCE TO NATIONAL COOPERATIVE DEVELOPMENT CORPORATION (NCDC) PROGRAMMES FOR DEVELOPMENT OF COOPERATIVES:

**(A)** The Department of Agriculture, Cooperation & Farmers Welfare (DAC&FW) is implementing cooperative development programmes through National Cooperative Development Corporation (NCDC).

NCDC is a statutory corporation set up by an Act of Parliament. It is non-equity based development financing institution 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. In 2017-18, an assistance of Rs.15290.64 crore has been disbursed (as on 10.01.2018) by the NCDC against approved outlay of Rs.8,000.00 crore.

**(i) Cooperative Spinning Mills:** 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 2017-18, NCDC released Rs. 234.97 crore (as on 10.01.2018) for this component.

- (ii) Cooperative Storage and Cold 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 164.34 lakh MT as on 31.03.2017. During the year 2017-18, financial assistance of Rs. 8.79 crore (Rs.5.08 crore loan and Rs. 3.71 crore subsidy) has been released and of Rs. 4.12 crore (Rs. 3.79 crore loan and Rs. 0.40 crore subsidy) has been sanctioned for the storage programme under the scheme as on 10.01.2018.

As up to 31.03.2017, 323 cold storages projects have been organized/sanctioned with a capacity of 9.76 lakh MT. During 2017-18 financial assistance of Rs.4.02 crore (Rs. 3.95 crore loan and Rs.0.07 crore subsidy) has been released under the scheme as on 10.01.2018.

- iii. Integrated Cooperative Development projects:** During the year 2017-18 (as on 10.1.2018), NCDC has released loan assistance of Rs. 113.08 crore and subsidy of Rs. 21.61 crore totaling to Rs. 134.69 crore for ICD projects in selected districts. The subsidy of Rs. 21.61 crore includes Rs. 10.32 crore towards manpower development & training and managerial assistance to Project Implementation Agency (PIA) & Monitoring Cell etc.

- iv. Cooperatives in Least-Developed/Under-Developed States:** For the purposes of funding by NCDC on liberal terms, 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.

**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 2016-17, NCDC sanctioned financial assistance of Rs.17340.96 crore and released Rs.10686.78 crore to LD/UD States accounting for 68.62% and 67.15% of total sanction & release respectively. Cumulatively, as on 31.03.2017, Rs.46566.53 crore released to LD/UD States under various schemes of NCDC which accounts for around 62% of the total assistance released by the Corporation, so far.

- v. 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 now covered under Weaker Section Programme for the purpose of availing subsidy and concessional funding during the remaining period of the 12<sup>th</sup> Five Year Plan programme under Central Sector Integrated Scheme on Agricultural Cooperation. Cumulatively, as on 31.03.2017, NCDC has sanctioned and released financial assistance of Rs.746.24 crore and Rs.651.30 crore respectively for the development of cooperative societies exclusively promoted by women. In the 14263 projects/units sanctioned in 2016-17, it is estimated that 11.01 lakh women are enrolled as members, out of which 879 women members are on the Board of Directors.

**B. 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 2016-17, the financial assistance has been provided to the following National Level Federations:-

**1. National Federation of Urban Cooperative Banks and Credit Societies Ltd. (NAFCUB), New Delhi :-** During the year 2016-17, Rs.23.00 lakhs as grants-in-aid has been released to NAFCUB. During the year NAFCUB conducted

20 Training programmes. Federation enrolled one urban cooperative bank and eight cooperative credit societies as its new members during 2016-17.

**2. All India Federation of Cooperative Spinning Mills Ltd. (AIFCOSPIN):-** As on 31.3.2017, there were 164 cooperative spinning mills and one composite mill established in the country, with a total installed capacity of 3.56 million spindles and 10,670 open-end rotors and 16,000 looms. During 2016-17 there were 1352 small scale unit with 5.35 million spindles and 2.91 lakh rotors. During 2016-17, 17 visits to the member mills were made. During the year 2016-17, Rs.5.50 lakhs as grants-in-aid has been released to it.

**3. National Cooperative Agriculture and Rural Development Banks' Federation Limited (NCARDBF), Mumbai :-** During the year 2016-17, Rs.15.00 lakhs as grants-in-aid has been released to it for promotional role in revival package for ARDBs and other allied schemes.

**4. National Federation of State Cooperative Banks Ltd., (NAFSCOB), Mumbai** During the year 2016-17, Rs.10.50 lakhs as grants-in-aid has been released to NAFSCOB for providing a common forum to the member banks to examine the problems of cooperative credit banking and allied matters.

**5. National Labour Cooperatives Federation of India Ltd. (NLCF), New Delhi**

During the year 2016-17, Rs.27.00 lakhs as grants-in-aid has been released to NLCF 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.

### 12.3 Assistance for Cooperative Education and Training:

1. Government of India has been implementing a Central Sector Scheme for Cooperative Education and Training through National Cooperative Union of India (NCUI) and National Council for Cooperative Training (NCCT) since 1960. Up to 50% of the expenditure is given as Grant in Aid to NCUI by the Government for Cooperative Education in cooperatively Under Developed States (UDS) under developed areas of developed States and also for other approved activities. Government also provide 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 spread over 22 States and Union Territories and also conducting various programmes at NCUI Head Office.
2. During the financial year 2017-18 (upto 31<sup>st</sup> December,2017) NCUI through its Cooperative Education Field Projects conducted wide ranging programmes on various issues of cooperatives development. Under UDS Projects other than North Eastern 91 new societies were registered and 8205 persons were trained under income generating activities. They also organized 17392 events imparting education to 251219 persons. In North Eastern States 92 SHGs were formed with a membership of 1505. Under approved activities, the National Centre for Cooperative Education (NCCE) organized 88 training programmes against the target of 75
3. The Cooperative Training programmes are also being conducted by the National Council for Cooperative Training (NCCT) through its 5 Regional Institutes of Cooperative Management, 14 Institutes of Cooperative Management located in different States and Vaikunth Mehta National Institute of Cooperative Management, Pune. During the financial year 2017-18, a sum of Rs. 351.85 lakhs has been released till date as grants-in-aid to NCCT including NE regions. Out of the total 1600 planned programmes during the 2017-18 to train 40,000 participants, NCCT conducted 1287 programmes and trained 39,992 participants upto December 2017. It is expected to conduct

programmes during the year including 12 weeks Diploma Programme in Cooperative Education and Development. 2879 persons from various sectors of the cooperative movement in different states were trained. Out of 88 training programmes, 32 programmes were organized for weaker sectors like labour, fisheries and tribal cooperatives and exclusively for SC/ST cooperative in which 1207 persons participated. 15 programmes were organized exclusively for women cooperatives which were attended 612 participants. During the year 2017-18, upto 31<sup>st</sup> December, 2017 an amount of Rs.339.62 lakhs was released as grants-in-aid to NCUI including Rs.40 lakhs NE Regions. During the year 2017-18 the members to be educated for gainful employment/running of their cooperatives are targeted at 3,33,457. Upto December, 2017 NCUI educated /trained 2,51,219 members/potential members. During this period Ministry released an amount of Rs.339.62 lakhs for the first and second quarters of the year.



430 more programmes to train more than 13,000 participants during January-March, 2018.

4. **NE Region** : The Government is providing separate assistance for intensification of cooperative education in the north-eastern region through NCUI. It has established 7 field projects namely Aizawl (Mizoram), Thoubal (Manipur), Mangalwaria (Sikkim), Shillong (Meghalaya), Kohima (Nagaland), Morigaon and Jorhat (Assam) in the North Eastern Region.

#### 12.4 Price support scheme (PSS)

1. The Department of Agriculture, Cooperation and Farmers Welfare implements Price Support Scheme (PSS) for procurement of oil seeds, pulses and cotton through Central Nodal Agencies at the Minimum Support Price (MSP) declared by the Government. This scheme is implemented at the request of the concerned state government
2. **Achievement under Price Support Scheme (PSS)** : During the season 2016-17, the prices of various oilseeds and pulses ruled below respective MSP fixed for the relevant marketing season. During the year 2016-17 and 2017-18 NAFED procured agricultural commodities as per the details given below-

#### DETAILS OF PROCUREMENT MADE BY NAFED FROM 2016-17 TO 2017-18.

YEAR	Agency	COMMODITIES	Oilseed/ Pulses	STATE	QUANTITY (IN MTs)	MSP Per. MT (Rs.)	MSP COST (IN LAKH)
2017-18	NAFED	MUSTARD	Oilseed	HARYANA	36940.18	37,000	13667.87
2017-18	NAFED	SUNFLOWER	Oilseed	TELANGANA	112.10	39,500	44.28
2017-18	NAFED	SUNFLOWER	Oilseed	HARYANA	4358.71	39,500	1721.69
2017-18	NAFED	SUNFLOWER	Oilseed	ODISHA	177.00	39,500	69.92
2017-18	NAFED	SUMMER URAD	Pulses	MADHYA PRADESH	15747.65	50,000	7873.83
2017-18	NAFED	SUMMER MOONG	Pulses	MADHYA PRADESH	111000.00	52,250	57997.50
2017-18	NAFED	SUMMER MOONG	Pulses	ODISHA	1405.99	52,250	734.63
2017-18	NAFED	SESAMUM SEED	Oilseed	WEST BENGAL	3419.81	50,000	1709.91
2017-18	NAFED	GROUND NUT	Oilseed	ODISHA	947.77	42,200	399.96
2017-18	NAFED	MOONG KHARIF	Pulses	TELANGANA	3329.26	55,750	1856.06
2017-18	NAFED	MOONG KHARIF	Pulses	KARNATAKA	21902.14	55,750	12210.44

YEAR	Agency	COMMODITIES	Oilseed/ Pulses	STATE	QUANTITY (IN MTs)	MSP Per. MT (Rs.)	MSP COST (IN LAKH)
2017-18	NAFED	MOONG KHARIF *	Pulses	RAJASTHAN	227822.87	55,750	127011.25
2017-18	NAFED	MOONG KHARIF *	Pulses	MAHARASHTRA	5407.97	55,750	3014.94
2017-18	NAFED	MOONG KHARIF *	Pulses	ANDHRA PRADESH	2471.40	55,750	1377.81
2017-18	NAFED	URAD KHARIF *	Pulses	RAJASTHAN	95194.29	54,000	51404.92
2017-18	NAFED	URAD KHARIF *	Pulses	TELANGANA	7630.00	54,000	4120.20
2017-18	NAFED	URAD KHARIF *	Pulses	KARNATAKA	13183.00	54,000	7118.82
2017-18	NAFED	URAD KHARIF *	Pulses	MAHARASHTRA	52000.00	54,000	28080.00
2017-18	NAFED	URAD KHARIF *	Pulses	GUJARAT	15342.13	54,000	8284.75
2017-18	NAFED	URAD KHARIF *	Pulses	ANDHRA PRADESH	13600.00	54,000	7344.00
2017-18	NAFED	URAD KHARIF *	Pulses	UTTAR PRADESH	1054.68	54,000	569.53
2017-18	NAFED	SOYABEAN KHARIF *	Oilseed	RAJASTHAN	11620.62	30,500	3544.29
2017-18	NAFED	SOYABEAN KHARIF *	Oilseed	TELANGANA	34724.15	30,500	10590.87
2017-18	NAFED	SOYABEAN KHARIF *	Oilseed	MAHARASHTRA	25974.17	30,500	7922.12
2017-18	NAFED	GROUND NUT KHARIF*	Oilseed	GUJARAT	678646.29	44,500	301997.60
2017-18	NAFED	GROUND NUT KHARIF*	Oilseed	RAJASTHAN	103394.66	44,500	46010.62
2017-18	NAFED	GROUND NUT KHARIF*	Oilseed	ANDHRA PRADESH	18764.95	44,500	8350.40
2017-18	NAFED	GROUND NUT KHARIF*	Oilseed	KARNATAKA	1172.58	44,500	521.80
2017-18	NAFED	TOOR (Kharif) 2017**	Pulses	TELANGANA	10725.14	54,500	5845.20
2017-18	NAFED	TOOR (Kharif) 2017**	Pulses	KARNATAKA	99.38	54,500	54.1621

#### Details of Procurement made by SFAC under PSS from 2016-17 to 2017-18

Year	Commodity	State	Procured quantity (in MTs)	Minimum Support Price (MSP) for FAQ (in Rs. Per MTs)	Procurement value (Rs. in Lakh)
2016-17	Moong K-2016	Karnataka	679.90	52,250.00	355.25
		Maharashtra	548.00		286.33
		Total	1227.90		641.58

#### 4. Market Intervention Scheme (MIS)

The Department of Agriculture, Cooperation and Farmers Welfare 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) 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 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.

#### Details of sanction accorded under MIS during 2017-18

S.N.	Year	Duration	Commodity	Market Intervention Price (MIP) (Rs. Per MTs.)	State	Sanctioned Qty (in MTs.)
1	2017-18	08.04.2017 to 07.05.2017	Potato	4,870/-	Uttar Pradesh	1,00,000
2	2017-18	02.05.2017 to 31.05.2017	Red Chilli	50,000/-	Telangana	33,700
3	2017-18	02.05.2017 to 31.05.2017	Red Chilli	50,000/-	Andhra Pradesh	88,300
4	2017-18	04.06.2017 to 31.07.2017	Potato	6,000/-	Nagaland	6,600
5	2017-18	17.06.2017 to 16.07.2017	Turmeric	55,720/-	Andhra Pradesh	12,100
6	2017-18	13.06.2017 to 12.07.2017	Garlic	28,600/-	Rajasthan	10,000
7	2017-18	09.06.2017 to 08.07.2017	Onion	5,867/-	Madhya Pradesh	6,51,000
8	2017-18	27.06.2017 to 26.07.2017	Onion	3,650/-	Rajasthan	20,000

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## CHAPTER 13

# Rashtriya Krishi Vikas Yojana (RKVY)

**13.1 Background:** National Development Council (NDC), in its meeting held on 29th May, 2007 resolved that a special Additional Central Assistance (ACA) Scheme be introduced 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. Accordingly, Department of Agriculture & Cooperation (DAC), Ministry of Agriculture, in consultation with the Planning Commission, launched the Rashtriya Krishi Vikas Yojana (RKVY) in 2007-2008.

**13.2** An amount of Rs. 31730.13 crore was released for implementation of the scheme to the States & Union Territories (UTs) during the XII Plan period. States/UTs have taken up projects related to crop development, horticulture, agricultural mechanization, natural resource management, marketing & post-harvest management, animal husbandry, dairy development, fisheries, extension etc for implementation under the scheme.

An amount of Rs. 4750 crore has been allocated for implementation of the scheme during 2017-18 at BE stage which has been reduced to Rs. 3050 crore at RE stage of which Rs. 2333.37 crore has been released as on 31.12.2017.

**13.3** 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.

**13.4** Based on the feedback received from States, experiences during implementation in the XI Plan and inputs provided by stakeholders, operational guidelines of RKVY have been revised for implementation from 2014-15 onwards in order to enhance efficiency and efficacy of the programme during the XII Plan period. The revised operational guidelines of the scheme mandated that at least 35% of Normal RKVY allocation should be utilized by the States for implementing Infrastructure and Asset development projects.

**13.5 Objectives:** The main objectives of the RKVY Scheme are as under:

- i. To incentivize the States so as to increase public investment in agriculture and allied sectors.
- ii. To provide flexibility and autonomy to States in the process of planning and executing agriculture and allied sector schemes.
- iii. To ensure the preparation of Agriculture Plans for the districts and the States based on agro-climatic conditions, availability of technology and natural resources.
- iv. To ensure that local needs/crops/priorities are better reflected in the agricultural plans of the States.



- v. To achieve the goal of reducing the yield gaps in important crops through focused interventions.
- vi. To maximize returns to the farmers in agriculture and allied sectors;
- vii. To bring about quantifiable changes in the production and productivity of various components of agriculture and allied sectors by addressing them in a holistic manner.

**13.6 Implementation Strategy:** RKVY accords flexibility and autonomy to States in planning and executing projects related to agriculture and allied sectors. States are empowered to formulate strategies for development of these sectors in a holistic manner keeping their agro-climatic conditions in mind so as to effectively address local needs and priorities. The strategy is to discontinue the business as usual mode of “one size fits all”. Projects under RKVY cover the entire gamut of activities in the agriculture and allied sectors supplementing ongoing Centrally Sponsored Schemes in these sectors. RKVY also emphasizes on convergence through District Agriculture Plans (DAPs) and State Agriculture Plan (SAP) for eliminating overlap of resources & efforts

**13.7** For a vast country like India with diverse soil & agro-climatic conditions, varying technological capabilities and agronomic practices, the RKVY framework has enabled States to plan and chart their own developmental trajectory. At a national level, it enables the country to achieve the desired annual growth rate in the agriculture and allied sectors.

**13.8** Over the years, RKVY has also addressed national priorities, without affecting the autonomy and flexibility of States, through special programmes as sub-schemes. Sub-schemes such as Bringing Green Revolution to Eastern India (BGREI), Saffron Mission, Crop

Diversification Programme (CDP), Reclamation of Problem Soil (RPS), Foot and Mouth Disease Control Programme (FMD - CP), Peri-Urban Horticulture etc are being implemented during 2017-18.

**13.9 Outcome:** One of the basic objectives of RKVY is to incentivize investments in the agriculture and allied sectors by linking State wise allocation of RKVY funds to the increased share of State Plan Expenditure in agriculture and allied sectors. This has resulted in significant increase in allocation to agriculture and allied sectors by the States during the XI and XII Plans. Government of India released an amount of Rs. 31730.13 crore for implementation of RKVY during the XII Plan period. Leveraging higher investments in the agriculture and allied sectors, States have been able to enhance production and productivity in these sectors. More than 7600 project were approved by the States for implementation under the scheme during the XII Plan. These projects covered the entire spectrum of agriculture & allied sectors such as crop development, horticulture, agricultural mechanization, marketing & post-harvest management, animal husbandry, dairy development, fisheries, extension, etc.

**13.10 Allocation of Funds to States:** RKVY is administered by the Union Ministry of Agriculture & Farmers Welfare. Funds under this scheme are provided to the States as grant-in-aid by the Central Government. Allocation of RKVY fund to the States is done based on six parameters as per the formula given below:

Sl.No.	Criteria/Parameter	Weightage
1.	Percentage share of net un irrigated area in a state to the net un irrigated area of all eligible States.	15%

Sl.No.	Criteria/Parameter	Weightage
2.	Last three (3) years average area under oil seeds and pulses.	5%
3.	State's highest GSDP for agriculture and allied sectors for the past five years.	30%
4.	Increase in expenditure in Agriculture and allied sectors in the previous year over the year prior to that year. (For example, previous year for allocating State's share for 2014-15 would be the year 2012-13 and the year prior to that would be 2011-12).	30%
5.	Increase in Plan and non-plan expenditure made by the States from the State Budgets on Animal Husbandry, Fisheries, and Agricultural Research & Education in the previous years over the year prior to that year.	10%
6.	Inverse of Yield gap between state average yield and potential yields as indicated in the frontline demonstration data.	10%

**13.11 Streams of Funding in RKVY:** RKVY funds provided to the States as grant by the Central Government are for the following streams:

- (a) RKVY (Production Growth) - 35% of annual outlay,
- (b) RKVY (Infrastructure and Assets) - 35% of annual outlay;

- (c) RKVY (Special Schemes) - 20% of annual outlay; and
- (d) RKVY (Flexi Fund) - 10% of annual outlay (States can undertake either production Growth or Infrastructure & Assets projects with this allocation depending upon State specific needs/priorities).

**13.12 State Level Sanctioning Committee (SLSC):** State Level Sanctioning Committees (SLSCs) have been constituted under the Chairmanship of Chief Secretary with Secretary (Agriculture) of the concerned State/UT as Member Secretary along with other members from allied departments & State Agriculture Universities, Department of Agriculture, Cooperation & Farmers Welfare (GOI), Department of Animal Husbandry, Dairying & Fisheries (GOI), and NITI Aayog (erstwhile Planning Commission). SLSC appraises and approves projects under RKVY. State Agriculture Department is the nodal Department for implementation of the scheme.

