



ANNUAL REPORT 2011 - 2012

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DEPARTMENT OF AGRICULTURE & COOPERATION
MINISTRY OF AGRICULTURE
GOVERNMENT OF INDIA



ANNUAL REPORT

2011-2012

Department of Agriculture & Cooperation
Ministry of Agriculture
Government of India

March, 2012



Contents

S.No.	Chapter	Page No.
1.	Overview	1-16
2.	Functions and Organisational Structure	17-22
3.	Economics and Statistics	23-32
4.	Crops	33-38
5.	Seeds	39-46
6.	Integrated Nutrient Management	47-52
7.	Plant Protection	53-58
8.	Agricultural Credit and Crop Insurance	59-70
9.	Agricultural Extension	71-84
10.	Agricultural Marketing	85-94
11.	Agricultural Trade	95-98
12.	Mechanisation and Technology	99-104
13.	Horticulture	105-114
14.	Natural Resource Management	115-122
15.	Rainfed Farming Systems	123-128
16.	Cooperation	129-138
17.	Drought Management	139-142
18.	International Cooperation	143-148
19.	Macro Management of Agriculture	149-152
20.	Information Technology	153-158
21.	Agricultural Census	159-164
22.	Other Special Policy Initiatives	165-168
23.	Rashtriya Krishi Vikas Yojana	169-176
24.	Gender Perspectives in Agriculture	177-187
	Annexures	189-213

Annexures

S. No.	Annexures	Page No.
Annexure 2.1	List of Functional Divisions in the Department of Agriculture and Cooperation	191
Annexure 2.2	Inventory of Field Formations	192
Annexure 2.3	Public Sector Undertakings and Autonomous Bodies of the Department	193
Annexure 3.1	Minimum Support Procurement Prices Recommended by CACP and fixed by the Government	194
Annexure 5.1	Programmes in North Eastern States: Seeds	196
Annexure 9.1	Programmes in North Eastern States: Agricultural Extension	197
Annexure 12.1	Programmes in North Eastern States: Mechanisation and Technology.	198
Annexure 14.1	Programmes in North Eastern States: Natural Resource Management	199
Annexure 15.1	Programmes in North-Eastern States: Rain-fed Farming Systems	200
Annexure 19.1	State-wise Allocation and Release of funds under Revised Macro Management of Agriculture (MMA) Scheme during 2010-11	201
Annexure 23.1	Status of District Agriculture Plans (DAPs) & State Agriculture Plans (SAPs)	202
Annexure 23.2	Sector wise Approved Project Cost	203-206
Annexure 23.3	State-wise List of Flagship Projects	207-208
Annexure 23.4	State-wise status of funds released and Expenditure / UC status	209-210
Annexure 24.1	Women in Agriculture at a glance	211-213

CHAPTER-1

Overview







1

Overview

1.1 Agriculture is the principal source of livelihood for more than 58% of the population of this country. Agriculture provides the bulk of wage goods required by non-agriculture sectors and most of the raw materials for the industries sector. The combined efforts of Central Government, State Governments and the farming community have succeeded in achieving record production of 244.78 million tonnes of foodgrains during 2010-11. This record production has been achieved through effective transfer of latest crop production technologies to farmers under various crop development schemes being implemented by the Department of Agriculture & Cooperation backed by remunerative prices for various crops through enhanced minimum support prices.

1.2 During the 12th Five Year Plan, Ministry of Agriculture will focus on sustaining the current momentum by stabilizing food grain production to ensure food security. For sustaining higher levels of production, it is necessary to target new areas of foodgrain production, while promoting conservation agriculture in the high production areas, to maintain current levels of productivity. New

technologies are needed to break yield barriers, utilize inputs more efficiently and diversify to more sustainable and higher value cropping patterns.

1.3 Investment in Agriculture: As a result of the initiatives taken by the Government, the share of total investment in Gross Capital Formation in agriculture and allied sectors has been going up in recent years. Gross capital formation (GCF) i.e. investment in Agriculture and Allied Sectors relative to GDP in this sector has been showing a steadily increasing trend from 13.5 per cent in 2004-05 to 20.1 per cent in 2010 -11.

Agriculture GDP

1.4 The Agriculture and Allied Sector is estimated to contribute approximately 13.9% of India's GDP (at constant 2004-05 prices) during 2011-12 as per advance estimate released by CSO on 07.02.2012. Gross Domestic Product (GDP) of Agriculture and Allied Sectors and its share in the total GDP of the country during the last 4 years, **including current year**, at 2004-05 prices, is as follows:

(Rs. Crore)

Year	2007-08	2008-09	2009-10	2010-11	2011-12
GDP of Agriculture and Allied Sectors	655080	655689	662509	709103	727161
Per cent to total GDP	16.8	15.8	14.7	14.5	13.9

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

1.5 There has been a continuous decline in the share of Agriculture and Allied Sectors in the GDP from 16.8 percent in 2007-08 to 13.9 percent in 2011-12 at 2004-05 prices. Falling share of Agriculture and Allied Sectors in GDP is an expected outcome

in a fast growing and structurally changing economy.

1.6 Growth (over the previous year) in the Total GDP and that in the GDP of Agriculture and Allied Sectors at 2004-05 prices is given below: -

(in percent)

Period	Total GDP	Agriculture & Allied Sector GDP
2005-06	9.5	5.1
2006-07	9.6	4.2
2007-08	9.3	5.8
2008-09	6.7	0.1
2009-10	8.4	1.0
2010-11	8.4	7.0
2011-12	6.9	2.5

Source : Central Statistics Office(CSO)

1.7 The year 2011-12 experienced normal South West monsoon rainfall (June-September). At met sub-division level, 33 out of 36 met sub-divisions received excess/normal rainfall and 3 met subdivisions namely, Assam & Meghalaya (-32%), Arunachal Pradesh (-24%) and NMMT (-27%) received deficit rainfall during this period. The country as a whole received 899.9 mm of rainfall against the normal rainfall of 887.5mm, which indicates a one percent upward deviation from the Long Period Average (LPA). Out of 603 districts for which rainfall data were available, 144

districts (24%) received excess rainfall, 315 districts (52%) normal rainfall, 137 districts (23%) deficit rainfall and only 7 districts (1%) received scanty rainfall.

1.8 Agriculture Production: For 2010-11, total foodgrains production is estimated at 244.78 million tonnes. It comprises of 121.14 million tonnes of kharif foodgrains and 123.64 million tonnes of rabi foodgrains. Production of oilseeds was estimated at 32.48 million tonnes, sugarcane at 342.38 million tonnes, and cotton at 33.00 million bales (of 170 kg each) in 2010-11.

All India Area, Production and Yield of Major Crops

Crops	(Area (lakh hectare))				(Production (million tonnes))				(Yield (kg/hectare))			
	2008-09	2009-10	2010-11	2011-12#	2008-09	2009-10	2010-11	2011-12#	2008-09	2009-10	2010-11	2011-12#
Foodgrains	1228.32	1213.33	1267.65	1254.92	234.47	218.11	244.78	250.42	1909	1798	1931	1996
Oilseeds	275.58	259.59	272.24	269.97	27.72	24.88	32.48	30.53	1006	958	1193	1131
Sugarcane	44.15	41.75	48.85	50.81	285.03	292.3	342.38	347.87	64553	70020	70091	68463
Cotton @	94.07	101.32	112.35	121.78	22.28	24.02	33.00	34.09	403	403	499	476

#2nd Advance Estimates @- Production in million bales of 170 kg each

Source: Department of Agriculture & Cooperation (DAC).