**13.13 District and State Agricultural Plans:** RKVY guidelines recognize the need for convergence and integration of the various programmes implemented at district / State level through Comprehensive District Agriculture Plans (C-DAPs) and State Agriculture Plans (SAPs). Several State/UTs have prepared comprehensive District and State Agriculture Plans for XI Plan. States are required to revise and update these keeping in view the change in guidelines of the scheme and emerging needs of the State.

**13.14** Each district is required to formulate a C-DAP taking into account resources available from other ongoing Central or State Plan schemes such as Backward Region Grant Fund (BRGF), Swarnajayanti Gram Swarozgar Yojana (SGSY), National Rural Employment Guarantee Scheme (NREGS) and Bharat Nirman, etc.

**13.15 C-DAPs** reflect the financial requirements and sources of financing of agriculture development plans in a more holistic manner by including animal husbandry and fishery, minor irrigation projects, rural development works, agricultural marketing schemes and schemes for water harvesting and conservation taking into account natural resources and technological possibilities in each district. The DAPs are thereafter integrated to formulate the State Agriculture Plans (SAPs).

**13.16 State Agriculture Infrastructure Development Programme (SAIDP):**

Revised operational guidelines of RKVY also mandated each State to prepare a SAIDP in a similar manner to that of DAPs and SAPs for identifying a shelf of projects for RKVY (Infrastructure & Assets) stream. SAIDP should ideally be a consolidation of the requirement of infrastructure identified in DAPs and SAP.

**13.17 Status of Preparation of District Agriculture Plans:** Preparation of the District Agriculture Plans (DAPs) and the State Agriculture Plans (SAPs) is the cornerstone of the strategy of implementation of RKVY. Though the progress of preparation of DAPs and SAPs by the States has been tardy during the XII Five Year Plan, 247 DAPs out of 652 districts and 12 SAPs have been prepared.

**13.18 Projects undertaken by States under RKVY:** RKVY is designed to focus on a strategy that will best help to generate growth in the agriculture and allied sectors for each State. State Governments, as per their priorities, have approved project proposals in sectors which include crops, horticulture, organic farming etc. Critical infrastructure such as State Seed farms and Soil and Fertilizer testing laboratories neglected over the years due to paucity of funds, received assistance under RKVY. The sector-wise cost of projects approved by States during the XII Plan is given in **Annexure-13.1**. While growth in agriculture and allied sector

in States cannot be attributed entirely to RKVY as there are many other programmes and policies contributing to it, RKVY has emerged as a principal instrument for development of the agriculture and allied sectors in States and has accelerated revival of agriculture.

**13.19 Sub-Schemes launched under RKVY:**

Many sub-schemes have been launched under RKVY preserving the flexibility and autonomy of States. Since 2010-11 several sub-schemes have been introduced under RKVY with specific objectives. The following special programmes/schemes are being implemented as sub-schemes of RKVY, which also include some new sub-schemes launched during the current financial year, with a total allocation of Rs. 771.53 crore in 2017-18.

- 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, Eastern Uttar Pradesh and Chhattisgarh. Rs. 4130 crore had been earmarked for implementation of this programme during the XII Plan. The allocation for this programme during 2017-18 is Rs.450 crore.
- ii. **Saffron Mission:** - The Scheme was initiated in 2010-11 for revival of saffron cultivation in Jammu & Kashmir. The allocation for the programme for the XII Plan was Rs.349.37 crore. The allocation for this programme during 2017-18 is Rs.81.27 crore.
- iii. **Crop Diversification Programme(CDP):** Pursuant to an announcement in the Union Budget for 2013-14, this scheme had been launched to promote technological innovation to encourage farmers to choose crop alternatives.

Rs.1080 crore had been earmarked for implementation of the programme during the XII Plan. The allocation for this programme during 2017-18 is Rs. 40 crore.

**iv. 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 scheme during 2016-17 was Rs 50 crore. The allocation for 2017-18 is Rs.30 crore.

**v. Foot and Mouth Disease Control Programme (FMD-CP):**

This programme was initiated as a sub-scheme of RKVY during 2016-17 for supplementing the efforts of the State Governments for prevention, control and containment of this animal disease. The allocation for the scheme during 2016-17 was Rs.100.65 crore. The allocation for the programme for 2017-18 is Rs. 50 crore.

**vi. Additional Fodder Development Programme (AFDP):**

This programme was launched in 2014-15 in order to mitigate the impact of drought on livestock. This programme was initially launched as the Accelerated Fodder Development Programme during 2011-12 to accelerate the production of fodder through intensive promotion of technologies to ensure availability of fodder throughout the year. The allocation for the programme during the XII Plan was Rs.411.83 crore. The allocation for this programme for 2017-18 is Rs.20 crore.

**vii. Swachh Bharat:** - This scheme has been initiated in 2017-18 with an allocation of

Rs. 47.50 crore for the current year for solid and liquid waste management in agriculture.

**viii. Scheme for Drought Affected Area:-**

This scheme has been initiated in 2017-18 with an allocation of Rs. 25 crore for a pilot implementation of interventions to address the issue of the most vulnerable drought prone districts in the country.

**ix. Peri-Urban Horticulture:** - This scheme

has been initiated in 2017-18 with the objectives of greening cities, utilizing waste, meeting the needs of food and nutrition and serving the environment by promoting cultivation of fruits, flowers, vegetables medicinal and aromatic plants in selected cities. The allocation for the programme for 2017-18 is Rs. 27.76 crore.

**13.20 Monitoring of RKVY:** A web-based Management Information System for RKVY [Relational Database and Management Information System (RDMIS)] has been established to collect and disseminate relevant information and data related to each RKVY project and also to monitor progress and completion details of these projects over their life cycle. States are entrusted with the responsibility to enter data on approval & implementation of projects in the RKVY website (<http://www.rkvy.nic.in>). RDMIS has been able to provide current and authenticated data on outputs, outcomes and impact of projects taken up under RKVY.

**Flagship/Innovative Schemes:** States have also taken up several flagship and innovative projects under RKVY, which reflect best practices, innovative approaches and achievements under RKVY. An illustrative list of these projects is at **Annexure-13.2**.



**13.21** States have been reasonably prompt in approving projects & incurring expenditure under RKVY. Status of year-wise release of funds to the States, their expenditure & utilization status as on **31.12.2017** is given below:

(Rs. in crore)

Year	RE	Fund released	Expenditure Reported	%of utilization over release
2012-13	8400.00	8400.00	8395.34	99.94%
2013-14	7089.00	7052.51	7039.73	99.82%
2014-15	8444.00	8443.20	8298.63	98.29%
2015-16	3900.00	3942.38	3856.05	97.81%
2016-17	3550.00	3892.04	3036.20	78.01%
2017-18	3050.00	2333.37	662.18	28.38%

**13.22** State-wise status of funds released under RKVY from XII Plan up to 2017-18 and expenditure/UC status as on **31.12.2017** is given in **Annexure-13.3**.

**13.23 RKVY-RAFTAAR** - The scheme has been approved by Union Cabinet on 1.11.2017 for continuation up to March, 2020 as Rashtriya Krishi Vikas Yojana - Remunerative Approaches for Agriculture and Allied sector Rejuvenation (RKVY-RAFTAAR) with an outlay of Rs. 15722.00 crore for 2017-18 to 2019-20. The objectives of the scheme are:

- To strengthen the farmers' efforts through creation of required pre and post harvesting agri. infrastructure that increase access of farmers to quality inputs, storage, market facilities etc. and enables farmers to make informed choices.
- To provide autonomy, flexibility to States to plan and execute schemes as per local/farmers' needs.
- To promote value chain linked production models that will help in increase in income of farmers as well as increase in production/productivity
- To empower farmers to risk mitigation with more focus on additional income generation activities - like integrated farming, mushroom cultivation, bee keeping, floriculture etc.

- To empower youth through skill development, innovation and agri-entrepreneurship based agribusiness models.
- To encourage public private partnerships for the Integrated Development of Agriculture.

**13.24** Inter-State allocation of RKVY-RAFTAAR funds is as per the formula given below:

Sl. No.	Criteria/Parameters	Weightage
1	Percentage share of net un-irrigated area in a State to the net un-irrigated area of all States.	15%
2	Percentage of small and marginal farmers in the state compared to total number of small and marginal farmers in the country.	20%
3	Moving averages of the increase in plan expenditure in agriculture & allied sectors including animal husbandry, fisheries etc. in the previous 3 years period.	30%
4	Average Gross State Value Added (GSVA) in agriculture and allied sectors in last 3 years.	20%
5	Percentage of youth population in the state compared to total youth in the country.	5%
6	Inverse of Yield gap between state average yield and potential yields as indicated in the frontline demonstration data.	10%

**13.25** 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.

**13.26 Conclusion:** RKVY is a transformational scheme in the evolution of agricultural development projects from a variegated schematic approach followed so far through strait-jacketed schemes to a completely

new approach in agriculture planning by allowing the States to plan their strategy and design appropriate schemes to implement that strategy with flexibility and autonomy in implementation. RKVY has imparted a momentum to the agriculture sector. Regular activities starved of resources, strategies languishing for lack of support and limited opportunities for experimentation and innovation, have been funded through RKVY. States are allocating more funds to agriculture and stepping up investment. This is reflected in additional plan allocation to the agriculture sector. There is a sense of hope and optimism. Agriculture, which had slid back stage, is making a comeback since launch of the scheme. A timely policy instrument i.e., RKVY has accelerated revival of agriculture and put it on the growth path.

**13.27 Audit Para:** There is no pending Audit para pertaining to RKVY. However, there is a Performance Audit of Rashtriya Krishi Vikas Yojana (RKVY) done for the period 2007-08 to 2012-13 (ending March 2013) by C&AG who submitted the report in both the Houses of Parliament on 5<sup>th</sup> May 2015. The details are given below in the prescribed format:

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 By the Ministry	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 submitted the report in both the Houses of Parliament on 5 <sup>th</sup> 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 have been received. Efforts are being made to obtain comments of the State Governments on the vetting of CAG to finalize the revised ATN.	

## CHAPTER 14

# Drought Management

**14.1.** 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.

**14.2** DAC&FW has reviewed and updated the Crisis Management Plan (CMP) for Drought (National) during the current year i.e. 2017. The Plan defines the roles and responsibilities of various agencies involved in crisis management including media management during drought. CMP 2017 (National) was circulated to State/ Union Territory Governments for preparing their own CMPs.

**14.3** 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). 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 14<sup>th</sup> Finance Commission, for a period of 5 years from 2015-16 to 2019-20 and allocation under SDRF is for State Governments only.

**14.4** During the year 2017-18, as per information available till date, Chhattisgarh and Madhya Pradesh and Rajasthan had declared drought and submitted Memorandum seeking financial assistance from National Disaster Response Fund (NDRF). Inter-Ministerial Central Teams (IMCTs) constituted for Chhattisgarh and Madhya Pradesh have visited these States to assess the loss/damage to crops etc. and recommend appropriate financial assistance from NDRF. The Sub Committee of National Executive Committee (SC-NEC) considered both the reports and recommendations of SC-NEC have been forwarded to Ministry of Home Affairs for placing them before the High Level Committee (HLC) for consideration. The memoranda

received from the State Government of Rajasthan and Maharashtra for drought during Kharif 2017 and pest attack, respectively, are under consideration.

**14.5** 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 623 districts in the country.

**14.6** A Manual for Drought Management was published in the year 2009 by the Department. This Manual for Drought Management suggested a system for drought management policy and programmes to be followed by the Government of India and State Governments. It focused on the general / common elements of drought management at the national level, while allowing the States to include their specific schemes and interventions, and incorporated drought forecasting, monitoring, response and mitigation as continuum of activities. The objective of this Manual was to serve as a handbook for all the decision-makers and administrators. The Manual provided relevant guidelines so that States benefit from them and pursue the most efficient and practical course of action. Since the publication of this Manual in 2009, several new developments had taken place and further to promote use of modern technology, the Manual for Drought Management was revised in 2016 through a consultative process, involving the concerned Central Ministries/

Departments, State Governments, Scientific, Technical and Research Organizations.

**14.7** The various indices and parameters appropriate for declaration of drought were revisited and new indices like Standardised Precipitation Index, Vegetation Condition Index, Percentage Available Soil Moisture, Hydrology Indices like Reservoir Storage Index, Stream-Flow Drought Index and Ground Water Drought Index have been added. Rainfall related indices have been recommended as the first trigger in the assessment of drought. In the event of rainfall inadequacy of a certain magnitude, the first trigger is set-off which would then obligate State Governments to consider other impact indicators related to agriculture (crop sowing coverage), remote sensing, soil moisture and hydrology. The level of severity of drought will be based on the recorded values against the impact indicators and, accordingly, the second drought trigger is set-off. In the event of the second drought trigger set-off, the Manual prescribes field level verification of ground truthing of crop damage through sample field survey in 10% of the villages in the affected area. The drought and the intensity of the calamity will be declared on the basis of findings from the field survey. Time-lines have been indicated for declaration of drought, namely, 30 October for Kharif and 31 March for Rabi. The Memorandum for Financial Assistance will be submitted not later than one week from the date of declaration of drought, if the drought was found to be of a severe nature. DAC&FW will thereafter dispatch an Inter-Ministerial Central Team (IMCT) within a week of receipt of the Memorandum from the State Government and the report will be submitted by the Team within seven days of all relevant information having been provided by the State Government. A decision will be taken on the quantum of assistance from the NDRF within a month of the IMCT report and disbursement of agriculture subsidy to affected farmers to be



concluded by the State Government within a month of receipt of central assistance.

**14.8** Guideline on Constitution and Administration of SDRF/NDRF has been partly modified by the Ministry of Home Affairs on 03.04.2017, requiring all the States/UTs to implement mandatorily the guidelines of 'Manual for Drought Management, 2016', prepared and circulated by DAC&FW, while determining /declaring drought in their States.

**14.9** 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.

**14.10** 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.

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## CHAPTER 15

# International Cooperation

**15.1** 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 Nodal 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 and other concerned Ministries and Departments.

## MULTILATERAL COOPERATION

**15.2 FOOD & AGRICULTURE ORGANIZATION (FAO):** India is a founder member of the FAO and has been taking part in all its activities. India makes payment of the annual membership contribution to FAO, and has paid the contribution to FAO for the year 2017. India has been availing services from the FAO from time to time in the form of training, consultancy services, equipments and material in the field of agriculture and allied sectors under its technical cooperation programme (TCP).

## WORLD FOOD PROGRAMME (WFP)

**15.3** The World Food Programme (WFP) was set up in 1963 jointly by the United Nations and Food & Agriculture Organization (UN/FAO). India is the member of WFP since its inception. It 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. India has made full payment to UNWFP for Calendar Year 2017. Besides, GoI makes an annual payment of Rs. 30 lakh to UNWFP Country Office towards their Local Operating Cost (LOC).

**15.4** GoI's pledge contribution towards UNWFP for an amount of US\$ 0.96 Million for the year 2017 has been released. GoI has recently decided that the amount of US \$ 1.92 million (Biennium) towards GoI's pledge contribution to UNWFP will remain the same i.e. US \$ 0.96 Million for the year 2018 as well.

**15.5** A Country Strategic Plan (CSP) 2015-2018 has been signed between WFP and GoI and meeting of the Country Programme Advisory Committee (CPAC) of WFP India was organized recently, with the last meeting on 13th November 2017.

**15.6 World Food Day (WFD):** World Food Day (WFD) was celebrated throughout the country on 16th October, 2017 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. This year's theme of WFD was "Change the future of migration: Invest in food security and rural development."

**15.7 Office of Minister (Agriculture), Embassy of India, Rome:** The Office of Minister (Agriculture), EoI, Rome is a Sub-ordinate Office under the administrative control of this Department. The Government of India, for the purpose of maintaining liaison and coordination with the three Rome based UN agencies has nominated the Indian Ambassador in Rome as its permanent representative to the FAO, IFAD and WFP. 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 a senior officer of the rank of Joint Secretary to the Government of India with the designation of Minister (Agriculture), EOI, Rome has been set up in the Indian Embassy, Rome. The Minister (Agriculture), EOI, Rome has been designated as India's Alternate Permanent Representative (APR) to the FAO, the World Food Programme (WFP) and the International Fund for Agricultural Development (IFAD). The Minister (Agriculture), EoI, Rome represents Indian interests, particularly in the field of agriculture and allied sectors at the meeting of various UN Agencies.

### **BILATERAL COOPERATION**

**15.8 MoU/MoC/Agreements/Work Plans:** Department of Agriculture, Cooperation and Farmers' Welfare has entered into 63 MoUs/MoCs/Agreements with 62 countries in the field of agriculture. During the year 2017, MoU/MoC/Agreement/Work Plan/Declaration etc. were signed by the Department of Agriculture, Cooperation and Farmers Welfare with corresponding Ministry of Portugal on 06.01.2017, Kenya on 11.01.2017, Mauritius on 16.01.2017, UAE on 25.01.2017 Poland on 27.04.2017, Palestine on 16.05.2017, Philippines on 13.11.2017 and Italy on 06.12.2017.

**15.9** In addition to these, (i) Work Plan

under MoU between India and Cyprus for cooperation in the field of agriculture for 2017-18 on 27.04.2017; (ii) Work Plan under MoU between India and Suriname for cooperation in the field of Agriculture and allied sectors for the period 2017-2021 on 28.04.2017 (iii) "India-Israel Development Cooperation (2018-2020)" three year Work Program in Agriculture on 05.07.2017 and (iv) Protocol amending the Agreement between the Ministry of Agriculture & Farmers Welfare, Government of India and the Ministry of Agriculture and Food, Government of Belarus on 12.09.2017 were also signed during the year 2017.

**15.10 Joint Working Group (JWG) Meetings:** During the year 2017, following Joint Working Group (JWG) meetings were held:

4<sup>th</sup> meeting of India-Indonesia Joint Working Group (JWG) on Agriculture was held during 17-18 April, 2017 in Indonesia.

3<sup>rd</sup> meeting of India-Australia Joint Working Group (JWG) on Agriculture was held during 29<sup>th</sup> -30<sup>th</sup> June, 2017 in India.

1<sup>st</sup> meeting of India-Taiwan Joint Working Group (JWG) on Agriculture was held on 3<sup>rd</sup> July, 2017 in India.

1<sup>st</sup> meeting of India-Japan Joint Working Group (JWG) on Agriculture was held on 5<sup>th</sup> November, 2017 in India.

5<sup>th</sup> meeting of India-Canada Joint Working Group (JWG) on Agriculture was held on 14<sup>th</sup> November, 2017 in India.

**15.11 INDO-US COOPERATION:** 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 & National Institute of

Agriculture Marketing (NIAM), Jaipur are also collaborating with USAID to provide training for national of three African countries viz. Liberia, Kenya and Malawi under trilateral cooperation envisaged under MoU with USA. Ten more countries have been included under India-USAID Trilateral Cooperation.

MANAGE has successfully completed Nine US-India-Africa Triangular International Training Programmes during April to December 2017. With this, under this USAID funded project, MANAGE has trained 240 Executives from 12 countries.

### STRATEGIC GROUPS

**15.12** India is a member of multilateral groupings such as G-20 – a forum for global cooperation on international economic and financial issues; IBSA (India, Brazil and South Africa); BRICS (Brazil, Russia, India, China and South Africa); 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.

**15.13 G-20:** An Indian delegation led by Hon'ble Minister of Agriculture & Farmers' Welfare visited Germany from 19-22 January 2017 for participation in G-20 Agriculture Ministers' Meeting. G-20 Agriculture Ministers' Declaration 2017 and G-20 Agriculture Ministers' Action Plan 2017 were issued on final day of the event i.e. 22nd January 2017 under the theme "Towards food and water security : Fostering sustainability, advancing innovation". G20 Ministers of Agriculture underlined their responsibility to achieve the agriculture-related goals (especially SDG 2) and targets in order to end hunger, ensure global food security and improved nutrition and promote sustainable agriculture and focus their commitment on water issues related to sustainable and improved agricultural productivity. G20 Ministers of

Agriculture also committed to take actions that reduce food loss and waste, acknowledging that such actions can alleviate pressure on water. The Ministry also participated in the 3rd meeting of G-20 Agriculture Deputies held in Potsdam, Germany on 14-15 May 2017.

### BRICS

**15.14** The 7<sup>th</sup> Meeting of BRICS Ministers of Agriculture & Agrarian Development was held during 15-17 June, 2017, in Nanjing, China. The Indian delegation was led by Secretary DAC&FW. BRICS Ministers of Agriculture adopted a Joint Declaration and an Action Plan for Agricultural Cooperation for 2017-2020. 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.

### 15.15 INDIA-AFRICA CONFERENCE:

This Ministry, in collaboration with FICCI and CII successfully organized the India-Africa Conference at Gujarat during 24-25 May, 2017 on the margins of the 52nd African Development Bank (AfDB) Annual meeting, in which several Ministers, Government officials and company representatives participated.

### OTHERS

**15.16 Cooperation with International Organizations:** This Department is a member of many International Organizations and the annual contributions to these International Organizations are being made from time to time as per agreed commitment/agreement by the IC Division. These International Organizations are as under:-

- i) Food and Agriculture Organization of United Nations (FAO).



- |  |  |
|--|--|
| ii) World Food Programme (WFP).                                | iii) National Dairy Support Project                              |
| iii) Trust Fund of FAO for Desert Locust in Eastern Region.    | iv) Rajasthan Agricultural Competitiveness Project               |
| iv) Trust Fund for International Desert Locust.                | v) Karnataka Watershed Development Project-II                    |
| v) Organization for Economic Cooperation & Development (OECD). | vi) Uttarakhand Decentralized Watershed Development Project – II |
| vi) Asia and Pacific Coconut Community (APCC).                 | vii) National Watersheds (Neeranchal) Project                    |
| vii) Asia and Pacific Plant Protection Commission (APPPC).     | viii) HP Horticulture Development Project                        |
| viii) Global Crops Diversity Trust Fund (GCDT)                 | ix) National Agricultural Higher Education Project               |

**15.17 International Seminars/Workshops/Conferences etc. :**

During 2017-18 (upto December, 2017), this Department took part in 97 International Conferences/Meetings/ Seminars/Training etc. dealing with various aspects of agricultural development organized by the FAO and other International Organizations.

**EXTERNAL ASSISTANCE**

**15.18** 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) and Asian Development Bank (ADB) and Japan International cooperation Agency (JICA) etc.

**World Bank Assisted Projects:** Currently, this Department is implementing ten ongoing World Bank assisted projects. These projects are as follows:

- i) UP Sodic Land Reclamation Project – III
- ii) Maharashtra Agricultural Competitiveness Project

- x) Assam Agribusiness & Rural Transformation Project.
- xi) Tamilnadu Irrigation and Agriculture Modernization Project.

**15.19 International Fund for Agricultural Development (IFAD):** Currently, this Department is implementing nine ongoing IFAD funded projects:

- i) Post-Tsunami Sustainable Livelihoods Programme for the Coastal Communities of Tamil Nadu;
- ii) Tejaswini Rural Women’s Empowerment Programme in Maharashtra and Madhya Pradesh;
- iii) Mitigating Poverty in Western Rajasthan Project;
- iv) Convergence of Agricultural Interventions in Maharashtra’s Distressed Districts Programme;
- v) Integrated Livelihood Support Project, Uttarakhand;
- vi) Jharkhand Tribal Empowerment and Livelihoods Project;

- vii) Odisha Particularly Vulnerable Tribal Groups Empowerment and Livelihoods Improvement Programme; **15.20 Asian Development Bank (ADB):** Currently there is no ADB assisted project which is being implemented by this Department.
- viii) Livelihoods and Access to Markets Project, Meghalaya; **15.21 Japan International Cooperation Agency (JICA):** Currently one project is being implemented by JICA assistance viz. Himachal Pradesh Crop Diversification Promotion Project.
- ix) Andhra Pradesh Drought Mitigation Project.

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## CHAPTER 16

# Agricultural Trade

**16.1** Agricultural Trade Policy Division of this Department is entrusted with the responsibility of making policy recommendations on export and import of agricultural commodities. Agricultural Trade Policy 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.

## INDIA'S AGRICULTURE TRADE

**16.2** 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 2015 were 2.26% and 1.74%, respectively.

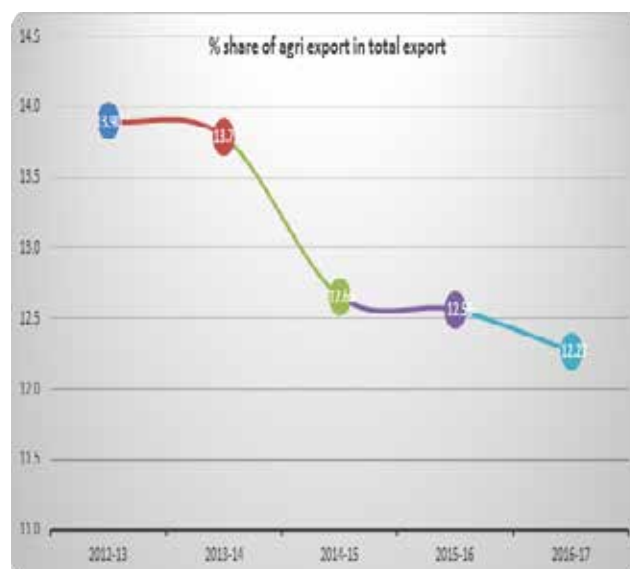
**16.3** Agricultural exports as a percentage of agricultural GDP has come down from 13.56% in 2012-13 to 9.90 % in 2015-16. During the same period, Agricultural imports as a percentage of agricultural GDP has also increased from 5.71% to 6.45%.

## AGRICULTURAL EXPORTS AND IMPORTS

**16.4** 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, and maize have witnessed significant increase in area coverage and growth rate of production.

**16.5** Agricultural exports increased from Rs. 2,27,193 crore in 2012-13 to Rs. 2,27,554 crore in financial year 2016-17 registering a growth of nearly 0.15%. Increase in the value of agricultural exports during 2016-17 was primarily on account of higher exports of rice basmati, spices, rice (non-basmati), raw cotton, sugar etc. The share of agricultural exports in India's total exports decreased from 13.90% in 2012-13 to 12.27% in 2016-17.



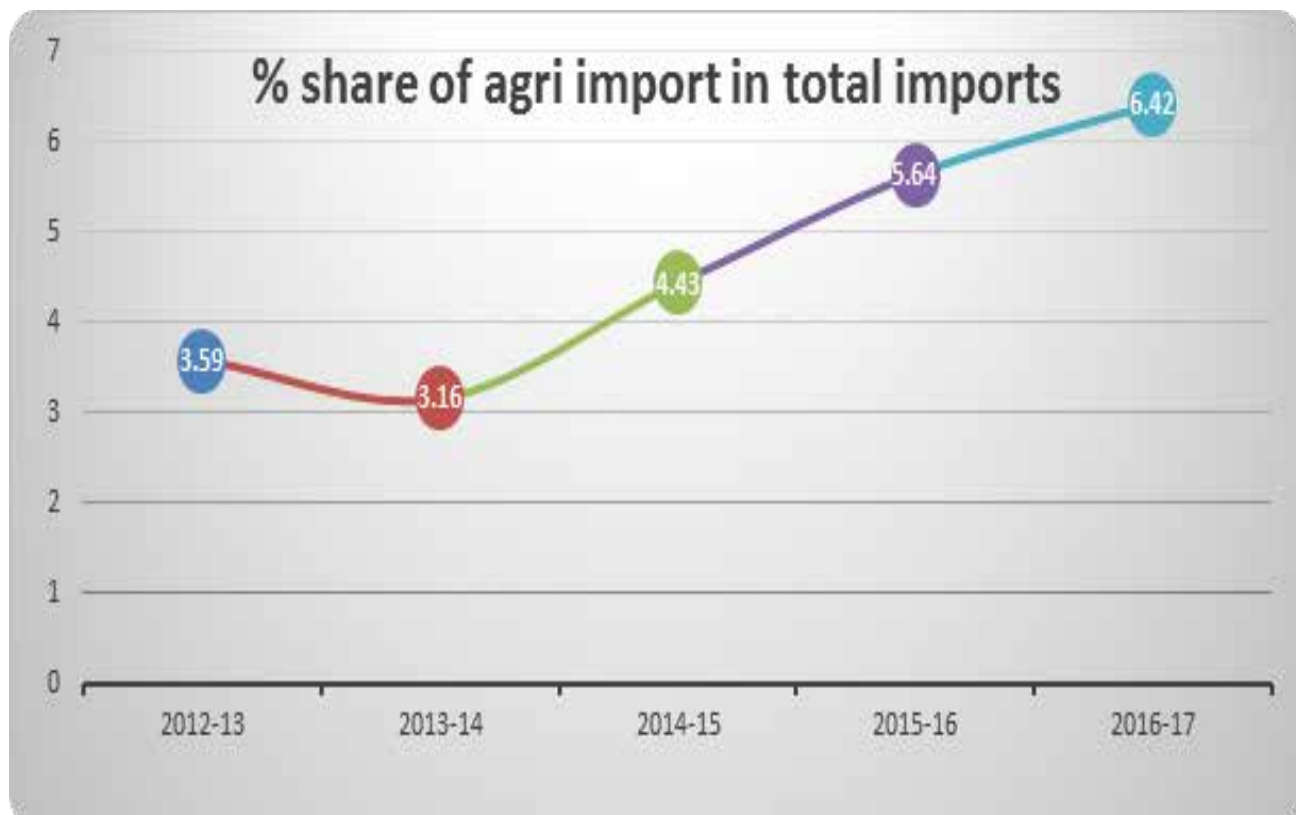
**16.6** India's top 10 agricultural export commodities in terms of quantity and value for the year 2012-13 to 2016-17 are given in the table 1 below:

**Table 1: India's top 10 agricultural commodities (Exports)**  
[Value in Rs. Crores]

S.N.	Commodity	2012-13	2013-14	2014-15	2015-16	2016-17
1	Rice -basmati	19409	29292	27599	22719	21604
2	Spices	15177	15146	14842	16630	19442
3	Rice(other than bas-mati)	14449	17795	20336	15483	17145
4	Cotton raw	20277	22338	11643	12821	10982
5	Sugar	8576	7179	5327	9825	8678
6	Fresh vegetables	3407	5384	4612	5237	5772
7	Coffee	4711	4799	4973	5125	5668
8	Groundnut	4065	3187	4675	4075	5454
9	Oil meals	16519	17070	8128	3599	5371
10	Cashewnut	4067	5095	5566	5028	5303
	Total agri & allied exports	227193	262779	239471	215396	227554

Source: Department of Commerce

**16.7** India's agricultural imports increased from Rs. 95,719crore in 2012-13 to Rs1,64,680crore in 2016-17 registering a growth of nearly 72%. 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 etc. Share of agricultural imports in the total imports increased from 3.59 % in 2012-13 to 6.42 % in 2016-17.





16.8 India's top 10 agriculture import commodities for the year 2012-13 to 2016-17 are given in the table 2 below:

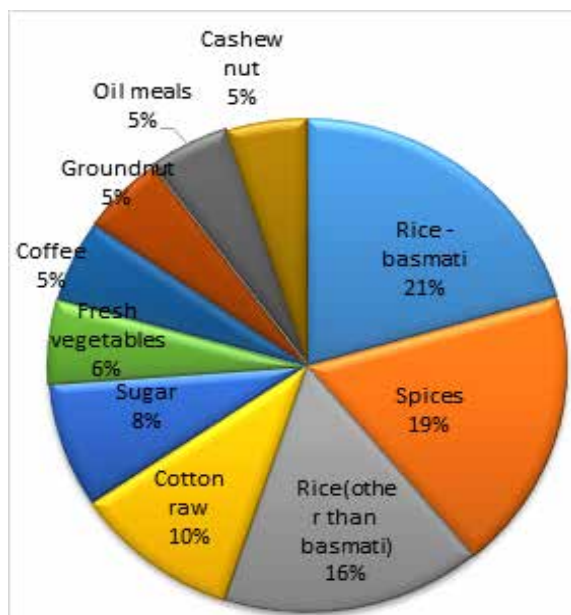
**Table 2: India's top 10 agricultural commodities (Imports)**  
[Value in Rs crores]

	Commodity	2012-13	2013-14	2014-15	2015-16	2016-17
1	Vegetable oils	53562	44038	64894	68677	73047
2	Pulses	13345	11037	17063	25619	28523
3	Fresh fruits	6180	7716	9544	11072	11241
4	Cashew nut	5434	4668	6600	8701	9027
5	Wheat	6	27	61	873	8509
6	Sugar	3094	2287	3668	4038	6868
7	Cotton raw	2467	2376	3101	2566	6337
5	Spices	2716	3452	4392	5400	5758
8	Misc processed items	1268	1474	1749	1811	2116
9	Cocoa products	1049	1072	1551	1399	1540
10	Oil Meals	210	200	273	430	975
	India's total agri and allied imports	95719	85727	121238	140311	164680

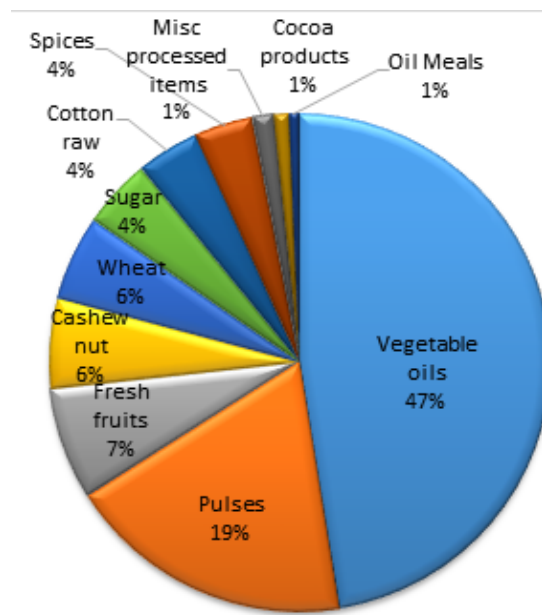
Source: Department of Commerce

16.9 Share of top 10 exported and imported agri-commodities during 2016-17 is as follows:

**Export share in 2016-17 (top 10 items)**



**Import share in 2016-17 (top 10 items)**



Source: Department of Commerce

## Foreign Trade Policy

**16.10** 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.

### MEASURES TAKEN ON EXPORT & IMPORT POLICY (2017-18)

**16.11** Import duty on sugar was increased from 40% to 50% vide Customs Notification dated 10th July, 2017. Import duty on wheat has been increased from 10% to 20% and on peas from 0% to 50% respectively vide Custom Notification dated 8.11.2017. Quantitative ceiling of 2 lakh tons/ year on arhar and 3 lakh tons/ year on moong & urad have been imposed on 5<sup>th</sup> August, 2017 and 21<sup>st</sup> August, 2017 respectively. Import duty on crude palm oil has been raised from 15% to 30%, on refined palm oil from 25% to 40%, on crude sunflower oil from 12.5% to 25%, on refined sunflower oil from 20% to 35%, on crude soya bean oil from 17.5% to 30%, on refined soya bean oil from 20% to 35%, crude rapeseed oil including canola oil (Low erucic and rapeseed oil), mustard oil and colza oil from 12.5% to 25% and on refined rapeseed oil including canola oil (Low erucic acid and rapeseed oil), mustard oil and colza oil from 20% to 35% vide Custom Notification dated 17.11.2017. Import duty on soya bean seed has also been raised from 30% to 45% vide Customs Notification dated 17.11.2017. Export of all varieties of pulses including organic pulses has been "free" without any quantitative restriction w.e.f. 22.11.2017. Minimum Import Price (MIP) of Rs. 500/kg on pepper has been imposed w.e.f.

6.12.2017. Import duty on lentil (masur) and chana (chickpea) has been raised from zero to 30% w.e.f 21.12.2017.

### FOREIGN DIRECT INVESTMENT (FDI) POLICY IN AGRICULTURE

**16.12** 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.

**16.13** From April 2000 to September 2017, FDI inflows of Rs. 12,743 crores have been received in agriculture sector (i.e. agriculture services including agriculture machinery). 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.

### GOODS AND SERVICES TAX

**16.14** Government has rolled out a new tax regime namely Goods and Services Tax (GST) with effect from 1<sup>st</sup> 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, compliant, simple, harmonized and development oriented tax system. The GST, unlike the present 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).

A weekly monitoring mechanism under the chairmanship of Trade Adviser has been established in GST issues.

**16.15 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.

**16.16 Projected benefits of GST on Agricultural Sector:** As the GST is being introduced with the objective of having a unified tax structure for goods and services, this is likely to lead various benefits for agricultural sector:

- a) Unified market - the amalgamation of various taxes into one will simplify the Procedure and help in evolution of a common market at national level.
- b) Increase in exports due to cost effective production
- c) The burden of tax on goods is expected to fall under GST leading to benefits to the consumers.
- d) This is likely to facilitate and strengthen the Scheme on National Agricultural Market (NAM) aimed at an integrated system of market of agriculture produce at the national level, allowing free flow of agricultural commodities across states.
- e) The implementation of GST is expected to facilitate the implementation of

National Agricultural Market on account of subsuming all kinds of taxes/cess on marketing of agricultural produce as well as it would ease interstate movement of agricultural commodities which would improve marketing efficiency, facilitate development of virtual markets through warehouses and reduce overhead marketing cost.

- f) Agricultural commodities are perishable in nature in varying degrees therefore trade is influenced by the time required for transportation. The simple uniform tax regime is expected to improve the transportation time, and curtail wastage of precious food.
- g) GST is essential to improve the transparency, reliability, timeline of supply chain mechanism. A better supply chain mechanism would ensure a reduction in wastage and cost for the farmers/retailers. GST would also help in reducing the cost of heavy machinery required for producing agricultural commodities.

**16.17 Services Tax on agricultural sectors:** Mostly all services activities relating to agriculture are currently exempted from the levy of service tax under GST.

## INSTITUTIONAL MECHANISM FOR IN-HOUSE KNOWLEDGE MANAGEMENT

### Commodity Profile

**16.18** Trade Division has been regularly publishing commodity profiles of six prime agricultural products viz. Rice, Wheat, Pulses, Vegetable Edible Oil, 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.

**16.19** The commodity profiles are placed in the public domain and are updated once in each month. These profiles can be viewed by clicking 'Trade' at <http://agricoop.nic.in/divisions.html>

**16.20** Chapter-wise export and import data of 352 agriculture tariff lines at six digit HS level indicating bound rate and applied rate from 2009-10 to 2016-2017 (Apr- Sept) is hosted on the website. (<http://agricoop.nic.in/divisions.html>)

#### **Audit Para**

**16.21** No audit para/ observation are pending in Trade Division of this Department.



*Trucks are loading for shipment*



*Goods are packed in container*



*Ships are ready in port for consignment*

\*\*\*\*\*



## CHAPTER 17

# Agricultural Credit

**17.1** The 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.

## POLICY INITIATIVES FOR INCREASING THE FLOW OF CREDIT

**17.2** The 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:-

### **Agriculture Credit : Target and Achievement**

**17.3** Agricultural credit flow has increased consistently over the years and it reached Rs. 10,65,756 crore against the target of Rs. 9,00,000 crore during 2016-17. The agriculture credit target for the year 2017-18 has been fixed at Rs. 10,00,000 crore and the achievement against this target till October, 2017 is Rs. 6,71,113.42 crore.