1.9 As per second advance estimates of kharif production for 2011-12 released by the Ministry of Agriculture on 3rd February, 2012, production of food grains and cotton are estimated at all time record levels of 250.42 million tonnes and 34.09 million bales (of 170 kg each) respectively. Production of pulses and oilseeds is estimated at 17.28 million tonnes and 30.53 million tonnes respectively. Compared to last year, food grains output is estimated

to go up by 2.30 per cent, oilseeds decline by 6.00 per cent, sugarcane output is estimated to go up by 1.60 per cent, and cotton by 3.30 per cent. The higher production estimates compared to last year are primarily due to significant improvement in productivity of major foodgrain crops resulting from favourable weather conditions and various initiatives taken by Ministry of Agriculture.

Production in 2010-11 and 2011-12

(Million Tonnes)

Crops	2010-11	2011-12 (2nd Advance Estimates)	Absolute difference w(Col 3-2)	Percentage change in 2011-12 over 2010-11
1	2	3	4	5
Foodgrains	244.78	250.42	5.64	2.30
Oilseeds	32.48	30.53	-1.95	-6.00
Sugarcane	342.38	347.87	5.49	1.60
Cotton@	33.00	34.09	1.09	3.30

@Production in million bales of 170 kg each

Source – Department of Agriculture & Cooperation (DAC).

1.10 Outlook Rabi 2011-12: Good rainfall, especially during later part of the monsoon, has resulted in increase in soil moisture. This, together with increased water availability in reservoirs across the country (119% of average of last 10 years as on 05.01.2012), augur well for substantial expansion in area and increase in productivity during ensuing Rabi.

1.11 Capital Formation in Agriculture and Allied Sectors: Investment or Capital formation in public sector includes irrigation works, command area development, land reclamation, afforestation, development of State Farms, etc. Capital formation in private sector includes construction activities, including improvement/reclamation of land, construction of non-residential buildings, farm houses, wells, other irrigation works,

etc. The machinery component includes tractors, transport equipments, agriculture machinery/equipments etc. It also includes livestock development.

Sectors relative to GDP in this sector has been showing a steadily increasing trend from 13.5 per cent in 2004-05 to 20.1 per cent in 2010-11.

1.12 Gross capital formation (GCF) investment in Agriculture and Allied

Gross Capital Formation (GCF) in Agriculture and Allied Sectors at 2004-05 prices

(Rs in Crore)

Year	GCF	GDP	GCF/GDP (in %)
1	2	3	4
2004-05	76096	565426	13.5
2005-06	86604	594487	14.6
2006-07	92057	619190	14.9
2007-08	105741	655080	16.1
2008-09	127127	655689	19.4
2009-10	131139	662509	19.8
2010-11	142254	709103	20.1

Source: Central Statistics Office

Flagship and Major Programmes of Department of Agriculture

1.13 Rashtriya Krishi Vikas Yojana (RKVY) : This scheme, launched in 2007-08 with an outlay of Rs. 25,000 crores for the XIth Plan, aims at incentivizing States to enhance public investment to achieve 4% growth rate in agriculture and allied sectors during the Plan period and to select, plan, approve and execute growth generating interventions and build agri-infrastructure as per their priorities and agro-climatic requirements. RKVY has succeeded in incentivizing States to allocate more funds to agriculture and allied sectors. Allocation to agriculture and allied sectors was Rs. 8770.16 crore (4.88% of total State Plan Expenditure) in 2006-07. This has gone up to Rs. 22158.46 crore (6.04% of aggregate State Plan Expenditure) in 2010-11 (RE). RKVY is projectised. States have taken up over 5290 projects in last five years across all segments of agriculture and allied sectors. Details of projects undertaken are

available in the website rkvy.nic.in. RKVY format has also enabled taking up national priorities as sub-schemes, while keeping States' flexibility of project selection and implementation intact. In all, nine special Programmes/schemes with focused objectives are being implemented as sub-schemes of RKVY in the year 2011-12.

1.14 Bringing Green Revolution to Eastern India (BGREI): In order to reduce over exploitation of the natural resources in North West Region and to harness the Potential of Eastern Indian Plains for enhancing Agricultural Production, a programme namely "Bringing Green Revolution to Eastern India (BGREI)" under Rashtriya Krishi Vikas Yojana (RKVY) was announced in the Union Budget, 2010-11 with an objective to increase the productivity of rice based cropping system by intensive cultivation through promotion of recommended agriculture technologies and package of practices by addressing the underlying constraints of

different agro climatic sub regions. It was implemented during the year in the states of Assam, Bihar, Chhattisgarh, Jharkhand, Odisha, Eastern Uttar Pradesh and West Bengal with an allocation of Rs. 400 crores. During 2011-12 also, an amount of Rs. 400.00 crores has been allocated for implementing the programme and so far an amount of Rs. 396.58 crores has been released to the State Governments for carrying out the approved activities as per the action plan. Under this scheme, a bouquet of activities has been taken up that include block demonstrations of rice & wheat technologies in cluster mode approach; promoting resource conservation technology (zero tillage under wheat); creation of asset building activities for water management (shallow tube wells/ dug wells/ bore wells, distribution of pump sets etc.); promotion of farm implements and need based site specific activities etc.

1.15 Pulses and Oilseeds Villages in Rainfed areas: For enhancing production and productivity of pulses, Government of India had provided an amount of Rs. 300.00 crores in the Union Budget 2011-12 under the programme of “Integrated Development of 60,000 Pulses Village in Rainfed Areas”. The programme is being implemented in 11 major pulses growing States viz. Andhra Pradesh, Bihar, Chhattisgarh, Gujarat, Karnataka, Madhya Pradesh, Maharashtra, Odisha, Rajasthan, Tamil Nadu & Uttar Pradesh. The programme provides support for in-situ moisture conservation works; demonstration of production and protection technologies in compact blocks under Accelerated Pulses Production Programme and market linked extension support to Small Farmer Agri-business Consortium (SFAC) for setting up of Farmers Producer Organizations (FPO). Out of 300.00 crores allocated during 2011-12, an amount of Rs. 276.12 crores (till 02.02.2012) has been released to the States for implementation of the programme.

1.16 Saffron Mission in J&K: National Mission on Saffron has been sanctioned for implementation in Jammu & Kashmir during the period 2010-11 to 2013-14 with an allocation of Rs.50 crores during 2011-12 for revival of saffron cultivation.

1.17 National Food Security Mission (NFSM): The National Food Security Mission (NFSM), a Centrally Sponsored Scheme is in operation in 480 districts of 18 important Rice, Wheat and Pulses growing states to increase production of rice by 10 million tonnes, of wheat by 8 million tonnes and of pulses by 2 million tonnes by the end of Eleventh Five Year Plan. The salient aspect of the Mission is that it has been conceptualized to target those districts which have lower productivity than the State average but have the potential to augment the productivity and production of three crops, i.e. Rice, Wheat and Pulses.

As per the Progress Report received from the States, significant achievements under NFSM have been recorded during the course of implementation of Programme in the last four years i.e. during 2007-08, 2008-09, 2009-10, 2010-11 and current year i.e. 2011-12 (till date). New farm practices have been encouraged through 5.79 lakh demonstrations of improved package of practices on Rice, wheat and Pulses. As many as 86,642 demonstrations on System of Rice Intensification (SRI) as well as 50,010 demonstrations on hybrid Rice, Wheat, and Pulses have been organized. About 100.70 lakh ha area has been treated with soil ameliorants (gypsum/ lime/ micro nutrients etc.) to restore soil fertility for higher productivity. An area of about 39.42 lakh ha has been treated under Integrated Pest Management (IPM). Further, nearly 30.16 lakh improved farm machineries including water saving devices have been distributed. Capacity building of farmers has been encouraged through arranging 43,656 farmers’ field schools (FFS) at the farm level so far.

1.18 National Horticulture Mission:

Horticulture is being promoted by DAC in mission mode for improving farm income, livelihood security and for enhancing employment generation. India is the second largest producer of fruits and vegetables. All States and UTs are covered under the Mission except the states that are covered under the Horticulture Mission for North East & Himalayan States (HMNEH). The Mission endeavours for the holistic development of horticulture sector duly ensuring forward and backward linkages by adopting cluster approach, with the active participation of all stake-holders. At present, 372 districts in 18 States and 3 Union Territories have been covered under NHM.

1.19 Horticulture Mission for North East and Himalayan States (HMNEH):

The Centrally Sponsored Scheme, Horticulture Mission for North East and Himalayan States (HMNEH) is being implemented in a mission mode with an end to end approach which includes development and introduction of high yielding varieties and improved production technologies, expansion of area, productivity improvement, post harvest management, marketing, processing and value addition of horticulture produce.

During the year 2010-11, a budget allocation of Rs. 400.00 crores was made, out of which Rs. 399.98 crores have been utilized. The outlay approved for 2011-12 is Rs. 490.00 crores (RE-Stage), which includes Rs.320.00 crores for the NE states and Rs.170.00 crores for the Himalayan states. So far an amount of Rs.427.64 crores has been released, of which Rs. 300.51 crores are for NE states and Rs.127.13 crores for the Himalayan states. Under the Mission, an additional area of 6.04 lakh ha has been brought under various horticulture crops, besides creation of infrastructure facilities for improving productivity, post harvest management, marketing and processing of horticulture produce.

1.20 Central Institute of Horticulture (CIH), Medziphema, Nagaland:

Recognizing the importance of institutional support for development of horticulture in NE Region, a central sector scheme 'Establishment of Central Institute of Horticulture' in Nagaland was approved for implementation in the year 2005-06 at Medziphema, Nagaland. The Institute has been set up in an area of 43.50 ha. The major development activities undertaken by the Institute are establishment of green houses/polyhouses for protected cultivation of high value vegetables and flowers, establishment of mother blocks of identified fruit crops/ varieties and nurseries for mass multiplication of planting materials, demonstration plots of improved production systems and capacity building through training of extension functionaries and farmers.

1.21 National Bamboo Mission:

In Order to harness the potential of bamboo crop, Department of Agriculture & Cooperation, Ministry of Agriculture has launched a Centrally Sponsored Scheme called 'National Bamboo Mission' in 2006-07 with a total outlay of Rs.568.23 crores. This scheme is being implemented in twenty-seven States of the country, namely, Andhra Pradesh, Bihar, Chhattisgarh, Gujarat, Goa, Himachal Pradesh, Jammu and Kashmir, Jharkhand, Karnataka, Kerala, Madhya Pradesh, Maharashtra, Odisha, Punjab, Rajasthan, Tamil Nadu, Uttar Pradesh, Uttarakhand, Arunachal Pradesh, Assam, Manipur, Meghalaya, Mizoram, Nagaland, Sikkim, Tripura and West Bengal. The thrust of the Mission is on area-based, regionally differentiated strategy for plantation of bamboo in both, forest and non-forest areas. Important activities being supported for increasing productivity and quality of bamboo under the Mission are: increasing area under bamboo cultivation, mass production of quality planting material of recommended species, improvement of existing stock,

pest and disease management, improved post-harvest management, development of human resource and of marketing facilities. The expected benefits of the Mission include coverage of 1.76 lakh ha of new area under bamboo plantation over a period of five years, employment generation of 50.4 million mandays by bamboo plantation and related activities and of about 9.7 lakh mandays in bamboo nursery sector.

1.22 Integrated Scheme of Oilseeds, Pulses, Oil Palm and Maize (ISOPOM):

The basic objective of the Integrated Scheme on Oilseeds, Pulses, Oil Palm and Maize (ISOPOM) is to increase production of oilseeds, pulses, maize and oil palm by bringing additional area under these crops and increasing productivity of these crops through various input incentives and technological support. ISOPOM is being implemented since 2004 by merging the following schemes : (i) Oilseeds Production Programme(OPP), (ii) National Pulses Development Programme (NPDP), (iii) Accelerated Maize Development Programme (AMDP), (iv) Oil Palm Development Programme (OPDP). The pulses component of ISOPOM has been merged with National Food Security Mission (NFSM) w.e.f. 1.4.2010. An allocation of Rs. 1500 crores has been made under ISOPOM during the Eleventh Five Year Plan. The Budget Estimate (BE) and Revised Estimate (RE) for the year 2010-11 were Rs. 500 crores and Rs. 715.17 crores respectively. BE and RE for the year 2011-12 are Rs. 550 crores and 515.17 crores respectively.

1.23 Accelerated Pulses Production Programme: A new initiative 'Accelerated Pulses Production Programme (A3P)' has been launched as part of NFSM Pulses from Kharif 2010-11. One million hectares of potential areas for the major pulses crops- *tur*, *urad*, *moong*, gram and lentil have been taken up for large scale demonstration of production and protection

technologies on village level compact blocks for enhanced production of Pulses as well as for motivating farmers.

1.24 Initiative for Nutritional Security through Intensive Millet Promotion (INSIMP):

This Scheme aims to demonstrate improved production and post-harvest technologies in an integrated manner with visible impact to catalyze increase in production of millets in the country. Besides increasing production of millets, the Scheme through processing and value addition techniques is expected to generate consumer demand for millet based food products. The scheme was launched from Kharif 2011.

Strategy: The districts with large crop area under millet (more than 10,000 ha area under sorghum and pearl millet or more than 5,000 ha area under finger millet or more than 2,000 ha area under small millets namely; barnyard, kodo, kutki, foxtail and proso) but with productivity less than that of the national average yield have been identified for active promotion of production technologies through block demonstration with cluster approach. However, in case of small millets, which have low productivity in general and are taken by resource poor tribal farmers in remote interior areas, production programme would be organized in all the identified districts irrespective of their productivity levels.

Components: The Scheme provides support for supply of technology demonstration kits comprising of micro-nutrients, bio-fertilizers, DAP, urea, potash and pesticides including weedicides up to maximum area of 2 ha/farmer, seed minikits for 0.4 ha area for every one ha of area covered under scheme, seed production of new varieties/hybrids which are released during last 5 years, hand holding and farmers training, installation of pre-processing and small processing units, awareness campaign and research needs. The scheme also has provision

for establishing 3 Centres of Excellence at Directorate of Sorghum Research, Hyderabad for sorghum, CCAHAU, Hisar for pearl millet and CIPHET, Ludhiana for small millets. The scheme is under implementation in 16 States namely; Andhra Pradesh, Arunachal Pradesh, Chhattisgarh, Gujarat, Haryana, Jharkhand, Karnataka, Madhya Pradesh, Maharashtra, Odisha, Rajasthan, Sikkim, Tamil Nadu, Uttar Pradesh, Uttrakhand and West Bengal.

Financial: As against the allocation of Rs.300 crores, a sum of Rs.274.66 crores has been released to the programme implementing States/Institutions up to 2nd February, 2012.

1.25 Support to State Extension Programmes for Extension Reforms:

The objective of the Scheme is to make the extension system farmer-driven and farmer-accountable by way of new institutional arrangements for technology dissemination. 604 Agricultural Technology Management Agencies (ATMAs) have been established at district level to operationalize the extension reforms. The allocation for 2010-11 was Rs. 250.00 crores. With the approval of the CCEA, the scheme has been modified in 2010 to provide for the following activities:

- Provision of specialist and functionary support at different levels.
- Innovative support through a 'Farmer Friend' at village level.
- Revision in ATMA Cafeteria.
- Farmers' Advisory Committees at State, District and Block levels.