## INTEREST SUBVENTION SCHEME

**17.4** The Government has been implementing Interest Subvention Scheme since 2006-07. Under the Scheme, an interest subvention is provided to Public Sector Banks, Private Sector Scheduled Commercial Banks, Cooperative Banks and Regional Rural Banks on the use of their own funds for lending short term crop loans upto Rs. 3.00 lakh per farmer to enable the lending institutions to make available short term credit at the ground level at 7% per annum to farmers. Farmers are provided with 3% additional interest subvention for the short term crop loan of upto Rs. 3.00 lakh for a maximum period of one year for prompt repayment on or before the due date. Thus, farmers, who promptly repay their crop loans as per the repayment schedule fixed by the banks, are extended loans at an effective interest rate of 4% per annum. Government has extended the scheme to crop loans borrowed from private sector scheduled commercial banks in respect of loans given within the service area of the branch concerned.

**17.5** Further, in order to discourage distress sale by farmers and to encourage them to store their produce in warehouses against warehouse receipts, the benefit of interest subvention scheme has been extended to small and marginal farmers having Kisan Credit Card for a further period upto six months post harvest on the same rate as available to crop loan against negotiable warehouse receipt for keeping their produce in warehouses accredited by Warehousing Development Regulatory Authority (WDRA).

**17.6** 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 however 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 3<sup>rd</sup> July, 2017.

**Release of funds to RBI/NABARD for settling the claims under Interest Subvention Scheme**

**17.7** During the financial year 2016-17, the Department released a sum of Rs.13,397.13 crore to RBI/NABARD, the implementing

agencies for settling the claims under Interest Subvention Scheme. The Government has allocated a sum of Rs.15,000 crore for the current financial year for settling the claims under the scheme. An amount of Rs.10,233 crore has been released to RBI/NABARD as on date for settlement of audited claims under the scheme. Details of funds released during the last five years are as under:

(Rs. crore)

2013-14	2014-15	2015-16	2016-17	2017-18
6,000	6,000	13,000	13,397.13	10,233 (As on 20.11.2017)

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## CHAPTER 18

# Gender Perspective in Agriculture

**18.1** ‘Gender Mainstreaming’ is one of the important pillars of the National Policy for Farmers’ formulated in 2007. In line with the Policy directives, it is mandated to take appropriate structural, functional & institutional measures to empower women in agriculture and allied sectors by building their capacities and improving their access to inputs, technology 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.

**18.2** The National Gender Resource Centre in Agriculture (NGRCA) set up in the Department of Agriculture, Cooperation & Farmers Welfare, Ministry of Agriculture & Farmers Welfare and supported under the Central Sector Component of Sub-Mission on Agricultural Extension (SMAE) acts as a focal point for convergence of all gender related activities & issues in agriculture & allied sectors within and outside the Department. The Centre is also contributing towards adding gender dimension to agriculture policies /programmes and rendering advocacy / advisory services to

the States/ UTs to internalize gender specific interventions in policies/ programmes of agriculture sector.

**18.3** 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 & is mandated to ensure that the policies and programmes in agriculture are fully engendered & reflect the national commitment to empowerment of women.

**18.4** Gender Budgeting Cell (GBC) has been constituted in the Department of Agriculture, Cooperation & Farmers Welfare for looking into the budgetary commitments of various schemes of DAC & FW, bringing gender concerns on to the centre stage in all aspects of public expenditure and policy and ensuring a proportionate flow of the public expenditure benefiting women farmers. Nodal officers/ Gender Coordinators in various Divisions have been sensitized about the concept of gender budgeting. Formats of all the beneficiary oriented schemes of the Ministry are being revised to generate gender disaggregated data.

## CURRENT INITIATIVES OF NGRCA

**18.5** 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 & Action Research

## Studies:

- Adoption of Gender Friendly Tools by Women Farmers and its impact on their lives
- Schemes for Improving Women Farmers' Access to Extension Services & Gender Mainstreaming in Agriculture.
- "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. Publication:

**Published:** Compendium on Gender Friendly Tools/Equipments (Bi-lingual).

Farm Women Friendly Handbook (Both in English & Hindi)

**Initiated:** 51 Success Stories of women farmers

Compendium on Women Agri-preneurs

3. Published literature has been circulated to all State Agriculture Department, ATMAs, KVKs, SAUs, ICAR Institutes for onward sharing with the women beneficiaries in their vernacular language.
4. Preparation of separate chapter on Gender Prescriptive in Agriculture for the Annual Report and Gender Related Write-up for the Outcome Budget of DAC&FW, Ministry of Agriculture & Farmers Welfare.
5. Delivery of Gender Sensitization Module/ Capsule Module on Gender Learning to the Extension functionaries at all levels viz. Senior, Middle & Cutting edge level through MANAGE. EEIs & SAMETIs & Maintenance of Gender Disaggregated

Data. The Capsule Module on Gender Learning was delivered through 260 Trg. Programme conducted by MANAGE, Extension Education Institutes (EEIs) and State Institutes for Management of Agricultural Extension Training (SMAETIs) with participation of 7441 male and 2066 Female participants.

6. Advisory issued to the States for preparation of specific guidelines for wasteland development and its distribution to land less farm-women/ women farmers, Women SHG for cultivating/livelihood purpose on long-term lease basis.
7. Developed Collaborative Project with the ICAR Institutes for empowerment of women in agriculture & allied sectors. These projects shall be submitted for approval of Competent Authority after modification, if required.
8. Periodic Updation of the Dashboard pertaining to the Empowerment of Women.
9. Collation of special provisions and package of assistance available for women under various on-going scheme/missions/sub-missions of DAC&FW, Ministry of Agriculture & Farmers Welfare and even those of other Ministries/Departments.
10. Reviewed Reporting format of various on-going schemes of DAC&FW viz. NFSM, SMPP, SMAM, SMSP, MIDH & NMOOP from gender lens.

### **Mainstreaming efforts of various Divisions of DAC & FW:**

**18.6** The important mainstreaming and gender budgeting efforts within various subject matter divisions are briefly given hereunder:



**(A) Horticulture**

**18.7** Under Mission for Integrated Development of Horticulture (MIDH), an umbrella scheme on horticulture subsuming ongoing schemes on Horticulture 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.

**18.8** The above mentioned schemes of Horticulture Divisions are 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.

**18.9** During the current financial year 2017-18, funds to the tune of Rs. 2329.13 Crore have been earmarked for implementation of schemes under MIDH. Out of this, a total of Rs. 1480.86 crores has been released till 15<sup>th</sup> January, 2018 to the MIDH implementing agencies.

**18.10** 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.

**(B) 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;
  - 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.
- ATMA programme provides that minimum 30% resources are to be utilized for women farmers and at least 30% scheme beneficiaries should be women farmers/farm women. To improve participation of women in planning & decision making process, the scheme provides for representation and active involvement of women at various decision making platforms viz. ATMA-Governing Body and ATMA-Management Committee at district level & Farmer Advisory Committees (FACs) at Block, District and State level. Besides, scheme provides for enhanced involvement of women as 'Farmer Friend' in a mechanism promoted under the scheme for Farmer-to-Farmer extension. Farm Women's Food Security Groups (FSGs) @ at least 2 per block are 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 10427917 farm women (24.05% of the total benefited farmers) have participated in farmer oriented activities like Exposure Visits, Training, Demonstrations & Kisan Melas including 611975 women farmers benefited during 2017-18 (up to 30<sup>th</sup> November, 2017). During FY 2017-18, Rs. 19500/- lakhs were allocated and earmarked for women, out of which Rs.12472.52 lakhs have been utilised under the scheme for women beneficiaries (as on 12/01/2018).

**18.11** 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.

**18.12** The scheme promotes involvement of agripreneurs (including women) under trained 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.

**18.13** 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.

**18.14** 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.

**18.15** 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).

**18.16** During the current year, 247 candidates were trained and 10 have established their ventures. Since inception of the scheme, 56542 candidates have been trained and 23517 agri-ventures have been established in the country till 31.12.2017. Out of these 4250 and 1334 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.

**18.17 Extension Education Institutes:** To provide training and HRD support to the extension functionaries across the Country, the Ministry of Agriculture & Farmers Welfare had established four EEIs in four different Regions of the country namely EEI, Nilokheri (Haryana), EEI, Hyderabad (Andhra Pradesh), EEI, Anand (Gujarat), and EEI, Jorhat (Assam) to address the needs of agricultural extension development.

**18.18** During 2016-17, the Extension Education Institutes (EIs) conducted 179 training courses with 4099 field extension functionaries including 948 women extension functionaries, whereas during 2017-18 (till 31.12.2017), the EIs conducted 132 training courses with 3068 field extension functionaries including 584 women extension functionaries working in agriculture & allied departments.

### ***Model Training Courses***

**18.19** During 2016-17, 59 Model Training Courses in the thrust areas of agriculture & allied sectors were conducted through specialized National Training Institutes with 1208 field extension functionaries including 181 women extension functionaries working in agriculture & allied departments of States/UTs, whereas during 2017-18 (till 31.12.2017), 51 Model Training Courses have been conducted with 912 field extension functionaries including 167 women extension functionaries.

### ***Diploma in Agril. Extension Services for Input Dealers (DAESI)***

**18.20** During 2016-17, 110 batches of DAESI programme were conducted to provide certification to 4463 Input Dealers including 27 women candidates, whereas during 2017-18 (till 31.12.2017), 100 programmes have been started to train 4000 input dealers including 62 women candidates.

## **(C) Crops**

**18.21** 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.

## **(D) Agricultural Marketing**

**18.22** 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).

**18.23** Under Agricultural Marketing Infrastructure (AMI) component, Women are eligible for subsidy @ 33.33% as against 25% for others.

### (E) Mechanization and Technology

**18.24** 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.

**18.25** 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 beneficiaries 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.

**18.26** Gender Friendly Equipment for Women: Under the component 1 of SMAM, Agricultural Mechanization through Training, Testing, and Demonstration, a total 1606 women were trained during the current Financial Year 2017-18 (till December 2017). 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.

## (F) Seeds

**18.27** 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.

**18.28** 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.

## (G) Cooperation

**18.29** 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 ie. 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, Odisha, Rajasthan, Tamil Nadu, Uttar Pradesh and West Bengal. During the year 2016-17 as many as 722 women were imparted education under various classes in 21 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 2016-17, 105 self help groups with membership of 1040 women were formed by the lady mobilizers of the cooperative education field projects. Through various income generating activities, 3252 women were benefitted under this programme. During the year 2016-17, a total of 127000 women were imparted education under various educational activities. Total 15 programmes were organised exclusively for women co-operatives and attended by 621 participants.

**18.30** NCDC encourages women cooperatives to avail assistance under its various schemes. A large number of women members are engaged & involved in cooperatives delaing 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 31.03.2016 NCDC has sanctioned and released financial assistance of Rs. 746.24 crore and Rs. 651.30 crore respectively for the development of cooperative societies exclusively promoted by women. In the 14263 projects/units sanctioned by NCDC in the year 2016-17, it is estimated that 11.01 lakh women are enrolled as members, out of which 879 women members are on the Board of Directors.

## (H) Policy

**18.31** 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.

**18.32** 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.

**18.33** 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.

## (I) Agriculture Census

**18.34** Since 1995-96, Gender based data in Agriculture Census is being collected as per the recommendations of the Central Statistics Office, Ministry of Statistics and Programme Implementation, New Delhi. 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).

**18.35** Percentage of female operational holdings as per results of latest Agriculture Census 2010-11 and Agriculture Census 2005-06 is given in the following table:

Sr. No.	Size Group	2005-06*	2010-11
1	Marginal (Below 1.00 ha.)	12.60	13.63
2	Small (1.00-2.00 ha.)	11.10	12.15
3	Semi-Medium (2.00-4.00 ha.)	9.61	10.45
4	Medium (4.00-10.00 ha.)	7.77	8.49
5	Large (Above 10.00 ha.)	6.00	6.78
	All Size Groups	11.70	12.78

\* Excludes Jharkhand

**18.36** 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. A brief summary of flow of benefits to women under various schemes/programmes of the DAC&FW is given in **Annexure- 18.1**.

#### (J) Rainfed Farming Systems (RFS)

**18.37** 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.

**18.38** 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 1<sup>st</sup> July, 2015. PDMC mainly focuses on water use efficiency at farm level through precision/ Micro Irrigation (Drip and Sprinkler Irrigation).

**18.39** 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".

**18.40** 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.

#### (K) Integrated Nutrient Management

**18.41** 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.

**(L) Plant Protection**

**18.42** 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 December 2017, a total of 1852 male & 460 females have participated in the training programme at NIPHM.

**THE WAY FORWARD:**

**18.43** 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

**18.44** 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.

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## ANNEXURE 2.1

**FUNCTIONS AND ORGANIZATIONAL STRUCTURE**  
**LIST OF FUNCTIONAL DIVISIONS IN THE DEPARTMENT OF AGRICULTURE, COOPERATION**  
**AND FARMERS WELFARE**

**Divisions:**

1. Administration
2. Agricultural Census
3. Agricultural Marketing
4. Budget, Finance and Accounts
5. Credit
6. Cooperation
7. Crops
8. Drought Management
9. Economic Administration
10. Extension
11. General Coordination
12. Official Language
13. Horticulture
14. Information Technology
15. Integrated Nutrients Management
16. International Cooperation
17. Mechanization and Technology
18. Natural Resource Management
19. Plant Protection
20. Policy
21. Plan Coordination
22. Rashtriya Krishi Vikash Yojna (RKVY)
23. Rainfed Farming System
24. Seeds
25. Oil Seeds
26. Trade
27. Vigilance

**FUNCTIONS AND ORGANIZATIONAL STRUCTURE  
INVENTORY OF FIELD FORMATIONS**

**I. ATTACHED OFFICES**

- |   |   |
|---|---|
| <ol style="list-style-type: none"> <li>1. Directorate of Economics &amp; Statistics, Shastri Bhavan, 'B' Wing, New Delhi.</li> <li>2. Commission for Agricultural Costs and Prices, Shastri Bhavan, 'F' Wing, Second Floor, New Delhi.</li> <li>3. Directorate of Plant Protection, Quarantine and Storage, N.H.IV, Faridabad (Haryana).</li> <li>4. Directorate of Marketing &amp; Inspection, N.H.IV, Faridabad (Haryana).</li> <li>5. Mahalanobis National Crop Forecast Centre, New Delhi.</li> </ol> | <ol style="list-style-type: none"> <li>6. Directorate of Jute Development, 234/4, Acharya Jagdish Bose Road, Nizam Palace Campus, Kolkata-700020 (West Bengal).</li> <li>7. Directorate of Millets Development, Mini Secretariat Building, Room No. 710, 6th Floor, Bani Park, Jaipur (Rajasthan).</li> <li>8. Directorate of Sugarcane Development, 8<sup>th</sup> Floor, Hall No.3, Kendriya Bhavan, Aliganj, Lucknow - 226024 (U.P).</li> <li>9. Directorate of Rice Development, 191, Patliputra Colony, Patna-800013 (Bihar).</li> <li>10. Directorate of Wheat Development, CGO Building, Hapur Road Chauraha, Kamla Nehru Nagar, Ghaziabad (U.P).</li> <li>11. Directorate of Extension, Krishi Vistar Bhavan, Dr. K.S. Krishna Marg, IARI Campus, Pusa, New Delhi-110 012.</li> <li>12. Directorate of Oilseeds Development, Telhan Bhavan, Himayat Nagar, Hyderabad (A.P).</li> <li>13. Directorate of Pulses Development, 8th Floor, Vindhyachal Bhavan, Bhopal- 462004 (M.P).</li> </ol> |
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**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

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.



**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. National Institute of Agricultural Marketing, Jaipur (Rajasthan).
7. National Institute of Plant Health Management, Hyderabad (A.P)
8. National Centre for Cold Chain Development, 2<sup>nd</sup> 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.

**Agricultural Statistics Division**  
Directorate of Economics & Statistics

**ANNEXURE 3.1**

**Department of Agriculture, Cooperation and Farmers welfare**  
**Fourth Advance Estimates of Production of Foodgrains for 2016-17**

**As on 16.08.2017**  
**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	
		3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
Rice	2															
	Kharif	78.62	72.23	78.27	80.17	82.66	84.91	75.92	80.65	92.78	92.37	91.50	91.39	91.31	91.41	93.00
	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	13.01	13.00	15.50
Wheat	Total	88.53	83.13	91.79	93.36	96.69	99.18	89.09	95.98	105.30	105.24	106.65	105.48	104.32	104.41	108.50
	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	93.50	92.29	96.50
	Kharif	4.84	4.04	4.07	3.71	4.11	3.05	2.76	3.44	3.29	2.84	2.39	2.30	1.71	1.82	3.00
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	2.70	2.42	3.00
	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	4.41	4.24	6.00
	Kharif	12.11	7.93	7.68	8.42	9.97	8.89	6.51	10.37	10.28	8.74	9.25	9.18	8.06	8.07	9.50
Maize	Kharif	12.73	11.48	12.16	11.56	15.11	14.12	12.29	16.64	16.49	16.19	17.14	17.01	15.24	16.05	17.50
	Rabi	2.25	2.70	2.55	3.54	3.85	5.61	4.43	5.09	5.27	6.06	7.11	7.16	6.56	6.51	7.00
	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	21.81	22.57	24.50
Ragi	Kharif	1.97	2.43	2.35	1.44	2.15	2.04	1.89	2.19	1.93	1.57	1.98	2.06	1.79	1.82	2.00
	Rabi	0.56	0.48	0.47	0.48	0.55	0.44	0.38	0.44	0.45	0.44	0.43	0.39	0.37	0.39	0.50
	Total	1.30	1.21	1.22	1.33	1.20	1.69	1.35	1.66	1.62	1.75	1.83	1.61	1.51	1.44	1.85
Small Millets	Kharif	32.22	26.36	26.74	25.61	31.89	28.54	23.83	33.08	32.44	29.79	31.20	30.94	27.17	28.15	32.50
	Rabi	5.39	7.10	7.33	8.31	8.86	11.49	9.72	10.32	9.58	10.25	12.09	11.92	10.77	11.85	11.48
	Total	37.60	33.46	34.07	33.92	40.75	40.04	33.55	43.40	42.01	40.04	43.29	42.86	37.94	38.52	44.35
Cereals	Kharif	110.84	98.59	105.01	105.78	114.55	113.45	99.75	113.73	125.22	122.16	123.70	122.34	118.48	119.56	125.50
	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	117.28	115.66	123.85
	Total	198.28	185.23	195.22	203.08	216.01	219.90	203.45	226.25	242.20	238.79	245.79	234.87	235.76	235.22	249.35
Tur	Kharif	2.36	2.35	2.74	2.31	3.08	2.27	2.46	2.86	2.65	3.02	3.17	2.81	2.46	2.56	3.62
	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	7.17	7.06	9.60
	Total	8.08	7.82	8.34	8.64	8.83	9.32	9.94	11.08	10.35	11.85	12.70	10.14	9.63	9.62	13.22
Gram	Kharif	1.20	0.95	0.90	0.94	1.12	0.84	0.81	1.40	1.23	1.43	1.15	1.28	1.39	1.25	1.45
	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	0.81	0.70	0.70
	Total	1.47	1.33	1.25	1.44	1.46	1.17	1.24	1.76	1.77	1.90	1.70	1.96	2.20	1.95	2.15
Moong	Kharif	1.43	0.81	0.69	0.84	1.25	0.78	0.44	1.53	1.24	0.79	0.96	0.87	1.02	1.00	1.22
	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	0.59	0.65
	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	1.60	1.59	1.87
Other Kharif Pulses	Kharif	1.18	0.61	0.54	0.70	0.96	0.80	0.49	1.33	0.93	0.62	0.71	0.77	0.67	0.72	0.96
	Rabi	2.48	2.32	2.31	2.29	2.00	2.23	2.31	2.27	2.40	2.73	2.53	2.77	2.37	2.47	2.55
	Total	3.66	2.93	2.85	2.99	2.96	3.03	2.80	3.60	3.33	3.35	3.24	3.54	3.04	3.19	3.51
Total Pulses	Kharif	6.16	4.72	4.86	4.80	6.40	4.69	4.20	7.12	6.06	5.91	5.99	5.73	5.54	5.53	7.25
	Rabi	8.74	8.41	8.52	9.40	8.36	9.88	10.46	11.12	11.03	12.43	13.25	11.42	10.93	10.82	13.50
	Total	14.91	13.13	13.38	14.20	14.76	14.57	14.66	18.24	17.09	18.34	19.25	17.15	16.47	16.35	20.75
Total Foodgrains	Kharif	117.00	103.31	109.87	110.58	120.96	118.14	103.95	120.85	131.27	128.07	128.69	128.06	124.01	125.09	132.75
	Rabi	96.19	95.05	98.73	106.71	109.82	116.33	114.15	123.64	128.01	129.06	136.35	132.96	128.21	126.47	137.35
	Total	213.19	198.36	208.60	217.28	230.78	234.47	218.10	244.49	259.29	257.13	265.04	252.02	252.22	251.57	270.10