1.26 Agricultural Credit: The target of doubling of the flow of agricultural credit in three years with base year as 2003-04 has been achieved in two years and agricultural credit flow reached Rs.384514 crores during 2009-10 forming 118% of the target. During 2010-11, credit flow of

Rs.446779 crores forming 119% of the target has been achieved. Against the target of Rs.4,75,000 crores during 2011-12, achievement upto September, 2011 is Rs.223380 crores forming 47 % of the target.

1.27 Kisan Credit Card: To provide adequate and timely support from the banking system to the farmers for their cultivation needs including purchase of inputs in a flexible and cost effective manner, a model Kisan Credit Card Scheme (KCC) was introduced in August, 1998 for short and medium term loan and was extended further w.e.f. 31.1.2006 covering all types of the loan requirement of borrowers of State Cooperative Agriculture Rural Development Bank. As on 31st March, 2011 about 1038 lakh Kisan Credit Cards have been issued to farmers. There is a coverage of risk of KCC holder against accidental death or permanent disability upto a maximum of Rs.50,000/- and Rs.25,000/- respectively.

1.28 Special Rehabilitation Package for distressed farmers

Government of India has implemented a Special Rehabilitation Package of Rs. 16978.69 crores for 31 suicide prone Districts in the four States, namely, Andhra Pradesh, Maharashtra, Karnataka and Kerala. The implementation period of the package has ended on 30.09.2011. As on 30.06.2011 Rs.19910.70 crores have been released to these States for implementation of the package. Package for Development of Kuttanad Wetland Ecosystem and Package for agrarian distress in Idukki district envisaging an outlay of Rs.1840.75 crores and Rs.764.45 crores respectively have also been approved by the Government.

1.29 Agriculture Insurance: National Agricultural Insurance Scheme (NAIS) with increased coverage of crops, risk and farmers is being implemented in the

country from Rabi 1999-2000. The scheme is available to both loanee and non-loanee farmers. At present, the scheme is implemented by 25 States and 2 UTs.

To overcome some limitations and to make the scheme more farmer friendly, a Joint Group was constituted to study the existing schemes & suggest improvements.

Based on the recommendations of the Joint Group and views/comments of various stakeholders, a proposal on MNAIS was prepared which has been approved by GOI for implementation on pilot basis in 50 districts during the remaining period of 11th Plan.

A Weather Based Crop Insurance Scheme (WBCIS) as announced in the Union Budget 2007 is also being implemented on pilot basis. The scheme was implemented in 14 States during kharif 2011 season

Besides, the Coconut Palm Insurance Scheme (CPIS) has also been approved for implementation on pilot basis during years 2009-10 and 2010-11 in the selected areas of Andhra Pradesh, Goa, Karnataka, Kerala, Maharashtra, Odisha, Tamil Nadu and West Bengal to provide insurance coverage against loss of the individual palm in the age group of 4 to 60 years for dwarf & 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 others perils.

1.30 Trade: India's international trade policy is guided by twin considerations of maintaining food security & supplies and promoting exports of agriculture produce. Food & agriculture production improved considerably in the year 2010-11 & during the current year on account of normal monsoons. Accordingly, export restrictions on cotton, wheat and rice were removed. To augment domestic availability of certain commodities import duties were temporarily reduced on non-basmati rice, wheat, crude edible oils, sugar and

pulses to nil and on refined edible oils to 7.5%. This has been continued so far as precautionary measures.

India's export of agriculture produce has grown from the level of 4% of agriculture GDP in 1990-91 to average of 9% of agricultural GDP during 2007-2011. In WTO & other regime/bilateral FTAs, while protecting India's sensitive agricultural products, efforts have been made to obtain market access and duty reduction for agricultural products of India's export potential. As a result, while India was not a significant exporter (having shares of more than 5% in global exports) of any agricultural products in 1996 (except plantation crops), India is now a significant agricultural exporter of rice, cotton, oil meals, eggs & meat.

1.31 Seeds: The major thrust of the Central Sector Scheme "Development and Strengthening of Infrastructure Facilities for Production and Distribution of Quality Seeds" is to improve quality of farm saved seeds through seed Village Programme, to enhance seed replacement rate, boost seed production in private sector and help public sector seed companies to enhance seed production. Some of the achievements under the scheme in 2010-11 are :

- Coverage under Seed Village Programme to improve quality of Farm Saved Seeds has been sanctioned for 1,01,067 seed villages in 2010-11.
- Availability of quality seeds has increased from 140.51 lakh quintals in 2005-06 to 353.62 lakh quintals during 2011-12. The SRR of major crops has also increased significantly.
- 76 seed processing plants have been sanctioned and an amount of Rs. 5.83 crores released to small entrepreneurs for creation of 15.53 lakh quintals of seed processing capacity and storage capacity of 3.92 lakh quintals. Seed

storage capacity of 3.60 lakh quintal and seed processing capacity of 3.99 lakh quintal have been created during 2010-11, in the public sector.

- NSRTC has organized 10 in campus/off campus National Level Training programmes on various seed related issues, for the benefits of various stakeholders of public and private Sectors. In addition to National Level Training Programmes, NSRTC has also organized one National Workshop and one National Seed Congress.

1.32 The Government decides on support price for various agricultural commodities taking into account the recommendations of the Commission for Agricultural Costs and Prices (CACP), the views of State Governments and Central Ministries, as well as other factors considered important for fixation of support prices.

1.33 The Government has fixed the Minimum Support Prices (MSPs) for Kharif Crops of 2011-12. The MSP of paddy (Common) has been fixed at Rs.1080 per quintal and of paddy(Grade A) at Rs.1110 per quintal, which represents an increase of Rs.80 per quintal over the last year's MSPs. The MSPs of jowar (hybrid), bajra and maize each have been raised by Rs. 100 per quintal and fixed at Rs.980 per quintal each. The MSP of jowar (Maldandi) has also been raised by Rs. 100 per quintal over last year's MSP and fixed at Rs.1000 per quintal. The MSP of ragi has been fixed at Rs.1050 per quintal - raising it by Rs.85 per quintal over last year's MSP. The MSP of *arhar* (tur) has been fixed at Rs. 3200 per quintal, of moong at Rs. 3500 per quintal and of urad at Rs. 3300 per quintal marking an increase of Rs.200, Rs.330 and Rs.400 per quintal, respectively over last year's MSPs. The MSPs of *arhar* (tur) and moong have been fixed at a level higher by Rs.100 per quintal than that recommended by Commission for Agricultural Costs & Prices (CACP). In addition, similar to last year, an

additional incentive at the rate of Rs.500 per quintal for tur, urad and moong sold to Government procurement agencies during harvest/arrival period of two months shall also be given. The MSPs of groundnut-in-shell, sunflower seed, sesmum and niger seed have been increased by Rs.400, Rs. 450, Rs.500 and Rs.450 per quintal over last year's MSPs and have been fixed at Rs. 2700, Rs.2800, Rs.3400 and Rs. 2900 per quintal, respectively. The MSPs of soyabean(Black), soyabean(Yellow) have been increased by Rs.250 per quintal each over last year's MSPs and fixed at Rs.1650 and Rs.1690 per quintal, respectively. MSP of Cotton has been raised by Rs.300 per quintal and fixed at Rs.2800 per quintal for staple length (mm) of 24.5 - 25.5 and Micronaire value of 4.3 - 5.1 and at Rs. 3300 per quintal for staple length (mm) of 29.5 - 30.5 and Micronaire value of 3.5 - 4.3.

1.34 The Government has fixed Minimum Support Prices (MSPs) for rabi crops of 2011-12 season to be marketed in 2012-13. The MSP of wheat has been fixed at Rs. 1285 per quintal marking an increase of Rs. 165 per quintal over last year's MSP. The MSP of barley has been raised by Rs 200 per quintal and fixed at Rs.980 per quintal. The MSPs of gram and masur (lentil) have been fixed at Rs.2800 per quintal each marking an increase of Rs.700 and Rs. 550 per quintal respectively over their last year's MSPs. The MSPs of rapeseed/mustard and safflower have been increased by Rs.650 and Rs.700 per quintal respectively over last year's MSPs and have been fixed at Rs.2500 per quintal each.

New Scheme/Initiatives

1.35 National Seed Mission : In view of the need felt in current scenario to upgrade and expand existing scheme 'Development and Strengthening of Infrastructure Facilities for Production and Distribution of Quality Seeds' into a National Mission

with a focused, time bound and integrated approach to further improve availability of quality seeds to farmers at reasonable price, a Centrally Sponsored Scheme 'National Mission on seeds' has been proposed for implementation during the Twelfth Five Year Plan with a proposed outlay of Rs. 3773.40 crores. The Mission will subsume the components of existing scheme and comprise components on seed planning, seed production, varietal replacement, seed infrastructure, quality control, specific interventions for seed PSUs, contingency planning, assistance to private sector, international cooperation, etc. Planning Commission has granted 'in principle' approval for the Mission. The EFC has approved implementation of Mission in its meeting held on 1.4.2011. Planning Commission has been requested for final approval of the Mission.

1.36 Rainfed Area Development Programme (RADP)

A new initiative Rainfed Area Development Programme (RADP) has been launched on pilot basis as a sub scheme of Rashtriya Krishi Vikas Yojana (RKVY) during 2011-12 in the states of Andhra Pradesh, Odisha, Tamil Nadu, Karnataka, Madhya Pradesh, Chhattisgarh, Maharashtra, Gujarat, Uttar Pradesh and Rajasthan with an outlay of Rs. 250.00 crores.

RADP aims at improving the quality of life of farmers' especially small and marginal farmers by offering a complete package of activities to maximize farm returns for enhancing food and livelihood security. RADP will act as a catalyst to accomplish the objectives of enhanced productivity, minimizing risk of crop losses due to uncertainties of weather conditions, harnessing efficiency of resources, assuring food and livelihood/income security at farm level and strengthening farmers' capacity to adapt to climatic changes. 3510 clusters have been selected and about 1.70 lakh farmers have been benefited till December

2011 under the programme.

1.37 Accelerated Fodder Development Programme (AFDP)

Pursuant to announcement in Union Budget for 2011-12 a special scheme entitled "Accelerated Fodder Development Programme (AFDP)" has been launched. AFDP is currently being implemented through a window of Rashtriya Krishi Vikas Yojana (RKVY) in twelve (12) selected states with a total outlay of Rs. 300 crores for 2011-12.

AFDP is expected to benefit about 25,000 villages through a three pronged approach: Production of Quality Breeder and Foundation Seeds; Enhancement of production of Fodder and Adoption of appropriate technologies for Post Harvest Management.

Prospective State Govt's will implement this scheme on a location specific but cluster approach with technical support provided by State Agricultural Universities and designated ICAR Institutions.

AFDP is expected to enhance availability of green and dry fodder throughout the year. Besides, this scheme would also help in contingency planning to mitigate shortage of fodder caused by natural calamities like droughts and floods. 1405 clusters (250-500 Ha area) have been selected and about 4.20 lakh hectare area has been brought under various dual purpose/ fodder crops by December 2011 under the programme.

1.38 Amendment to the Constitution in respect of Cooperatives: Pursuant to the Common Minimum Programme of the UPA Government to ensure democratic, autonomous and professional functioning of cooperatives, it has been decided to initiate a proposal for amendment to the Constitution for this purpose.

Accordingly, the Constitution Amendment Bill was introduced in 14th Lok Sabha. However, the same could not be

discussed for passing. The Bill lapsed upon dissolution of 14th Lok Sabha. Thereafter, the Constitution (One Hundred and Eleventh Amendment) Bill, 2009 was introduced in the Lok Sabha on 30.11.2009. The Standing Committee submitted its recommendations which were examined by the Government. The Bill was passed in Lok Sabha on 22.12.2011 and in Rajya Sabha on 28.12.2011 as "The Constitution (Ninety Seventh Amendment) Act, 2011" and the Hon'ble President of India has given her assent to the aforesaid Act on 12.01.2012. The constitution (Ninety-Seventh Amendment) Act, 2011 has been enacted and published in the Gazette of India on 13.01.2012.

The object of the Constitution (One Hundred & Eleventh Amendment) Bill 2009 is to ensure that the cooperatives societies in the country function in a democratic, professional, autonomous and economically sound manner. The proposed amendment in the constitution, inter alia, seeks to empower the Parliament in respect of multi-state co-operative societies and the State Legislatures in case of other cooperative societies to make appropriate law, laying down the following matters, namely:-

- a) Right to form cooperative societies as a Fundamental Right by insertion of the words 'cooperative societies' in sub clause (c) of clause (1) of Article 19.
- b) Provisions for incorporation, regulation and winding up of cooperative societies based on the principles of democratic member-control, member-economic participation and autonomous functioning.
- c) Insertion of Article 43B in part IV of the constitution as directive principle of State policy for Voluntary formation of cooperative societies.
- d) Specifying the maximum number of

directors of a co-operative society to be not exceeding twenty-one members.

- e) Providing for a fixed term of five years from the date of election in respect of the elected members of the Board and its office bearers; and an authority or body for the conduct of elections to a cooperative-society.
- f) Providing for a maximum time limit of six months during which the Board of directors of co-operative society could be kept under supersession or suspension.
- g) Providing for independent professional audit.
- h) Providing for right of information to the members of the co-operative society.
- i) Empowering the State Governments to obtain periodic reports of activities and accounts of co-operative societies.
- j) Providing for reservation of one seat for the Scheduled Castes or the Scheduled Tribes and two seats for women on the Board of every cooperative society, which have individuals as members from such categories.
- k) Providing for offences relating to co-operative societies and penalties in respect of such offences.

It is expected that these provisions will not only ensure the autonomous and democratic functioning of cooperatives, but also ensure the accountability of management to the members and other/stakeholders and also provide for deterrence for violation of the provisions of the law.

1.39 Replacement of Seeds Act, 1966:

In response to changes that have taken place in the seeds sector, the Seeds Act, 1966 is proposed to be replaced by a suitable legislation to, inter alia, i) create an enabling climate for growth of seed industry, ii) enhance seed replacement

rates for various crops, iii) boost export of seeds and encourage import of useful germplasm, iv) create a conducive atmosphere for application of frontier sciences in varietal development and for enhanced investment in research and development. The Government introduced Seeds Bill in Rajya Sabha in December, 2004. The Bill was referred to Parliamentary Standing Committee on Agriculture, which recommended several modifications in the Bill. Based on the recommendations of Committee and comments of concerned Ministries/ Departments, Government of India approved official amendments and these were moved in Rajya Sabha. Meanwhile, Department received suggestions/ amendments from several Members of Parliament and VIPs particularly after the issuance of Notice for consideration and passing of the Bill. The Department accepted some of the suggestions and incorporated these in Seed Bill, 2004. The Bill is presently pending for consideration in the Rajya Sabha.