**Agricultural Statistics Division**  
**Directorate of Economics & Statistics**  
**Department of Agriculture, Cooperation and Farmers welfare**  
**Fourth Advance Estimates of Production of Commercial Crops for 2016-17**

**As on 16.08.2017**  
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	
														4th Advance Esti- mates	Final	Targets
Groundnut	Kharif	68.60	52.62	62.98	32.94	73.62	56.17	38.52	66.43	51.27	31.87	80.58	59.30	53.68	64.30	62.21
	Rabi	12.67	15.12	16.95	15.69	18.20	15.51	15.76	16.22	18.37	15.08	16.56	14.71	13.66	20.70	13.43
	Total	81.27	67.74	79.93	48.64	91.83	71.68	54.28	82.65	69.64	46.95	97.14	74.02	67.33	85.00	75.65
Castorseed	Kharif	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	22.00	14.21
	Kharif	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	9.00	7.84
	Kharif	1.09	1.12	1.08	1.21	1.10	1.17	1.00	1.08	0.98	1.02	0.98	0.76	0.74	1.15	0.83
Rapeseed & Mustard	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	85.00	79.77
	Rabi	1.97	1.70	1.73	1.68	1.63	1.69	1.54	1.47	1.52	1.49	1.41	1.55	1.25	1.60	1.54
	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	0.64	0.53	0.78
Safflower	Kharif	3.06	4.31	4.56	3.66	4.63	3.57	2.14	1.92	1.47	1.87	1.54	1.11	0.68	2.40	0.97
	Rabi	6.24	7.56	9.83	8.62	10.00	8.01	6.36	4.59	3.69	3.57	3.50	3.23	2.30	6.10	1.43
	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	8.50	2.41
Soyabean	Kharif	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	136.15	137.94
	Kharif	166.72	141.49	167.67	140.12	207.13	178.08	157.28	219.22	206.91	207.91	226.12	191.89	166.80	235.00	224.01
	Rabi	85.14	102.04	112.11	102.77	90.42	99.11	91.53	105.57	91.08	101.52	101.37	83.21	85.71	115.00	96.96
Cotton #	Total	251.86	243.54	279.78	242.89	297.55	277.19	248.82	324.79	297.99	309.43	327.49	275.11	253.04	350.00	320.97
	Total	137.29	164.29	184.99	226.32	258.84	222.76	240.22	330.00	352.00	342.20	359.02	348.05	301.47	360.00	330.92
	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	99.38	110.00	100.88
Jute # #	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	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	104.66	117.00	106.00
	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	3521.63	3484.48	3550.00

# Lakh bales of 170 kgs. each

# # Lakh bales of 180 kgs. each

**Agricultural Statistics Division**  
**Directorate of Economics & Statistics**  
**Department of Agriculture, Cooperation and Farmers Welfare**  
**First Advance Estimates of Production of Foodgrains for 2017-18**

# ANNEXURE 3.2

As on 22.09.2017

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	
		3	4	5	6	7	8	9	10	11	12	13	14	15	16	1st Advance Estimates	4th Advance Estimates	Targets
Rice	Kharif	78.62	72.23	78.27	80.17	82.66	84.91	75.92	80.65	92.78	92.37	91.50	91.39	91.41	93.88	96.39	94.50	94.48
	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		13.76	14.00	
Wheat	Total	88.53	83.13	91.79	93.36	96.69	99.18	89.09	95.98	105.30	105.24	106.65	105.48	104.41	93.88	110.15	108.50	94.48
	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	98.38	98.38	97.50	
Jowar	Kharif	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	2.42	1.85	2.75	2.15
	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	2.72	3.00		
Bajra	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	2.42	4.57	5.75	2.15
	Kharif	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	8.55	9.80	9.50	8.66
Maize	Kharif	12.73	11.48	12.16	11.56	15.11	14.12	12.29	16.64	16.49	16.19	17.14	17.01	16.05	19.30	19.24	19.00	18.73
	Rabi	2.25	2.70	2.55	3.54	3.85	5.61	4.43	5.09	5.27	6.06	7.11	7.16	6.51	7.02	7.02	7.00	
Ragi	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	19.30	26.26	26.00	18.73
	Kharif	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	1.85	1.40	2.00	1.61
Small Millets	Kharif	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	0.34	0.42	0.50	0.33
	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	1.74	1.74	1.90	
Coarse Cereals	Kharif	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	32.45	32.71	33.75	31.49
	Rabi	5.39	7.10	7.33	8.31	8.86	11.49	9.72	10.32	9.58	10.25	12.09	11.92	10.37	11.48	11.48	11.90	
Cereals	Total	37.60	33.46	34.07	33.92	40.75	40.04	33.55	43.40	42.01	40.04	43.29	42.86	38.52	32.45	44.19	45.65	31.49
	Kharif	110.84	98.59	105.01	105.78	114.55	113.45	99.75	113.73	125.22	122.16	122.70	122.34	119.56	126.33	129.10	128.25	125.96
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	123.63	123.40		
	Total	198.28	185.23	195.22	203.08	216.01	219.90	203.45	226.25	242.20	238.79	245.79	234.87	235.22	126.33	252.73	251.65	125.96
Gram	Kharif	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	4.29	4.78	4.25	3.99
	Rabi	5.72	5.47	5.60	6.33	5.75	7.06	7.48	8.22	7.70	8.88	9.53	7.33	7.06	9.33	9.33	9.75	
Moong	Kharif	1.20	0.95	0.90	0.94	1.12	0.84	0.81	1.40	1.23	1.43	1.15	1.28	1.25	2.01	2.17	1.85	2.53
	Total	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	0.63	0.63	0.75	
Other Pulses	Kharif	1.47	1.33	1.25	1.44	1.46	1.17	1.24	1.76	1.77	1.90	1.70	1.96	1.95	2.01	2.80	2.60	2.53
	Rabi	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	1.35	1.62	1.65	1.32
Pulses	Total	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	0.55	0.55	0.65	
	Kharif	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	1.35	2.16	2.30	1.32
Total Pulses	Total	1.18	0.61	0.54	0.70	0.96	0.80	0.49	1.33	0.93	0.62	0.71	0.77	0.72	1.06	0.86	1.00	0.86
	Rabi	2.48	2.32	2.31	2.29	2.00	2.23	2.31	2.27	2.40	2.73	2.53	2.77	2.47	3.02	3.02	3.00	
Total Foodgrains	Kharif	6.16	4.72	4.86	4.80	6.40	4.69	4.20	7.12	6.06	5.91	5.99	5.73	5.53	8.70	9.42	8.75	8.71
	Rabi	8.74	8.41	8.52	9.40	8.36	9.88	10.46	11.12	11.03	12.43	13.25	11.42	10.82	13.53	13.53	14.15	
Total	Total	14.91	13.13	13.38	14.20	14.76	14.57	14.66	18.24	17.09	18.34	19.25	17.15	16.35	8.70	22.95	22.90	8.71
	Kharif	117.00	103.31	109.87	110.58	120.96	118.14	103.95	120.85	131.27	128.07	128.69	128.06	125.09	135.03	138.52	137.00	134.67
Foodgrains	Rabi	96.19	95.05	98.73	106.71	109.82	116.33	114.15	123.64	128.01	129.06	136.35	123.96	126.47	137.16	137.16	137.55	
	Total	213.19	198.36	208.60	217.28	230.78	234.47	218.11	244.49	259.29	257.13	265.04	252.02	251.57	135.03	275.68	274.55	134.67



**Agricultural Statistics Division**  
**Directorate of Economics & Statistics**  
**Department of Agriculture, Cooperation and Farmers Welfare**  
**First Advance Estimates of Production of Commercial Crops for 2017-18**

**As on 22.09.2017**  
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		
		1st Advance Esti- mates	4th Advance Esti- mates	1st Advance Esti- mates	1st Advance Esti- mates	1st Advance Esti- mates	1st Advance Esti- mates	1st Advance Esti- mates	1st Advance Esti- mates	1st Advance Esti- mates	1st Advance Esti- mates	1st Advance Esti- mates	1st Advance Esti- mates	1st Advance Esti- mates	1st Advance Esti- mates	1st Advance Esti- mates	1st Advance Esti- mates	
Groundnut	Kharif	68.60	52.62	62.98	32.94	73.62	56.17	38.52	66.43	51.27	31.87	80.58	59.30	53.68	62.21	75.00	62.13	
	Rabi	12.67	15.12	16.95	15.69	18.20	15.51	15.76	16.22	18.37	15.08	16.56	14.71	13.66	13.43	15.00		
	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	67.33	75.65	90.00	62.13
Castorseed	Kharif	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	17.31	14.21	19.00	13.96
	Kharif	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	6.75	7.94	10.00	6.64
Sesamum	Kharif	1.09	1.12	1.08	1.21	1.10	1.17	1.00	1.08	0.98	1.02	0.98	0.76	0.74	1.01	0.83	2.00	1.02
	Kharif	1.09	1.12	1.08	1.21	1.10	1.17	1.00	1.08	0.98	1.02	0.98	0.76	0.74	1.01	0.83	2.00	1.02
Rapeseed & Mustard	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	79.77	81.00		
	Rabi	1.97	1.70	1.73	1.68	1.63	1.69	1.54	1.47	1.52	1.49	1.41	1.55	1.25	1.54	2.00		
Linseed	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	0.78	1.00		
	Rabi	3.06	4.31	4.56	3.66	4.63	3.57	2.14	1.92	1.47	1.87	1.54	1.11	0.66	1.34	0.97	1.00	0.88
Sunflower	Rabi	6.24	7.56	9.83	8.62	10.00	8.01	6.36	4.59	3.69	3.57	3.50	3.23	2.30	1.43	1.98		
	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	2.41	2.98		0.88
Soyabean	Kharif	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	142.23	137.94	147.00	122.17
	Kharif	166.72	141.49	167.67	140.12	207.13	178.08	157.28	219.22	206.91	207.91	226.12	191.89	166.80	233.63	224.01	254.00	206.79
Total Nine Oilseeds	Rabi	85.14	102.04	112.11	102.77	90.42	99.11	91.53	105.57	91.08	101.52	101.37	83.21	85.71	96.96	100.98		
	Total	251.86	243.54	279.78	242.89	297.55	277.19	248.82	324.79	297.99	309.43	327.49	275.11	252.51	233.63	320.97	354.98	206.79
Cotton #	Total	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	321.23	330.92	355.00	322.73
	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	99.05	100.88	111.00	98.32
Jute # #	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	5.01	5.12	7.00	4.95
	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	104.05	106.00	118.00	103.28
Jute & Mesta # #	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	3067.20	3550.00	3376.95	
	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	3067.20	3550.00	3376.95	

# Lakh bales of 170 kgs. each  
# Lakh bales of 180 kgs. each

## ANNEXURE 3.3

PROGRAMMES OF NORTH-EASTERN STATES IN RESPECT OF  
AGRO-ECONOMIC RESEARCH CENTRE – JORHAT

(Rs. in lakhs)

Name of Division: Agro-Economic Research Division					
Schemes/ Programme Activities Approved	Details of Schemes/ Programmes/ Activities taken up	Targets	Achievements	Funds Released	Utilization
1	2	3	4	5	6
“Agro-Economic Research (AER) Scheme” an independent component of “Integrated Scheme on Agriculture Census, Economics and Statistics” of Central Sector Plan Scheme	AER Centre, Jorhat undertakes re-search studies on Agro-Economic Problems of North Eastern States	There is no fixed target.	Study completed by AER Centre, Jorhat during the Financial Year 2012-13, 2013-14, 2014-15, 2015-16, 2016-17 & 2017-18 are given below: Year Study Completed 2012-13 = 1 2013-14 = 3 2014-15 = 0 2015-16 = 2 2016-17 = 0 2017-18 = 0	2012-13 = 0.00 2013-14 = 250.00 2014-15 = 48.52 2015-16 = 104.00 2016-17 = 122.61 2017-18 = 41.37*	96.73 121.69 129.48 117.52 118.10 55.52*

Note: (\*) Fund released and expenditure figures till October, 2017

**Details of the State-wise funds allocated, Release and Expenditure under PKVY schemes being implemented by DAC&FW during 2015-16 to 2017-18**

S. No	Name of the State	No of clusters	2015-16 (Rs in lakh)		2016-17 (Rs in lakh)		2017-18 (Rs in lakh)		No. of New Clusters	Allocation for new clusters	Release for new clusters
			Allocation	Release	Allocation	Release	Allocation	Release			
1	Andhra Pradesh	433	1854.47	1100.15	1308.50	798.17	798.17	759.88	39	167.03	70.32
2	Bihar	327	1400.49	1050.37	988.17	664.26	0.00	573.86	100	428.28	214.14
3	Chhattisgarh	188	805.17	603.88	568.12	314.78	314.78	329.92	12	51.39	25.70
4	Gujarat	100	428.28	178.45	302.19	238.83	0.00	175.49	0	0.00	0.00
5	Goa	4	17.13	7.14	12.09	0	0.00	7.02	0	0.00	0.00
6	Haryana	20	85.66	53.53	60.44	45.98	1.10	35.10	0	0.00	0.00
7	Jharkhand	100	428.28	321.21	302.19	203.14	0.00	175.49	150	642.43	321.21
8	Karnataka	545	2334.15	1945.12	1646.96	815.27	785.27	956.43	0	0.00	0.00
9	Kerala	119	509.66	382.22	355.296	0	0.00	208.83	500	2141.42	1070.71
10	Madhya Pradesh	880	3768.90	2826.67	2659.31	1787.6	754.41	1544.33	500	2141.42	1070.71
11	Maharashtra	932	3991.61	2598.51	2816.45	2957.59	0.00	1635.58	326	1396.21	698.10
12	Odisha	320	1370.51	1027.88	967.02	650.03	650.03	561.57	0	0.00	0.00
13	Punjab	50	214.14	160.6	151.10	0	0.00	87.75	200	856.57	428.28
14	Rajasthan	755	3233.55	2373.69	2281.56	1491.13	597.78	1324.96	395	1691.72	845.86
15	Tamil Nadu	112	479.68	399.73	338.46	207.264	207.26	196.55	0	0.00	0.00
16	Telangana	300	1284.85	1070.71	906.58	448.77	0.00	526.47	390	1670.31	835.15
17	Uttar Pradesh	575	2462.64	2052.2	1737.62	1270.64	739.94	1009.08	45	192.73	96.36
18	West Bengal	120	513.94	214.14	362.63	393.66	271.18	210.59	0	0.00	0.00
19	Assam	220	1413.34	576.39	997.24	0	0.00	579.12	0	0.00	0.00
20	Arunachal Pradesh	19	122.06	51.41	86.13	81.08	81.08	50.02	0	0.00	0.00
21	Mizoram	34	218.43	89.08	154.12	138.65	138.65	89.50	0	0.00	0.00
22	Manipur	30	192.73	107.07	135.99	0	0.00	78.97	0	0.00	0.00
23	Nagaland	24	154.18	154.18	108.79	0	0.00	63.18	0	0.00	0.00
24	Sikkim	150	963.64	409.105	679.94	0	0.00	394.86	0	0.00	0.00
25	Tripura	50	321.21	133.84	226.65	308.83	308.83	131.62	0	0.00	0.00
26	Meghalaya	45	289.09	144.55	203.98	296	159.02	118.46	0	0.00	0.00
27	Himachal Pradesh	110	706.67	395	498.62	0	0.00	289.56	100	642.43	321.21
28	Jammu & Kashmir	28	179.88	74.95	126.92	87.81	26.79	73.71	0	0.00	0.00
29	Uttarakhand	550	3533.35	1962.97	2493.10	2019.4	1641.29	1447.81	35	224.85	112.42
30	Andman & Nicobar	68	485.39	130	342.49	0	0.00	198.89	0	0.00	0.00
31	Other admin. charges			24.85		0					
	Total	7208	33763.09	22619.60	18998.76	15218.88	7475.59	13834.58	2792	12246.79	6110.20

Total fund released in 2017-18 is Rs 14555.39 lakh

## ANNEXURE 8.1

## SEEDS PROGRAMMES IN NORTH-EASTERN STATES

S. No	Schemes/ Programmes Activities Approved	Details of Schemes/ Programmes/ Activities taken	Target for 2016-17	Achievement 2016-17	Target for 2017-18	Achievement 2017-18
1.	National Seed Reserve (NSR)	The basic objective of this component is to keep seed available for meeting requirement during natural calamities.	57798 Qtl	57798 Qtl	71387 Qtl	71387 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 being 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 18226.83 qtl transported exclusively to NE States. An amount of Rs. 102.23 lakh has been reimbursed. The Total quantity of seeds transported total including NE States is 1,55,149.06 Quintal (upto 31.03.2017)	As mentioned in Col. 4	For NE States a quantity of 36993.68 qtl of seeds transported exclusively to NE States. An amount of Rs. 191.136 lakh has been reimbursed. The Total quantity of seeds transported total including NE States is 82489.25 Quintal (upto 04.01.2018)



## ANNEXURE 9.1

State-wise coverage details under PMFBY and RWBCIS are given below:

(as on 20.12.2017)

States	No. of Farmers Insured	Area Insured (Ha)	Sum Insured	Gross Premium	Claims Reported	No. of Farmers benefited
Andhra Pradesh	1776996	2015915.74	1041079.31	95725.60	97536.58	880893
Andaman & Nicobar Islands	324	253.20	46.84	1.62	14.56	295
Arunachal Pradesh	0	0.00	0.00	0.00	0.00	0
Assam	60265	41005.08	23559.43	864.66	501.68	23370
Bihar	2713178	2465249.21	1172428.36	142107.64	28937.93	151526
Chhatisgarh	1549164	2432358.59	726900.19	32818.04	15453.60	134341
Dadra & Nagar Haveli	0	0.00	0.00	0.00	0.00	0
Daman & Diu	0	0.00	0.00	0.00	0.00	0
Goa	755	547.38	579.35	7.42	2.68	111
Gujarat	1975090	2841434.96	1232288.84	236049.64	99882.87	490692
Haryana	1335986	2084554.35	1178294.32	36341.49	29203.72	211978
Himachal Pradesh	379072	129344.71	89809.89	7154.51	17657.96	63336
Jammu & Kashmir	0	0.00	0.00	0.00	0.00	0
Jharkhand	878148	375760.15	201063.96	27198.12	2689.74	45181
Karnataka	2909787	2443391.99	1132768.59	162630.92	110060.06	687175
Kerala	77456	53104.17	33245.40	3315.86	1770.44	21341
Lakshadweep	0	0.00	0.00	0.00	0.00	0
Madhya Pradesh	6897724	11571174.90	3522827.23	372728.74	186182.89	1182214
Maharashtra	12010693	7442303.08	2462359.08	473942.27	229301.85	2894026
Manipur	8366	9120.89	3693.96	359.00	195.91	8358
Meghalaya	89	37.71	47.13	4.05	2.62	0
Mizoram	0	0.00	0.00	0.00	0.00	0
Nagaland	0	0.00	0.00	0.00	0.00	0
Odisha	1820122	1318616.98	726170.12	53903.37	42718.83	169619
Puducherry	8880	7361.61	3108.38	283.10	733.61	4254
Punjab	0	0.00	0.00	0.00	0.00	0
Rajasthan	9332904	10244507.78	1731377.10	252191.38	131316.39	2248265
Sikkim	574	130.50	45.93	1.02	0.00	0
Tamil Nadu	1403760	1300867.61	608323.94	122402.21	244554.42	736685
Telangana	977430	874628.11	550484.89	31405.10	18388.99	221257
Tripura	12528	4916.54	2957.70	38.89	8.34	502
Uttar Pradesh	6549217	5645366.79	2452928.56	103532.55	53185.20	1057276
Uttarakhand	261573	132362.70	92139.49	4158.52	2747.07	61680.9
West Bengal	4126151	2033954.29	1234599.07	72870.45	11770.19	247140
<b>TOTAL</b>	<b>57066232</b>	<b>55468269.01</b>	<b>20223127.05</b>	<b>2232036.18</b>	<b>1324818.15</b>	<b>11541516</b>

## ANNEXURE 13.1

## Sector wise Approved Projects Cost 2012-13

(Rs. in crore)

Sno	STATE NAME	CROP	HORT	SERI	ANHB	OTHR	FISH	COOP	IPMT	SEED	FINM	AMEC	EXTN	MRKT	NONF	ITEC	AGRE	NRM	IRRI	ORPM	DDEV	TOTAL
1	ANDHRA PRADESH	11.29	210.45	10.00	105.80		21.53			63.68		319.81	4.95	48.67			19.49	19.65		15.00	29.90	880.22
2	ARUNACHAL PRADESH	30.41	17.87	0.35	6.06	0.47	6.05					10.63	1.11	6.50				0.47	2.99	2.99		85.83
3	ASSAM	52.45	27.80		36.70	7.54	20.50			5.38		26.10	132.35	22.63	15.05		13.00	21.60	11.57	10.97		403.64
4	BIHAR	323.97	156.42		27.60	64.87	24.92	50.72				161.45	2.00								26.00	837.95
5	CHATTISHGARH	174.12	102.90		67.43	8.54	28.51	34.34	13.01	13.97	2.10	18.19	48.63	16.83			12.58	16.30		24.17		581.62
6	GOA	4.29	25.16			1.10			1.29	6.52			0.76				1.77				4.01	44.90
7	GUJARAT	156.82	155.93		75.75		25.04	3.28	1.04	24.82		100.83	94.24	27.71	4.05		6.97	149.88	11.63	1.80		1005.68
8	HARYANA	10.14	16.34		53.79	2.74	2.00		11.81	11.05	14.23	12.00	0.79	3.11			15.65	5.22	79.99	3.38	26.45	268.69
9	HIMACHAL PRADESH	14.25	3.72	1.00	8.59		10.28			1.56			0.10	3.00			0.76		3.35	10.50	8.06	65.17
10	JAMMU AND KASHMIR	1.81	11.44	1.27		0.63		0.43		4.24		0.96			1.27		0.19		10.71	2.37	12.00	47.32
11	JHARKHAND	252.84	12.00		12.17	89.51	15.68		16.56	55.34		140.13	5.42						49.31	4.00	95.85	748.81
12	KARNATAKA	18.67	114.03	13.50	101.21	81.59	15.00		3.50	24.85	5.00	85.00		43.00	5.00	16.00	24.40	25.00		21.00		596.75
13	KERALA	61.96	55.16		44.33	2.71	32.42			0.81		0.81	0.25	0.25	1.74		5.03	5.89	9.73	1.44	10.58	232.30
14	MADHYA PRADESH	50.01	100.60		108.16	18.39	12.34	134.00		113.83	25.18	65.74	25.89		1.51		14.35		85.00	5.69		760.69
15	MAHARASHTRA	137.86	173.06		30.16	10.61			252.61	15.00			82.72			1.16		370.00	25.06			1098.24
16	MANIPUR		8.34	1.15	5.57		7.81	0.70		0.60		2.30	12.53	1.60				1.00	0.75			42.35
17	MEGHALAYA		7.94		7.22													4.93	12.14			32.23
18	MIZORAM	29.47	15.77	12.55	14.40		13.91		0.30			3.11	5.77	0.70				55.37	3.47		1.30	156.12
19	NAGALAND	10.50	9.50	2.00	12.40	3.00	12.84	1.50	2.00		2.00	3.30	1.50	2.50	5.21			11.00	6.35	3.00		88.60
20	ORISSA	275.89	61.60		103.49	1.00	13.60	4.00	5.14	2.21	6.10	58.73	75.34				10.36		10.00		6.50	632.96
21	PUNJAB	10.00	1228.11		47.33		7.23		26.57	18.58	11.56				5.50		15.60	60.00			39.46	1470.94
22	RAJASTHAN	4.41	3.88		105.60		16.95	20.60	2.00	15.95		50.75		101.22			37.19		2.00	0.70	165.00	526.25
23	SIKKIM	1.52	8.36					0.91				1.28						6.50	1.20	1.00	20.77	
24	TAMILNADU	160.24	87.25		64.16	9.19	40.98	12.25		28.29	1.90	112.20	24.75	32.44	8.74	3.34	3.72	9.20	6.60	6.60	27.63	632.88
25	TRIPURA	43.48	4.90		6.13		8.71					0.63	2.02									65.87
26	UTTAR PRADESH	96.74	37.99		26.77	10.34	4.07	176.00	7.65	164.32	2.30	106.62	2.17	2.32		0.86	1.06	52.85	13.11	28.18	34.77	768.12
27	UTTARAKHAND	6.00		82.04	8.91		3.58			0.06	0.55		0.90	10.00			2.04		9.44		15.08	138.60
28	WEST BENGAL		22.12	6.35	32.01	2.45	9.28	6.68		19.96				167.57	4.31		0.15	4.63	6.11			281.62
29	TOTAL	1939.14	2678.64	130.21	1111.74	314.68	353.23	445.41	343.48	571.63	70.92	1299.15	522.17	492.07	52.38	21.36	184.31	771.92	523.68	145.55	543.45	12515.12

Total Cost: Rs 12515.12

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/HORTY/ANIMAL HUS-BANDRY etc); NRM - NATURAL RESOURCE MANAGEMENT; IRRI - MICRO/MINOR IRRIGATION; ORPM - ORGANIC FARMING / BIO FERTILISER; DDEV - DAIRY DEVELOPMENT

## Sector wise Approved Projects Cost 2013-14

(Rs. in crore)

SNo	STATE NAME	CROP	HORT	SERI	ANHB	OTHR	FISH	COOP	IPMT	SEED	FINM	AMEC	EXTN	MRKT	NONF	ITEC	AGRE	NRM	IRRI	ORFM	DDEV	TOTAL
1	ANDHRA PRADESH	3.50	86.66	4.42	50.47	34.43	6.56	28.00		48.34		94.50		16.53			14.96	29.91	1.02	16.00	13.22	448.52
2	ARUNACHAL PRADESH	9.99	5.42	0.99	10.29	0.59	7.32			1.00		1.00	1.00						0.75			38.35
3	ASSAM	108.79	39.72	4.95	29.70	24.50	14.85			28.27		20.41	100.22	14.00					6.50	11.88	4.46	408.25
4	BIHAR	328.35	12.00			23.43	15.40	49.46				44.56		28.55								501.75
5	CHATTISHGARH	193.82	69.66		8.21		28.32	14.20		10.85		12.75					0.25		2.00	1.26	4.96	346.28
6	GOA	6.97			7.71		2.50						1.56	21.78		1.83						42.35
7	GUJARAT	20.40	0.26		27.70	1.20		0.18			3.00	103.64		31.66	13.13	1.25		18.80	90.45	39.09	10.50	340.86
8	HARYANA	20.40	20.57		63.70	3.72		2.80	2.00	24.08	5.83	13.93	0.42	109.01			11.00	13.17	89.07	2.00	23.15	404.85
9	HIMACHAL PRADESH	4.16	107.86	1.00	7.56		7.27						4.16	4.00			6.70	6.70	5.76	7.50		162.67
10	JAMMU AND KASHMIR	2.45	104.15	0.65		0.00		0.20		2.34	0.60	1.45		1.22	3.11				5.41	1.64		123.22
11	JHARKHAND	11461.49								10.31			60.81							3.60		11536.21
12	KARNATAKA	58.64	123.58	14.00	51.59	62.20	10.75	1.50	1.50	116.40		72.00		40.00	31.00		35.25	92.50		14.40		723.51
13	KERALA	36.83	63.12		72.32		12.78					51.45		0.52			6.98	17.48				273.73
14	MADHYA PRADESH	109.38	1052.96		99.67	18.50	10.71		1.77	77.91		63.08	26.29		8.57		1.57		4.50	3.00	29.47	1507.38
15	MAHARASHTRA	98.10	135.46	8.67	89.80	2.75			1.83	16.38	2.50	30.00	56.85	15.64				52.58	214.00	4.88	55.76	785.20
16	MANIPUR		3.00	1.00	4.05		5.40	2.60		3.07		1.41	3.34					7.25		0.29	1.60	33.01
17	MEGHALAYA		8.64	2.78	6.55	3.44	11.50	0.94											3.10			36.95
18	MIZORAM	41.59	10.58	3.00	12.06		10.31		0.33			22.35	2.41	2.48				11.37	6.50	0.05	1.33	124.36
19	NAGALAND	5.20	6.07	1.50	6.17	1.18	6.40	1.50	0.80	1.00	0.80	3.20		1.60	0.59			13.30	2.00	0.60		51.91
20	ORISSA	258.92	93.26		40.36	55.88	59.96	92.65	2.88	3.79	0.31	79.08	52.80	19.40				29.81	56.13		67.23	912.46
21	PUNJAB	59.90	348.94	0.72	80.63		1.08										31.42	51.00			29.80	603.49
22	RAJASTHAN		41.82		64.29		1.25	3.00		25.06	4.42	4.50	0.40	19.95			4.00	32.52				159.39
23	TAMILNADU	85.51			19.28		6.96	1.40			6.00	162.10	44.00	19.90		13.02	3.60				25.54	429.13
24	TRIPURA	24.87	9.06		9.67		12.20					2.25						4.54	0.63		2.52	65.74
25	UTTAR PRADESH	348.89	30.44	1.30	47.48	26.11	12.12	25.00	2.03	90.41	14.59	47.40	1.00	17.00		0.64	3.61	40.67	151.01	95.03	34.98	989.71
26	UTTARAKHAND	12.96	7.56		11.66	4.53				7.47	0.35	3.20	1.10	19.10				76.84		19.42	16.80	180.99
27	WEST BENGAL	5.67	31.35	10.72	48.85	14.92	17.67	16.50	0.21	13.90	4.33	60.00		80.11				20.00	5.00		5.74	334.97
28	TOTAL	13286.38	2412.14	55.70	869.77	277.38	261.31	235.43	16.35	480.28	42.73	894.26	356.36	462.45	56.40	16.74	119.34	518.44	643.83	220.64	339.31	21565.24

Total Cost : Rs. 21565.24

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 (AGR/HORT)/ANIMAL HUSBANDRY etc); NRM - NATURAL RESOURCE MANAGEMENT; IRRI - MICRO/MINOR IRRIGATION; ORFM - ORGANIC FARMING / BIO FERTILISER; DDEV - DAIRY DEVELOPMENT

## Sector wise Approved Projects Cost 2014-15

(Rs. in crore)

Sno	STATE NAME	CROP	HORT	SERI	ANHB	OTHR	FISH	COOP	IPMT	SEED	FINM	AMEC	EXTN	MRKT	NONF	ITFC	AGRE	NRM	IRRI	ORFM	DDEV	TOTAL
1	ANDHRA PRADESH		44.15	6.44	80.12	2.22	14.70		7.63	29.50	17.45	28.09	2.09	16.96			12.63	3.62		10.97	20.84	297.41
2	ARUNACHAL PRADESH	9695.75	9.14	2.45	12.50	6.28	8.89	2.02				4.40		3.00								9744.43
3	ASSAM	128.36	64.68	3.28	6.05	9.46	5.07			20.65		62.50	4.15	17.00	5.35		3.20		65.60	11.00	7.74	414.09
4	BIHAR	610.19		1.44	23.37	9.95		77.36		2.88	3.07	31.75		15.08					30.20			805.29
5	CHATTISHGARH	179.82	46.00		15.16		28.02	6.07		32.58	18.70						15.36		17.00		8.35	367.06
6	GOA						9.77				0.41		0.45			10.88		15.90				37.41
7	GUJARAT	8.35	172.19		34.40		10.24		2.14	58.20		281.04					0.70	450.00	15.00	0.20	15.89	1048.35
8	HARYANA	125.27	62.34		47.54		6.77	0.34	2.25	29.98		22.75		16.30			21.48	13.51	99.22		14.86	462.61
9	HIMACHAL PRADESH	3.82	18.50	1.00	23.03		1.89						5.44	1.40			1.19	6.70	12.00	8.00	2.40	85.37
10	JAMMU AND KASHMIR	1.74	10.30	0.80	14.72	100.94	0.60	0.40		2.66		3.58	1.01	0.75	2.56		0.71	1.75	4.98	3.02		150.52
11	JHARKHAND	209.59						14.31	7.69				1.85			0.77						242.06
12	KARNATAKA	11.46	128.13	18.05	131.35	42.50	10.89		5.10	49.00	1.50	72.68	38.94	178.74	25.00		39.15	41.53	51.68	12.45	2.00	860.15
13	KERALA	65.22	74.55		57.72		49.01			0.78		4.00		14.60	46.44		18.08	21.98	4.33	1.40	8.74	366.85
14	MADHYA PRADESH	23.78	23.30	5.04	38.47	49.89	7.32		5.50	105.38		100.08	46.60				3.74		93.29			502.39
15	MAHARASHTRA	105.00	239.14	6.02	88.65	1.44	4.43			13.69	13.95		57.19	34.49			3.77	91.10	600.00	3.10	37.81	1299.78
16	MANIPUR		4.31	3.12	5.83		5.33	1.30		3.42		0.94	2.18		1.71		0.25	5.09		3.67	1.00	38.15
17	MEGHALAYA		4.88	9.90	5.83		21.34		0.69			0.30	0.42						17.28			60.64
18	MIZORAM	9.68	11.65	10.42	17.89	2.75	13.98		2.55	0.11		9.13	6.03	0.66			1.33	17.79	6.80	0.21	2.02	113.00
19	NAGALAND	10.00	10.66	4.00	9.27	4.34	9.50	4.00	2.50	5.50	3.49	11.00	2.60	3.00	1.96			20.84		1.00	1.43	105.09
20	ORISSA	223.21	87.80	25.41	1.06				2.06	11.43	0.85	24.95				3.75	12.85		24.45			417.82
21	PUNJAB	289.76	19.62		177.28	5.00	35.34		0.50			43.72			9.03		41.20		59.36	2.00	81.53	764.34
22	RAJASTHAN	2.32	73.85		159.20	7.52	4.75	38.50	0.15	183.51	16.80	0.87	126.13	13.12	1.99		5.15	47.39	184.39	4.77	3.03	873.44
23	SIKKIM		3.50					1.19		1.20												5.89
24	TAMILNADU	74.00	523.77		7.30	1.72	7.02	5.25		0.28	16.66	57.68	5.81	24.07			6.49	11.75	3.20		32.62	777.62
25	TELANGANA		36.06	1.12	28.79	2.85	3.74	5.66	0.20	36.92	1.00	53.03		2.47	1.03		15.83		1.00	5.00	13.11	207.81
26	TRIPURA	25.38	16.97	1.00	11.00	7.10	10.50			7.07		4.77	7.49		0.90			1.60	1.26	1.00		88.97
27	UTTAR PRADESH	263.99	0.11	10.57	4.33	7.16	0.27	100.00				55.95				3.16		0.12	37.37	0.42	28.17	533.27
28	UTTARAKHAND	4.79	5.43		14.60	26.22			0.25	29.22	3.75	29.22	3.75	16.63		76.15	7.88	111.53		42.34		338.79
29	WEST BENGAL	106.06	36.08	9.91	118.75	51.43	98.87	25.45	6.96	32.75		59.25	32.75	148.49	2.49		3.11	26.43	88.13		30.24	877.15
30	TOTAL	12177.54	1727.11	119.97	1134.21	338.77	368.24	281.85	46.17	627.49	93.88	961.68	344.88	521.34	98.46	94.71	214.10	888.63	1416.54	118.40	311.78	21885.75

Total Cost: Rs. 21885.75

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/HORTI/ANIMAL HUSBANDRY etc); NRM - NATURAL RESOURCE MANAGEMENT; IRRI - MICRO/MINOR IRRIGATION; ORFM - ORGANIC FARMING / BIO FERTILISER; DDEV - DAIRY DEVELOPMENT



## Sector wise Approved Projects Cost (Ongoing and Completed projects) 2015-16

(Rs. in Crore)

Sr No	State	Status of Project	CROP	HORT	SERI	ANHB	OTHR	FISH	COOP	IPMT	SEED	FINM	AMEC	EXTN	MRKT	NONF	ITEC	AGRE	NRM	IRRI	ORFM	DDEV	Total		
1	ANDHRA PRADESH	Completed				6.02	0.24															1.85	8.11		
		Ongoing	14.97	65.05	13.05	10.36	14.39	28.09		5.19	19.61	11.62	34.23			13.17	0.63		16.75	0.84		42.23	16.10	306.29	
		Total	14.97	65.05	13.05	16.38	14.63	28.09		5.19	19.61	11.62	34.23			13.17	0.63		16.75	0.84		42.23	17.95	314.40	
2	ARUNACHAL PRADESH	Ongoing		7.92		1.40																	9.32		
		Total		7.92		1.40																		9.32	
		Ongoing	105.27				10.55				180.44		27.37										5.00	328.62	
3	ASSAM	Total	105.27			10.55				180.44		27.37											5.00	328.62	
		Completed	124.37				4.27				6.00													134.65	
		Ongoing																					23.74	23.74	
4	BIHAR	Total	124.37				4.27			6.00													23.74	23.74	
		Completed																						158.39	
		Ongoing																						11.77	
5	CHATTISHGARH	Completed		11.77																				11.77	
		Ongoing	162.65	12.88							13.46	3.30	9.20											9.63	216.48
		Total	162.65	24.65							13.46	3.30	9.20											9.63	228.25
6	GOA	Ongoing								3.43														3.43	
		Total									3.43														3.43
		Ongoing																							208.0
7	GUJARAT	Ongoing			10.56			1.09	5.92	2.20	18.55			99.38					95.60				20.80	254.10	
		Total			10.56				1.09	5.92	2.20	18.55			99.38				95.60				20.80	254.10	
		Ongoing	43.57	31.99	60.81	84.87	8.95					13.46	3.30	9.20	36.85	7.08			68.41	5.00	84.00		3.60	435.12	
8	HARYANA	Total	43.57	31.99	60.81	84.87	8.95				13.46	3.30	9.20	36.85	7.08			68.41	5.00	84.00		3.60	435.12		
		Completed			14.21		0.63							1.75								7.60		24.19	
		Ongoing	3.63	9.42	3.02	1.06	0.63								1.30				1.00		8.75			28.81	
9	HIMACHAL PRADESH	Total	3.63	9.42	17.23	1.06	1.26						1.75	1.30				1.00		8.75				28.81	
		Ongoing	40.64	0.43						38.25	1.27	20.38		10.62	5.13			0.50							53.00
		Total	40.64	0.43						38.25	1.27	20.38		10.62	5.13			0.50							123.22
10	JHARKHAND	Completed																						123.22	
		Ongoing	16.20	51.52	13.05	94.88	19.00	5.22				0.56		146.05	2.55	128.44			2.86		0.91	0.89		482.13	
		Total	16.20	51.52	13.05	94.88	19.00	5.22				0.56		146.05	2.55	128.44			3.67		0.91	0.89		482.94	
11	KARNATAKA	Completed	1.50	2.63		16.48		16.50			0.94								0.50				8.24	46.40	
		Ongoing	88.26	12.93		13.60	2.00	26.50			0.94								5.25	15.69	15.58		13.76	194.51	
		Total	89.76	15.55		30.08	2.00	43.00			0.94								5.75	15.69	15.58		22.00	240.91	
12	KERALA	Ongoing	8.39	64.87	5.50	55.13	8.36	7.66		107.26	30.00	138.24		75.22	31.28						15.51	142.77	11.40	714.53	
		Total	8.39	64.87	5.50	55.13	8.36	7.66	7.66		107.26	30.00	138.24		75.22	31.28					15.51	142.77	11.40	714.53	
		Ongoing	55.29	233.24	8.78	195.11	0.53				22.18	7.60			30.88	15.47			4.11	127.58	175.00	1.11	21.79	898.68	
13	MADHYA PRADESH	Total	55.29	233.24	8.78	195.11	0.53			22.18	7.60			30.88	15.47			4.11	127.58	175.00	1.11	21.79	898.68		
		Ongoing																							
		Total	55.29	233.24	8.78	195.11	0.53				22.18	7.60			30.88	15.47			4.11	127.58	175.00	1.11	21.79	898.68	
14	MAHARASHTRA	Ongoing																							
		Total																							
		Ongoing																							