Presently further suggestions have been received from Hon'ble Members of Parliament which are under consideration.

1.40 Amendment of New Policy on Seed Development, 1988:

1. In order to provide to Indian farmers the best planting material available in the world so as to increase productivity, import of seeds of wheat and paddy will be allowed as per provisions of Plant Quarantine Order, 2003 for a

period not exceeding two years by companies, which have technical/ financial collaboration agreement for production of seeds with companies abroad, provided 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 first commercial consignment after its import has been recommended by Department of Agriculture and Cooperation.

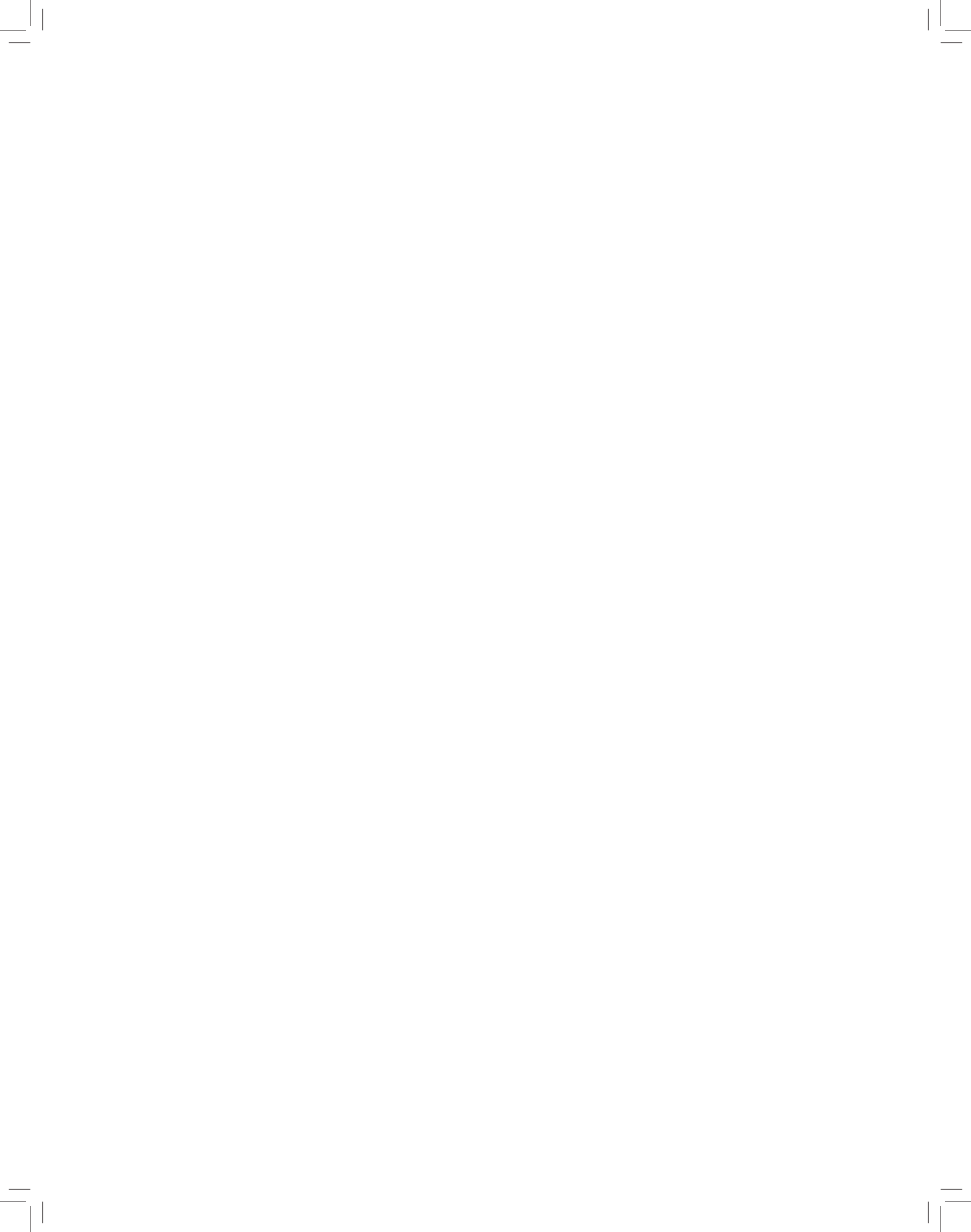
2. A quantity of 16 kg. of seeds of wheat and 5 kg. of seeds of paddy for sowing sought to be imported by eligible importers will be given to ICAR or farms accredited by ICAR for trial and evaluation. After trial/evaluation and receipt of satisfactory result of trials/evaluation, eligible importer may apply for bulk import of such seeds to Department of Agriculture and Cooperation (DAC).
3. Trial / evaluation of seeds of coarse cereals / pulses and oil seeds for sowing sought to be imported by eligible importers will be conducted by ICAR and / or farms accredited by ICAR as per procedures and protocols developed by ICAR and circulated by DAC and subject to supervision and monitoring by ICAR. After the receipt of satisfactory result of these trials/ evaluations, eligible importers may apply for bulk import of such seed to DAC.



CHAPTER-2

Functions & Organisational Structure







2

Functions and Organisational Structure

2.1 Structure: The Department of Agriculture and Cooperation (DAC) is one of the three constituent Departments of Ministry of Agriculture, 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 Minister and is assisted by Minister of State. Secretary (Agriculture & Cooperation) is the administrative Head of the Department. Secretary is assisted by two Special Secretaries, one Principal Adviser and three Additional Secretaries including one Financial Adviser, Agriculture Commissioner, 10 Joint Secretaries, one Mission Director (National Food Security Mission), Horticulture Commissioner, Horticulture Advisor, Marketing Advisor and two Deputy Director Generals. In addition, Chairman of Commission for Agriculture Costs and Prices (CACP) advises Department on pricing policies for selected agricultural crops.

2.2 The DAC is organized into 26 Divisions (**Annexure-2.1**) and has four attached offices and twenty-one subordinate offices (**Annexure-2.2**) which are spread across the country for coordination with state level agencies and implementation of Central Sector Schemes in their respective fields. Further, two Public Sector Undertakings,

eight autonomous bodies, ten national-level cooperative organizations and one authority (**Annexure-2.3**) are functioning under the administrative control of the Department.

2.3 Administrative Improvements: An Administrative Vigilance Unit functions in the Department under an Additional Secretary, designated as Chief Vigilance Officer, to ensure a clean and corruption free work environment through surveillance, preventive and punitive measures. The complaints/allegations received in the Unit are reviewed and necessary follow up action is taken. The position is regularly reviewed by CVO through meetings, reports/returns etc. Further, identification of sensitive posts in DAC is also undertaken as per guidelines of Central Vigilance Commission (CVC) to enable periodical rotation of staff posted in these posts by the competent authority.

2.4 A Public Grievance Redressal Cell has been set up and is fully functional in the Department of Agriculture & Cooperation 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 Deputy Secretary has been nominated as Staff Grievance

Officer to deal with grievances of the employees working in the Department of Agriculture & Cooperation 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.

2.5 A SEVOTTAM Compliant “Citizen’s Charter” has been prepared as per latest instructions/guidelines issued by Cabinet Secretariat and the Department of Administrative Reforms and Public Grievances. The Citizen’s Charter is available on the website of Department (www.agricoop.nic.in).

2.6 Implementation of the Right to Information Act, 2005: During the year 2011-12 (up to 31st December, 2011) 519 applications seeking information under Right to Information Act, 2005 were received and replies were sent to all the applicants in time.