Sr No	State	Status of Project	CROP	HORT	SERI	ANHB	OTHR	FISH	COOP	IPMT	SEED	FINM	AMEC	EXTN	MRKT	NONF	ITEC	AGRE	NRM	IRRI	OREM	DDEV	Total
15	MEGHALAYA	Completed		154																			154
		Ongoing		075																			487
		Total		229																			642
16	MIZORAM	Ongoing	0.40	150	2.08	2.72	0.79	2.42		0.63	0.31		0.37	0.42	0.95			0.14	6.13	0.75			19.60
		Total	0.40	150	2.08	2.72	0.79	2.42		0.63	0.31		0.37	0.42	0.95			0.14	6.13	0.75			19.60
17	NAGALAND	Ongoing	5.50	4.25	2.00	4.25	19.00	4.00		1.10	1.00	1.00	1.00		2.50	4.90			1.00		1.25		52.75
		Total	5.50	4.25	2.00	4.25	19.00	4.00		1.10	1.00	1.00	1.00		2.50	4.90			1.00		1.25		52.75
18	ORISSA	Completed	194.05	4.16	31.39	31.39	7.02			2.05			1.81	1.81			7.32					11.24	260.85
		Ongoing	30.53	58.80	92.44	92.44	46.13	1.23			56.62		1.33	14.20	0.49		1.33	40.01			10.13	11.05	362.96
		Total	224.58	62.96	123.83	123.83	53.15	1.23		2.05	56.62		1.81	16.01	0.49		8.65	40.01			10.13	22.29	623.81
19	PUNJAB	Ongoing														5.27			19.24	53.00			77.51
		Total														5.27			19.24	53.00			77.51
20	RAJASTHAN	Ongoing				56.18	66.60				5.10			9.49								0.12	246.83
		Total				56.18	66.60				5.10			9.49								0.12	246.83
21	TAMILNADU	Completed				6.34		2.10		0.60				9.00	9.00							8.10	25.54
		Ongoing	135.49	18.81	27.36	27.36	13.11				15.00	7.80	60.36	63.59	4.31			28.69	4.45			17.05	396.02
		Total	135.49	18.81	33.70	33.70	15.21				15.00	7.80	60.36	72.59	4.31			28.69	4.45			25.15	421.56
22	TELANGANA	Completed				15.06																9.73	34.39
		Ongoing		36.00	3.00	32.19		3.67		9.00	20.00	2.49	49.01	2.80	0.99			12.03			1.70		172.87
		Total		36.00	3.00	47.26		3.67		9.60	20.00	2.49	49.01	2.80	0.99			12.03			1.70	9.73	207.26
23	TRIPURA	Ongoing	38.02			2.23	1.41	3.79									7.20						52.65
		Total	38.02			2.23	1.41	3.79									7.20						52.65
24	UTTAR PRADESH	Completed				2.01	0.30																2.31
		Ongoing	205.29	27.57	23.30	79.70	21.99	7.68			32.53	27.88	118.82	1.02	11.58		3.16	0.87	2.89	2.89	0.72	24.46	648.74
		Total	205.29	27.57	23.30	81.71	22.29	7.68			32.53	27.88	118.82	1.02	11.58		3.16	0.87	2.89	2.89	0.72	24.46	651.06
25	UTTARAKHAND	Ongoing											2.31										2.31
		Total											2.31										2.31
26	WEST BENGAL	Completed						27.50															27.50
		Ongoing	9.20	0.24		2.34	4.26	24.76	23.25	2.43	54.21		40.00	5.97						6.43	14.15		187.23
		Total	9.20	0.24		2.34	4.26	52.25	23.25	2.43	54.21		40.00	5.97						6.43	14.15		214.73
		Gr Total	1283.21	658.25	70.75	835.81	259.62	237.44	68.65	24.47	577.59	91.68	643.31	361.57	217.74	28.52	19.01	219.39	334.13	520.95	73.91	295.38	6821.38

Total Cost :- 6821.38

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/HORTI/ANIMAL HUSBANDRY etc); NRM - NATURAL RESOURCE MANAGEMENT; IRRI - MICRO/MINOR IRRIGATION; OREFM - ORGANIC FARMING / BIO FERTILISER; DDEV - DAIRY DEVELOPMENT

## Sector wise Approved Projects Cost (Ongoing and Completed projects) 2016-17

(Rs. in Crore)

Sr No	State	Status of Project	CROP	HORT	SERI	ANHB	OTHR	FISH	COOP	IPMT	SEED	FINM	AMEC	EXTN	MRKT	NONF	ITEC	AGRE	NRM	IRRI	ORFM	DDEV	Total			
1	ANDHRA PRADESH	Completed		5.25																			5.25			
		Ongoing	31.66	56.42	19.66	89.32	2.63	37.15			5.06	8.55	7.19	50.35		5.10			13.95				46.11	25.41	398.57	
		Total	31.66	61.67	19.66	89.32	2.63	37.15			5.06	8.55	7.19	50.35		5.10			13.95				46.11	25.41	403.82	
2	ARUNACHAL PRADESH	Completed	3.88				2.58						1.85											9.03		
		Ongoing	4.84												2.75						0.75			8.34		
		Total	8.72				2.58							1.85	2.75						0.75			17.37		
3	ASSAM	Ongoing	159.10	55.31	25.29	101.20	33.01				64.61		26.25	6.53	8.30	22.68				7.25	4.03		6.99	520.54		
		Total	159.10	55.31	25.29	101.20	33.01				64.61		26.25	6.53	8.30	22.68				7.25	4.03		6.99	520.54		
		Completed		30.84								9.40			0.50									40.74		
4	CHATTISH-GARH	Ongoing	165.50	1.61							5.76										31.00			204.64		
		Total	165.50	32.45							15.16				0.50						31.00			245.38		
		Ongoing					2.54	8.52																11.06		
5	GOA	Total				2.54	8.52																	11.06		
		Ongoing				2.54	8.52																		11.06	
		Total				2.54	8.52																		11.06	
6	GUJARAT	Ongoing	17.38	19.09	10.46	10.35				21.65	37.85									171.16				11.00	298.94	
		Total	17.38	19.09	10.46	10.35					21.65	37.85								171.16				11.00	298.94	
		Ongoing	82.42	10.81	32.87	62.48	5.00					34.16		20.86					8.07					3.54	260.21	
7	HARYANA	Total	82.42	10.81	32.87	62.48	5.00				34.16		20.86					8.07						3.54	260.21	
		Completed	6.00											3.00											9.75	
		Ongoing	0.60																		10.39				15.31	
8	HIMACHAL PRADESH	Total	6.60																		10.39			25.06		
		Completed																							47.94	
		Ongoing	3.61	108.28	20.00	116.26	38.50	5.00			1.08	4.95		65.00	18.70	131.84	1.53		8.05		102.81	1.00		626.61		
9	KARNATAKA	Total	3.61	108.28	20.00	163.55	38.50	5.00		1.08	4.95		65.00	18.70	131.84	1.53		8.05		102.81	1.00			674.55		
		Completed		19.48		3.23																			22.71	
		Ongoing	46.50			27.24			28.88		1.60		3.00	3.00		1.97			0.65		0.80			10.37	120.35	
10	KERALA	Total	46.50	19.48		30.48		28.88		1.60		3.00	3.00		1.97				0.65		0.80			10.37	120.35	
		Ongoing	46.50	19.48		30.48		28.88		1.60		3.00	3.00		1.97				0.65		0.80				10.37	120.35
		Completed		67.94		61.77	60.37	7.20		1.95	192.50	8.53	110.15	110.15	78.87				14.77	0.70	44.10	12.00			660.85	
11	MADHYA PRADESH	Total		67.94		61.77	60.37	7.20		1.95	192.50	8.53	110.15	110.15	78.87				14.77	0.70	44.10	12.00			660.85	
		Ongoing	10.00	113.14	27.84	46.94																			446.60	
		Total	10.00	113.14	27.84	46.94																			446.60	
12	MAHARASH-TRA	Ongoing	1.50	1.26									1.12								0.90			4.77		
		Total	1.50	1.26									1.12								0.90			4.77		
		Ongoing	1.50	1.26									1.12								0.90			4.77		
13	MEGHALAYA	Total	1.50	1.26									1.12								0.90			4.77		
		Ongoing	1.50	1.26									1.12								0.90			4.77		
		Total	1.50	1.26									1.12								0.90			4.77		
14	MIZORAM	Ongoing												0.04										0.04		
		Total													0.04									0.04		
		Ongoing													0.04									0.04		

Sr No	State	Status of Project	CROP	HORT	SERI	ANHB	OTHR	FISH	COOP	IPMT	SEED	FINM	AMEC	EXTN	MRKT	NONF	ITEC	AGRE	NRM	IRRI	ORFM	DDEV	Total
15	NAGALAND	Ongoing	3.75	4.16	2.00	4.25	4.00	4.00	1.85	1.50	2.05	1.05	6.00	1.53	2.50	5.24			11.89		0.50		52.27
		Total	3.75	4.16	2.00	4.25	4.00	4.00	1.85	1.50	2.05	1.05	6.00	1.53	2.50	5.24			11.89		0.50		52.27
16	ODISHA	Completed		0.24									23.80				1.10						25.14
		Ongoing	214.48	27.64	68.11	68.11	28.17	28.17	1.29	2.05	43.26	1.02	25.79	4.50			119.65	9.89	79.46			35.51	660.81
		Total	214.48	27.88	68.11	68.11	28.17	28.17	1.29	2.05	43.26	1.02	49.59	4.50			120.75	9.89	79.46			35.51	685.96
17	RAJASTHAN	Ongoing	3.00	73.84	58.38	136.05			25.00		22.32	0.76		5.72		2.08		221.37				15.31	563.84
		Total	3.00	73.84	58.38	136.05			25.00		22.32	0.76		5.72		2.08		221.37				15.31	563.84
18	SIKKIM	Ongoing			2.00																		2.00
		Total			2.00																		2.00
19	TAMILNADU	Completed	91.98	15.74	5.84		1.65	1.65	1.96			31.06	2.77	5.18			0.30		4.57			4.83	165.88
		Ongoing	196.64	65.04	52.32		44.32	44.32	1.96		1.55	1.95	57.10		16.78			16.67	6.67	21.00	2.77	63.33	548.09
		Total	288.63	80.78	58.15		45.98	45.98	3.92		1.55	1.95	88.16	2.77	21.96		0.30	16.67	11.24	21.00	2.77	68.15	713.97
20	TELANGANA	Ongoing	4.19	34.65	24.75	5.90	2.62	2.62		2.50	30.85	8.10	80.00		450.00			20.54			0.67	9.90	674.68
		Total	4.19	34.65	24.75	5.90	2.62	2.62		2.50	30.85	8.10	80.00		450.00			20.54			0.67	9.90	674.68
21	TRIPURA	Ongoing	30.30	7.14	8.30	0.98	5.44	5.44							4.04		7.20						63.40
		Total	30.30	7.14	8.30	0.98	5.44	5.44							4.04		7.20						63.40
22	UTTAR PRADESH	Completed	15.91			4.52						0.72											21.14
		Ongoing	277.00	51.21	81.34	29.19	21.18	21.18	0.28		47.30	103.36	62.48			0.10	0.20	21.10	45.21	0.99	7.82		748.76
		Total	292.91	51.21	81.34	33.70	21.18	21.18	0.28		47.30	104.07	62.48			0.10	0.20	21.10	45.21	0.99	7.82		769.90
23	UTTARA-KHAND	Completed	2.50																				2.50
		Ongoing			2.96	4.28						1.88										1.05	10.16
		Total	2.50		2.96	4.28						1.88										1.05	12.66
24	WEST BENGAL	Completed	0.13																				0.13
		Ongoing	171.95	1.00	3.12	6.16	63.22	63.22	25.30	5.81	4.76		40.40	8.41	7.80	20.58							367.73
		Total	172.08	1.00	3.12	6.16	63.22	63.22	25.30	5.81	4.76		40.40	8.41	7.80	20.58							367.85
		Sub Total	1543.33	770.34	70.75	774.59	477.29	288.33	57.63	43.20	509.87	47.53	657.79	196.05	636.25	52.20	128.45	335.06	324.43	384.45	76.39	244.87	7618.80

Total Cost :- 7618.80

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## National Flagship Projects

State Name	National Flagship Theme
ANDHRA PRADESH	Seed Management
	Intensified mechanisation
	Integrated vegetable programme in A.P.
	Induction of milch animals
ARUNACHAL PRADESH	Area expansion by land terracing for paddy.
	Development of way side market sheds for fruits and vegetables
	Development of commercial fish farms through private fish farmers
ASSAM	Shallow Tube Wells with electrically operated pump sets - increase in irrigated area and crop production in areas where SWT have been installed.
	Establishment of Organic agriculture produce market
	Agri mechanisation through increased use of power tillers
BIHAR	Farm mechanisation especially Power tillers
	Seed production and distribution programme
	Dairy activities undertaken under RKVY
CHATTISHGARH	Establishment of model villages 'Adarsh Gram'
	Performance linked incentives to AI workers
GOA	Establishing modern rice mill processing facilities
	Incentivizing paddy cultivation through SHGs
GUJARAT	Water & Soil Conservation Project including reclamation of degraded Bhal areas and checking of salinity ingress in coastal areas and farm ponds.
	Export oriented clustering and infrastructure in PPP mode for banana
	Large animal surgery at Anand.
	Soil testing lab. operated in PPP mode.
HARYANA	Providing assistance on laying underground pipeline system for water conveyance so that water losses can be avoided and additional land brought under cultivation from the irrigation channels
	100% treatment of certified wheat seed
	Cattle health management to optimise fertility
HIMACHAL PRADESH	Construction of low cost green houses/ poly houses
	Organic cultivation
	Micro/minor irrigation and water harvesting
JAMMU AND KASHMIR	Protected cultivation of flowers & vegetables
	Creation of irrigation infrastructure for Horticulture
	Organic farming
JHARKHAND	Micro Lift Irrigation
	Vermi-composting
KARNATAKA	Karnataka Seed Mission project
	Automated weather monitoring system
	Rainfed agriculture – Bhoo-chetana
	E-tendering project

State Name	National Flagship Theme
KERALA	Paddy cultivation in fallow lands by leasing land to Padasekaram Samities
	Farm mechanisation for paddy harvesting, includes custom hiring of farm machinery by KAICO and giving agricultural machinery to district Panchayats and Padasekarams for collective use.
	Development of fishery seed farms, seed production and group mobilisation
MADHYA PRADESH	Micro irrigation schemes - Percolation tanks, minor irrigation tanks
	Seed replacement
	Development and promotion of hybrid rice varieties
	Kisan Call Centers
MAHARASHTRA	Construction of farm ponds
	Creation of low cost onion storage structures
	Surveillance and Monitoring of Pest and Disease on soybean and cotton
	AI delivery system
MEGHALAYA	Water conservation structures mini irrigation check dams
	Horticulture hubs
	Fisheries
ODISHA	Development of 100 new watersheds
	Acidic soil treatment
	Renovation of horticulture farms
PUNJAB	Animal insurance
	Conservation of irrigation water
RAJASTHAN	PPP for innovation in olive, date palm and jojoba
	Operation golden rays PPP for livelihood of 7.5 lakh families through hybrid maize
	Diggi Programme
SIKKIM	Hi-tech green houses
	Integrated farming system for sustainable agriculture
TAMILNADU	Precision Farming sugarcane, banana
	Automated weather stations in 224 Blocks
	Promoting SRI through conduct of demonstrations in 40,000 ha
	Use of Paddy transplanters in outsourced mode
TRIPURA	SRI
	Pineapple cultivation
	Development of demonstration unit on piggery
UTTAR PRADESH	Production of high value vegetable crops through nursery production in low tunnel Polyhouses
	Land Reclamation of Katri Area
	Adoption & certification of Organic Agriculture Management System
	Saghan Mini Dairy Yojna
UTTARAKHAND	Strengthening organic vision
WEST BENGAL	Prani Bandhu Scheme
	Hybrid paddy seed production involving NGOs
	Implement hub at block level

## Statement showing Allocation and Expenditure of the Sates Under RKVY during XIIth Plan as on 31.12.2017

(Rs. In Crore)

Sl. No.	Name of the State	2012-13			2013-14			2014-15			2015-16			2016-17							
		Allocation	Release	UC Recvd	UC Pending	Allocation	Release	UC Recvd	UC Pending	Allocation	Release	UC Recvd	UC Pending	UC Recvd	UC Pending						
1	Andhra Pradesh	601.98	577.79	577.79	0.00	483.23	456.87	456.87	0.00	267.07	263.54	263.54	0.00	197.79	192.66	192.66	0.00	228.35	222.59	222.59	0.00
2	Arunachal Pradesh	40.31	24.94	24.94	0.00	33.04	33.04	33.04	0.00	27.83	13.92	13.92	0.00	31.55	31.55	31.55	0.00	23.82	11.92	9.00	2.92
3	Assam	399.57	399.57	399.57	0.00	440.03	218.87	218.87	0.00	483.53	267.00	267.00	0.71	128.07	94.10	93.49	0.61	279.75	210.45	174.61	35.84
4	Bihar	724.01	700.20	700.20	0.00	527.67	254.26	254.26	0.00	564.55	456.89	456.89	88.84	164.86	111.20	103.20	8.00	258.22	90.61	75.64	14.97
5	Chhatisgarh	581.12	571.22	571.22	0.00	407.63	233.82	233.82	0.00	385.44	341.75	341.75	0.00	150.11	145.07	145.07	0.00	200.30	193.04	175.81	17.23
6	Goa	62.43	35.27	35.27	0.00	21.91	10.43	10.43	0.00	25.63	0.00	0.00	0.00	43.40	21.70	21.70	0.00	20.69	10.35	10.35	0.00
7	Gujarat #	586.87	610.87	610.87	0.00	557.04	476.89	476.89	0.00	593.55	290.03	290.03	0.00	182.09	174.55	174.55	0.00	315.27	155.31	89.39	65.92
8	Haryana	199.49	179.88	179.88	0.26	318.57	159.29	159.29	0.00	372.03	254.68	254.67	0.41	143.10	141.55	124.86	16.69	152.40	126.85	59.32	67.53
9	Himachal Pradesh	73.48	59.27	59.27	0.00	77.40	77.40	77.40	0.00	86.11	86.11	86.11	0.00	28.30	28.30	28.30	0.00	52.76	52.76	51.39	1.37
10	J&K	112.08	103.22	102.01	1.21	148.04	88.52	86.87	1.65	150.50	78.25	73.95	4.30	74.72	37.36	35.55	1.81	88.90	38.49	37.73	0.76
11	Jharkhand	241.55	219.38	216.19	3.19	294.18	147.10	136.95	10.15	306.94	153.15	124.51	28.64	87.68	78.32	61.22	17.10	155.27	72.72	40.74	31.98
12	Karnataka	586.52	549.15	549.15	0.00	794.58	467.29	466.53	0.76	884.17	632.22	632.22	0.00	359.94	346.93	346.93	0.00	247.04	242.31	240.27	2.04
13	Kerala	282.26	253.03	253.03	0.00	270.78	256.24	256.24	0.00	321.40	300.70	300.70	0.00	91.86	90.48	90.48	0.00	157.71	92.76	92.76	0.00
14	Madhya Pradesh	448.13	448.13	448.13	0.00	545.15	276.25	276.25	0.00	547.55	511.78	511.78	0.00	264.57	264.09	263.60	0.49	454.89	293.49	237.40	56.09
15	Maharashtra	1025.81	1050.81	1050.81	0.00	1154.93	959.69	959.69	0.00	1013.49	942.09	942.09	0.00	438.11	438.00	438.00	0.00	396.29	250.91	128.40	122.51
16	Manipur	52.94	47.97	47.97	0.00	40.96	23.66	23.66	0.00	43.00	43.00	43.00	0.00	20.46	20.46	20.46	0.00	29.77	12.83	11.86	0.97
17	Meghalaya	105.34	22.68	22.68	0.00	60.89	37.98	37.95	0.03	68.77	60.64	60.64	0.00	16.52	8.26	8.26	0.00	20.19	10.63	10.63	0.00
18	Mizoram	200.91	184.73	184.73	0.00	132.01	77.41	77.41	0.00	113.92	113.92	113.92	0.00	16.61	19.39	19.39	0.00	23.95	20.58	7.88	12.70
19	Nagaland	85.75	85.75	85.75	0.00	52.59	30.07	30.07	0.00	52.75	52.75	52.75	0.00	25.25	25.25	25.25	0.00	36.94	34.94	34.94	0.00
20	Odisha	503.10	468.28	468.28	0.00	508.42	529.42	529.42	0.00	504.13	482.07	482.07	0.00	299.67	292.36	286.97	5.39	342.59	334.91	263.16	71.75
21	Punjab	146.93	86.83	86.83	0.00	448.24	229.44	229.44	0.00	508.71	413.71	397.53	16.18	215.94	107.97	74.82	33.15	260.50	95.81	0.00	95.81
22	Rajasthan	363.09	348.18	348.18	0.00	735.24	735.24	735.24	0.00	740.55	695.28	695.28	0.00	342.47	325.97	325.97	0.00	262.28	261.98	261.68	0.30
23	Sikkim	29.47	15.21	15.21	0.00	20.20	10.20	10.20	0.00	18.98	9.49	9.49	0.00	24.35	4.07	4.07	0.00	14.71	14.40	7.43	6.97
24	Tamil Nadu	659.68	613.27	613.27	0.00	301.53	269.96	269.96	0.00	298.95	298.95	298.95	0.00	259.94	259.74	259.74	0.00	147.39	204.87	204.38	0.49
25	Telangana	-	-	-	-	-	-	-	-	195.27	179.64	179.64	0.00	142.30	135.91	135.91	0.00	427.85	256.99	171.74	85.25
26	Tripura	56.43	56.43	56.43	0.00	74.28	70.50	70.50	0.00	80.27	80.27	80.27	0.00	21.54	21.54	21.54	0.00	34.41	34.41	34.41	0.00
27	Uttar Pradesh	432.26	294.52	294.52	0.00	746.69	561.09	560.90	0.19	704.93	589.47	584.13	5.34	358.16	177.41	177.41	0.00	321.98	201.89	149.92	51.97
28	Uttarakhand	44.36	8.21	8.21	0.00	88.02	44.03	44.03	0.00	95.39	80.70	80.70	0.00	40.03	36.20	36.20	0.00	46.87	46.57	36.08	10.49
29	West Bengal	464.81	374.58	374.58	0.00	508.14	265.08	265.08	0.00	598.61	582.34	582.19	0.15	285.26	284.56	284.56	0.00	352.47	280.78	204.71	76.07
	Total States	9110.68	8389.37	8384.71	4.66	9791.39	7000.04	6987.26	12.77	9864.02	8363.89	8219.32	144.57	4454.65	3914.95	3831.71	83.24	5355.56	3876.15	3033.87	842.28

Sl. No.	Name of the State	2012-13			2013-14			2014-15			2015-16			2016-17						
		Allocation	Release	UC Recvd	UC Pending	Release	UC Recvd	UC Pending	Allocation	Release	UC Recvd	UC Pending	Allocation	Release	UC Recvd	UC Pending				
30	Delhi							1.50	0.00		0.00	1.50				0.00				
31	Puducherry							1.51	0.76		0.76	1.51				0.00				
32	A&N							4.70	2.35		0.00	4.69	2.35		2.33	0.02				
33	Chandigarh							0.31	0.00		0.00	0.33				0.00				
34	D & N Haveli							5.43	0.00		0.00	5.42				0.00				
35	Daman & Diu							0.94	0.00		0.00	0.94				0.00				
36	Lakshadweep							0.63	0.00		0.00	0.63				0.00				
	CRRI, Cuttack BGREI Cell, Centres of Excellence, Monitoring and other admin. Expenditure	106.58	10.63	10.63	0.00	90.00	52.47	52.47	79.31	79.31	0.00	30.33	24.34	24.34	13.57	13.57				
	Grand Total	9217.00	8400.00	8395.34	4.66	9881.39	7052.51	7039.73	12.77	9954.02	8443.20	144.57	4500.00	3942.40	3856.05	84.00	5391.56	3892.04	3036.20	855.84

Being Done by MHA

(2012-13) :- Rs. 7.00 Crore has been allocated to NCT of Delhi Under Vegetable Cluster; Rs. 2.5 crore has been allocated to Puducherry under NMPS. Rs. 100.00 crore additional allocation and release under the AFDP for the Maharashtra, Haryana, Punjab, Karnataka, Gujarat and Tamil Nadu approved by the EGoM. # The exceeded amount i.e. Rs. 26 lakh would be met from DADF Budget 2012-13 from the relevant schemes under fisheries. (2013-14) :- Rs. 1.00 crore allocation for delhi under the VIUC, Including Allocation of Rs. 1.49 crore for Monitoring and Rs. 3.40 crore for N.E. States, Rs. 1.27 crore for Monitoring under INSIMP, Rs. 3.00 crore for Monitoring under the Nutri Farm, Rs. 1.50 crore for Monitoring under the Crop Diversification and Rs. 2.00 crore for Moitoring under the BGREI, @ COE, Monitoring, Evaluation, etc. (2014-15):- Rs. 6.00 Crore Allocation for Delhi. # Allocaton adjusted additional fund of Rs. 250.00 crore will be asked at a later stage, Release of funds to Govt. of Bihar under Rashtriya Krishi Vikas Yojana (RKVY) during 2014-15 for adjustment of expenditure during 2013-14, Rs. 100.00 crore under the AFDP will be meet from overall saving of the Normal and Sub-Schemes. (2014-15) :- # Rs.14.72 crore is refund by Gujarat to GOI during 2013-14, as per this is unspent balance is NIL. (2015-16) :- Note : Including total allocation for UT's Rs.15.02 and Rs.30.33 crore inculding sub-head 2401 under RKVY, Rs. 10.04 crore for Bee Keeping sub-scheme ) \* Rs. 2.35 crore for A&N fund could not be utilized, fund may be treated as surrendered by the UT



## Statewise Allocation and Release of funds under Normal RKVY and Sub-schemes for 2017-18 as on 31.12.2017

(Rs. in crore)

Sl. No.	Name of the States	Normal RKVY "Allocation Normal RKVY"	BGREI Allocation Release	CDP "Allocation Release"	RPS "Allocation Release"	FMD "Allocation Release"	Peri Urban "Allocation Release"	Swachh Bharat "Allocation Release"	Drought/NRM "Allocation Release"	AFDP "Allocation Release"	Saffron Mission "Allocation Release"	Total Sub-Scheme "Allocation Release"	Grand Total "Allocation Release"	Total "Allocation Release % of Release"	Utilization						
															UC Rord	UC Pending					
1	Andhra Pradesh	206.51	103.26	2.10	0.00				4.00	0.00	1.28	7.38	213.89	103.26	48.28%	77.44	25.82	75.00%			
2	Andhra Pradesh	40.51	10.13			0.41	0.00					1.41	41.92	10.63	25.36%		10.63	0.00%			
3	Assam	202.93	101.46			7.28	0.00	4.00				88.06	290.99	139.60	47.97%	104.68	34.92	74.99%			
4	Bihar	111.62	25.07	0.18	0.09	1.50	0.75					64.07	175.69	57.11	32.51%		57.11	0.00%			
5	Chhattisgarh	89.10	44.54			5.00	2.50					76.98	166.08	83.03	49.99%		83.03	0.00%			
6	Goa	17.77	8.89									0.00	17.77	8.89	50.00%		8.89	0.00%			
7	Gujarat	199.97	99.99					3.95	0.00	3.20	0.00	20.16	550	220.13	105.49	47.92%	105.49	0.00%			
8	Haryana	110.11	33.61					3.95	0.00			12.00	37.39	30.62%			37.39	0.00%			
9	Himachal Pradesh	22.94	11.47			1.48	0.00					1.48	24.42	11.47	46.96%	7.00	4.47	61.03%			
10	Jammu & Kashmir	29.52	14.76			3.05	0.00					84.32	113.84	24.76	21.75%		24.76	0.00%			
11	Jharkhand	84.08				4.10	0.00					44.69	128.77	0.00	0.00%		0.00				
12	Karnataka	238.63	119.32					4.00	0.00	2.24	0.00	26.09	0.75	264.72	120.07	45.36%	75.99	44.08	63.29%		
13	Kerala	128.44	41.50									0.00	128.44	41.50	32.31%		41.50	0.00%			
14	Madhya Pradesh	226.23	113.10			10.50	0.00					10.50	236.73	113.10	47.78%	23.87	89.23	21.11%			
15	Maharashtra	408.32	204.15							4.32	0.00	11.30	0.00	419.62	204.15	48.65%	204.15	0.00%			
16	Manipur	15.88	6.67			0.29	0.00					1.29	0.50	17.17	7.17	41.75%	7.17	0.00%			
17	Meghalaya	19.81	9.91			0.79	0.00					1.29	0.50	21.10	10.41	49.31%	10.41	0.00%			
18	Mizoram	9.40	4.70			0.03	0.00					1.03	0.50	10.43	5.20	49.80%	3.56	1.64	68.53%		
19	Nagaland	55.34	26.65			0.23	0.00					2.23	1.00	57.57	27.65	48.02%	27.65	0.00	100.00%		
20	Odisha	205.19	102.59			6.11	0.00	3.94	0.00			83.85	35.91	289.04	138.50	47.92%	47.29	91.21	34.14%		
21	Punjab	259.86	129.92					3.95	0.00			24.61	0.00	284.47	129.92	45.67%	129.92	0.00%			
22	Rajasthan	232.64	232.65						4.00	0.00	4.64	8.64	0.00	241.28	232.65	96.42%	76.34	156.31	32.81%		
23	Sikkim	5.97	2.99			0.12	0.00					0.12	0.00	6.09	2.99	48.99%		2.99	0.00%		
24	Tamil Nadu	222.09	222.09									2.05	1.02	224.14	223.11	99.54%	122.50	100.61	54.91%		
25	Telangana	127.58	63.80									0.10	0.05	127.68	63.85	50.01%	49.45	14.40	77.44%		
26	Tripura	39.55	19.78			0.83	0.00					0.83	0.00	40.38	19.78	48.99%	14.88	4.90	75.23%		
27	Uttar Pradesh	369.03	184.52							4.32	0.00	70.97	33.00	440.00	217.52	49.44%	10.71	206.81	4.92%		
28	Uttarakhand	84.13	38.37			1.58	0.79					1.58	0.79	85.71	39.16	45.69%		39.16	0.00%		
29	West Bengal	230.67	115.35			8.20	0.00					76.13	33.96	306.80	149.31	48.67%	20.82	128.49	13.94%		
30	Total States	3993.83	2091.22			449.50	203.74	3990	7.90	11.50	30.00	27.76	0.00	36.00	24.75	0.00	81.27	10.00	81.27	1665.47	28.45%
31	Delhi	3.31										0.00	0.00	3.31	0.00			0.00			
32	Puducherry	2.66										0.00	0.00	2.66	0.00			0.00			
33	Total 3601+3602	5.97										0.00	0.00	5.97	0.00			0.00			
34	Andaman & Nicobar	2.30	1.15									0.00	0.00	2.30	1.15			1.15	0.00%		

Sl. No.	Name of the States	Normal RKVY		BGREI	CDP		RPS	FMD		Peri Urban		Swachh Bharat		Drought/NRM		AFDP		Saffron Mission		Total Sub-Scheme		Grand Total		Utilization		
		"Allocation Normal RKVY"	"Release Normal RKVY"		"Allocation"	"Release"		"Allocation"	"Release"	"Allocation"	"Release"	"Allocation"	"Release"	"Allocation"	"Release"	"Allocation"	"Release"	"Allocation"	"Release"	"Allocation"	"Release"	"Allocation"	"Release"	"Allocation"	"Release"	UC Pending
33	Chandigarh	0.15																			0.00	0.15	0.00		0.00	
34	D & N Haveli	2.86																			0.00	2.86	0.00		0.00	
35	Daman & Diu	0.45																			0.00	0.45	0.00		0.00	
36	Lakshadweep	0.30																			0.00	0.30	0.00		0.00	
	Total Us	12.04	1.15																		0.00	12.04	1.15		1.15	0.00%
	National Level/2401(BGREI)	21.50	4.58	0.50										0.25	0.00						0.75	22.25	4.58		4.58	0.00%
	Unallocated (CDP)				0.10	0.00															11.60	0.00	0.00		0.00	
	Grand Total (States+Other)	4027.37	2096.95	450.00	203.74	30.00	11.50	50.00	3.29	277.6	0.00	47.50	0.00	25.00	0.00	20.00	0.00	81.27	10.00	771.53	236.43	4750.00	2333.37	662.18	1671.19	0.28
																						3050		76.50		

## 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	Implementing agencies viz. State Horticulture Missions have been directed to ensure that at least 30% of budget allocation is earmarked for women beneficiaries/farmers. Women beneficiaries such as women farmers, women Self Help Groups, women entrepreneurs are encouraged to obtain the benefits of the schemes under the Mission.
2	Agriculture Extension	Support to States for Extension Reforms	<ul style="list-style-type: none"> <li>• At least 30% scheme beneficiaries should be women farmers/farm women.</li> <li>• 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;</li> <li>• Farm <i>Women's Food and Nutritional Security Groups</i> (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.</li> <li>• Inclusion of one '<i>Gender Coordinator</i>' 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</li> <li>• At least 30% scheme beneficiaries are to be women farmers/farm women;</li> <li>• 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</li> <li>• Preferential involvement of women as 'Farmer Friends' under the extension delivery mechanism below the block level (@1Farmer Friend/2 Villages)</li> <li>• Since inception of the Scheme in 2005-06, total <b>10427917 farm women (24.05%</b> of the total benefited farmers) have participated in farmer oriented activities like Exposure Visits, Training, Demonstrations &amp; Kisan Melas including 611975 women farmers benefited during 2017-18 (up to 30<sup>th</sup> November, 2017). During FY 2017-18, Rs. 19500/- lakhs was allocated and earmarked for women, out of which Rs. 12472.52 lakhs has been utilised under the scheme for women beneficiaries (as on 12.01.2018).</li> </ul>

S.No	Divisions/Subject Matter Area	Scheme/Component	Flow of benefit to women in schemes/programmes
3.		National Gender Resource Centre in Agriculture (NGRCA)	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, 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.
4.		Establishment of Agri-Clinics & Agri-Business Centres (ACABC)	The AC&ABC scheme has been revised during 2010-11 with changes in relevant operational aspects aiming to provided 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 agri-preneurs has been made a mandatory component of the said Scheme. 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. During the current year <b>247</b> candidates were trained and <b>10</b> have established their ventures. Since inception of the scheme, 56542 candidates have been trained and <b>23517</b> agri-ventures have been established in the country till 31.12.2017. Out of these <b>4250</b> and <b>1334</b> are women candidates and entrepreneurs.
5.		Extension Education Institutes	During 2016-17, the Extension Education Institutes (EIs) conducted <b>179</b> training courses with <b>4099</b> field extension functionaries including 948 women extension functionaries whereas during 2017-18 (till 31.12.2017 ), the EIs conducted 132 training courses with <b>3068</b> field extension functionaries including <b>584</b> women extension functionaries working in agriculture & allied departments.
6.		Diploma in Agril. Extension Services for Input Dealers (DAESI)	During 2016-17, <b>110</b> batches of DAESI programme were conducted to provide certification to 4463 Input Dealers including <b>27</b> women candidates, whereas during 2017-18 (till 31.12.2017), 100 programmes have been started to train 4000 Input Dealers including <b>62</b> women candidates.
7.		Model Training Courses	During 2016-17, 59 Model Training Courses in the thrust areas of agriculture & allied sectors were conducted through specialized National Training Institutes with 1208 field extension functionaries including <b>181</b> women extension functionaries working in agriculture & allied departments of States/UTs, whereas during 2017-18 (till 31.12.2017), 51 Model Training Courses have been conducted with 912 field extension functionaries including <b>167</b> women extension functionaries.
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.

S.No	Divisions/Subject Matter Area	Scheme/Component	Flow of benefit to women in schemes/programmes
10.	Mechanization and Technology	Sub Mission on Agricultural Mechanization (SMAM)	<ul style="list-style-type: none"> <li>• 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.</li> <li>• 10% more assistance for women beneficiary to procure Agricultural Machinery, implements and equipments including PHT under component 2 and 3.</li> <li>• 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 &amp; 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.</li> <li>• Gender Friendly Equipment for Women: Under the component 1 of SMAM, Agricultural Mechanization through Training, Testing, and Demonstration, a total <b>1606</b> women were trained during the current Financial Year 2017-18 (till December, 2017).</li> </ul>
11.	Seeds	Sub-Mission for Seed and Planting Material (SMSP)	Financial assistance/ subsidy benefits are <b>equally available/ open to all the farmers including that of women farmers</b> . Implementing States/UTs/ agencies have been requested to allocate sufficient funds and ensure participation of women farmers.
12.	Cooperation	National Cooperative Development Corporation	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. During the year 2016-17 as many as 722 women were imparted education under various classes in 21 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 2016-17, 105 self help groups with membership of 1040 women were formed by the lady mobilizers of the cooperative education field projects. Through various income generating activities, 3252 women were benefitted under this programme. During the year 2016-17, a total of 127000 women were imparted education under various educational activities. Total 15 programmes were organised exclusively for women co-operatives and attended by 621 participants. NCDC encourages women cooperatives to avail assistance under its various schemes. Cumulatively, as on 31.03.2016 NCDC has sanctioned and released financial assistance of Rs. 746.24 crore and Rs. 651.30 crore respectively for the development of cooperative societies exclusively promoted by women. In the 14263 projects/units sanctioned by NCDC in the year 2016-17, it is estimated that 11.01 lakh women are enrolled as members, out of which 879 women members are on the Board of Directors.



S.No	Divisions/Subject Matter Area	Scheme/Component	Flow of benefit to women in schemes/programmes
13.	Policy		<ul style="list-style-type: none"> <li>• The National Policy for Farmers 2007 announced by the Government envisages the following measures aimed at women's empowerment:</li> <li>• Asset reforms under land, water and livestock for an equitable share to women farmers.</li> <li>• Better access to inputs and services, science and technology, implements, credit and support services like creches, child care centres, nutrition, health and training.</li> <li>• Encouragement to women for participating in group activities aimed at achieving economies of scale through farming groups.</li> <li>• Involvement of women in conservation and development of bio-resources.</li> </ul>
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 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.
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 December 2017, a total of 1852 male & <b>460</b> females have participated in the training programme at NIPHM.

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सत्यमेव जयते

**कृषि, सहकारिता एवं किसान कल्याण विभाग**

कृषि एवं किसान कल्याण मंत्रालय

भारत सरकार

कृषि भवन, नई दिल्ली-110 001