2.7 Information and Facilitation Counter: This counter provides information in respect of all the three Departments under the Ministry of Agriculture. During the year 2011-12 (up to 31st December, 2011) 370 persons (NGOs, General Public, Researchers, RTI applicants) visited the counter to obtain information related to Ministry of Agriculture.

2.8 Progressive use of Hindi: The Department has an Official Language Implementation Committee (OLIC), chaired by Joint Secretary (Administration), to monitor 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 OLIC were held regularly. In accordance with guidelines issued by the Department of Official Language, a Joint Hindi Salahkar Samiti for all three departments of the Ministry of Agriculture has been

reconstituted under the chairmanship of the Hon’ble Agriculture Minister.

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

2.10 Every year, the Department nominates Lower Division Clerks and Stenographers for training in Hindi Shorthand and Typing, under the Hindi Teaching Scheme of the Department of Official Language.

2.11 Six employees have been given cash awards for doing original noting and drafting in Hindi under the incentive scheme for promoting the 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 1st to 14th September 2011. On this occasion, the Honourable Minister for Agriculture issued an appeal to all the officers and staff of the Department of Agriculture and Cooperation 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 and debate were organized, and a large number of officers and employees participated in these competitions. Cash awards and certificates of appreciation were given to the winners of these

competitions.

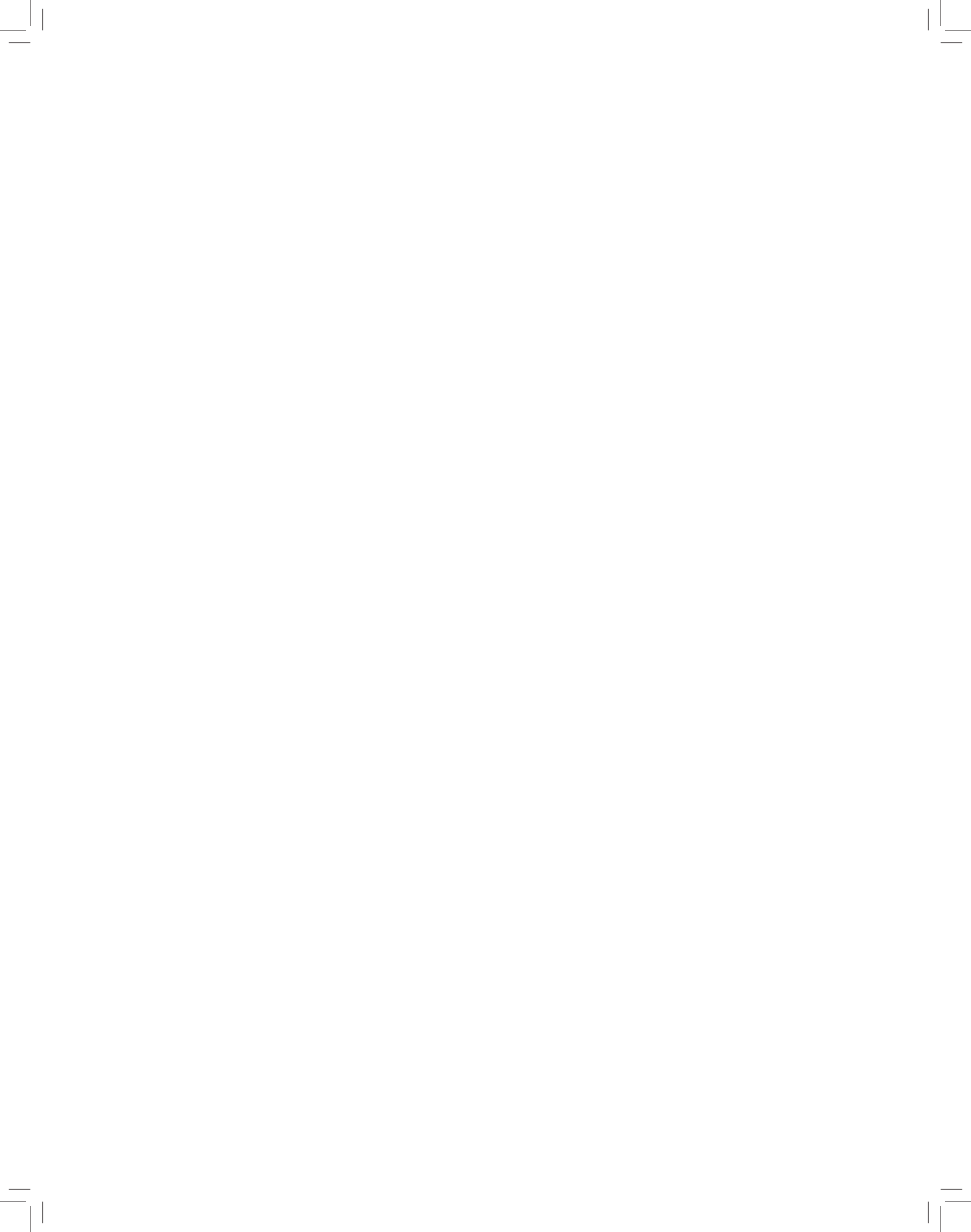
2.13 The Second Sub-Committee of the Committee of Parliament on Official Language conducted inspection of nine offices of the Department of Agriculture and Cooperation to review the position regarding progressive use of Hindi in official work during the year. The officers of this Department were also present at these inspections.

2.14 Employees possessing a working knowledge of Hindi were deputed to undergo training in Hindi workshops organized by the Hindi Division from time to time during the year under report.

2.15 Reservation for Scheduled Castes/ Scheduled Tribes /Other Backward Castes: Department of Agriculture and Cooperation continued its endeavour for strict implementation of the

orders issued by the Government of India from time to time, regarding reservation in services for SCs, STs, OBCs, minorities, ex-servicemen and physically disabled persons.

2.16 Prevention of Harassment of Women Employees: A complaints committee regarding prevention of sexual harassment of women at their work place was reconstituted by the Department. This committee is chaired by a senior lady officer of the Department. The committee is represented by 5 members, 4 of them women members, (one of these belongs to an NGO) and one male member of the Department. Three meetings of the Committee were held during the year. No complaint alleging harassment was received from any of the women employees in the Department during this period.



CHAPTER-3

Economics and Statistics







3

Directorate of Economics and Statistics

3.1 The Directorate of Economics and Statistics (DES), an attached office of Department of Agriculture & Cooperation (DAC), is guided by the vision of enriching economic and statistical data and analytical inputs required by DAC for providing better Agricultural Economic Development Policy. Its mission is to provide important statistics on area, production, yield of principal crops; Minimum Support Prices, implementschemesrelatedtoimprovement of agricultural statistics and carry out agro-economic research. The main objectives of Directorate are generation of agricultural statistics, research and analysis on the basis of agricultural statistics and dissemination of agricultural statistics. The Directorate's main functions include furnishing agricultural economics and statistical inputs to DAC and CACP, providing expert services to DAC on various economic and statistical issues; and to provide coordination services to DAC on matters concerning agricultural economics and policy.

3.2 As per the land use statistics 2008-09, the total geographical area of the country is 328.7 million hectares, of which 141.4 million hectares is net sown area and 195.1 million hectares is gross cropped area with a cropping intensity of 138%. The net irrigated area is 63.2 million hectares

Major Programmes/Activities of DES

Agricultural Statistics

3.3 Directorate of Economics & Statistics is implementing a Central Sector Plan Scheme 'Improvement of Agricultural Statistics', which is a fully funded Central Scheme focused on improving agricultural statistics system in the States. Based on estimates provided by various State Governments through designated State Agricultural Statistics Authorities(SASA) / State Directorate of Economics & Statistics/ Department of Agriculture/ Department of Land Revenue, advance estimates of production of food grains and commercial crops are released on quarterly basis which are widely used for planning and policy formulation.

3.4 An Expert Committee under the chairmanship of Prof. A. Vaidyanathan, an eminent agriculture economist, constituted by Government for improving Agricultural Statistics and examining use of remote sensing applications in agricultural statistics, submitted its Final Report in February, 2011. The Committee recommended exploring ways to making the scale of primary data collection manageable and reducing scope for human errors so that crop, area and yield estimates are reliable.

One of the major recommendations of Committee is for setting up a National Crop Statistics Centre (NCSC) as an autonomous, professional organization fully funded by the Government to design, organize and supervise generation of area and yield estimates at state and national levels. The proposed NCSC is proposed to be the nodal agency to undertake the above activities in collaboration with Department of Agriculture & Cooperation.

Cost of Cultivation of Principal Agricultural Crops

3.5 The estimates of cost of cultivation and cost of production of important agricultural crops covered under the mechanism of Minimum Support Prices (MSPs) are brought out by this office. These estimates are furnished to the Commission for Agricultural Costs and Prices (CACP) which in turn recommends MSPs to Government.

3.6 Coverage of Crops

The crops covered are as follows

Cereals - Paddy, wheat, jowar, bajra, maize, ragi and barley

Pulses - Moong, urad, arhar, gram, lentil and peas

Oilseeds - Groundnut, rapeseed & mustard, nigerseeds, soyabean, sunflower, sesamum and safflower.

Fibre Crops - Cotton and jute

Others - Sugarcane, vfc tobacco, onion, potato, black pepper and coconut

3.7 The nodal Agencies involved with the Survey are:

Agricultural Universities –	12
General Universities –	3
College –	1
Directorate of Tobacco Development	1

Support Price for Agricultural Commodities

3.8 The Directorate examines the reports submitted by the Commission for Agricultural Costs and Prices on price policy for principal agricultural crops and other aspects of agriculture. The Price policy for agricultural commodities reflects an important element of overall agricultural policy.

3.9 Government's price policy for agricultural produce seeks to ensure remunerative prices to growers for their produce with a view to encourage higher investment and production, and to safeguard the interests 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 overall needs of economy. To achieve this goal, Government announces for each season Minimum Support Prices (MSPs) for major agricultural commodities and organizes purchase operations through public, cooperative and other agencies designated by State Governments.

3.10 The Government decides on support price for various agricultural commodities taking into account the recommendations of the Commission for Agricultural Costs and Prices (CACP), the views of State Governments and Central Ministries, as well as other factors considered important for fixation of support prices.

3.11 The Government has fixed the Minimum Support Prices (MSPs) for Kharif Crops of 2011-12. The MSP of paddy (Common) has been fixed at Rs.1080 per quintal and of paddy(Grade A) at Rs.1110 per quintal, which represents an increase of Rs.80 per quintal over the last year's MSPs. The MSPs of jowar (hybrid), bajra and maize each have been raised by Rs. 100 per quintal and fixed at Rs.980 per quintal each. The MSP of jowar(Maldandi) has also been raised by Rs. 100 per quintal

over last year's MSP and fixed at Rs.1000 per quintal. The MSP of ragi has been fixed at Rs.1050 per quintal - raising it by Rs.85 per quintal over last year's MSP. The MSP of arhar (tur) has been fixed at Rs. 3200 per quintal, of moong at Rs. 3500 per quintal and of urad at Rs. 3300 per quintal marking an increase of Rs.200, Rs.330 and Rs.400 per quintal, respectively over last year's MSPs. The MSPs of arhar (tur) and moong have been fixed at a level higher by Rs.100 per quintal than that recommended by Commission for Agricultural Costs & Prices (CACP). In addition, similar to last year, an additional incentive at the rate of Rs.500 per quintal for tur, urad and moong sold to Government procurement agencies during harvest/arrival period of two months shall also be given. The MSPs of groundnut-in-shell, sunflower seed, sesamum and niger seed have been increased by Rs.400, Rs. 450, Rs.500 and Rs.450 per quintal over last year's MSPs and have been fixed at Rs. 2700, Rs.2800, Rs.3400 and Rs. 2900 per quintal, respectively. The MSPs of soyabean(Black), soyabean(Yellow) have been increased by Rs.250 per quintal each over last year's MSPs and fixed at Rs.1650 and Rs.1690 per quintal, respectively. MSP of Cotton has been raised by Rs.300 per quintal and fixed at Rs.2800 per quintal for staple length (mm) of 24.5 - 25.5 and Micronaire value of 4.3 - 5.1 and at Rs. 3300 per quintal for staple length (mm) of 29.5 - 30.5 and Micronaire value of 3.5 - 4.3.

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over their last year's MSPs. The MSPs of rapeseed/mustard and safflower have been increased by Rs.650 and Rs.700 per quintal respectively over last year's MSPs and have been fixed at Rs.2500 per quintal each. Recent trends in the MSPs of different crops may be seen from the statement given at **Annexure 3.1**.

Market Intelligence & Price Analysis

3.13 The Directorate collects retail prices of agricultural commodities from 87 designated centers, and compiles and disseminates them to various Ministries and Departments. The wholesale prices and market arrivals of agricultural commodities are also collected on weekly/monthly basis from 700 centres spread all over the country. Out of these price quotations, about 404 quotations on wholesale prices are disseminated to the Office of Economic Adviser, Ministry of Commerce and Industry for construction of Wholesale Price Index on weekly basis. International prices of selected agricultural commodities are regularly collected and disseminated through publication of Agricultural Prices in India.

Agricultural Wages

3.14 Statistics relating to daily wages paid to different categories of agricultural and skilled rural labour at selected centers are collected and compiled by Directorate of Economics & Statistics. In total, agricultural wage data is collected from 20 states in India. These are published in Agricultural Wages in India, an annual publication and also in the monthly journal, viz. Agricultural Situation in India. Agricultural wage statistics are furnished to the Commission for Agricultural Costs and Prices (CACP) and other research organizations.

Publications

3.15 In order to disseminate various agricultural statistics, Directorate of Economics and Statistics brings out a

number of publications. Apart from flagship annual publication of Agricultural Statistics at a Glance, the Directorate publishes a monthly journal called Agricultural Situation in India, and periodicals like Agricultural Prices in India, Agricultural Wages in India, Land Use Statistics at a Glance, Cost of Cultivation of Principal Crops, and Farm Harvest Prices of Principal Crops in India.

Plan Schemes of Directorate of Economics and Statistics

3.16 The Plan Schemes of DES seek to serve the purpose of database on different facets of agriculture. The three Plan Schemes are (I) Improvement of Agricultural Statistics, (II) Studies on Inputs for Agricultural Economic Policy & Development and (III) Forecasting Agricultural Output using Space, Agro-Meteorology and Land Based Observation (FASAL).

Improvement of Agricultural Statistics Scheme

3.17 The basic objective of Improvement of Agricultural Statistics (IAS) Scheme is to collect and improve the quality of agricultural statistics of principal agricultural and horticultural crops. From 2007-08 onwards, the scheme has been converted into a Central Sector Scheme from Centrally Sponsored Scheme and is funded 100% by the Centre. The scheme has four components, namely,

Timely Reporting Scheme (TRS)

3.18 Under this component timely and reliable estimates of area under principal crops for each of the agricultural seasons are generated on the basis of complete enumeration of 20% villages selected randomly, within a specific time frame. TRS is implemented in 16 land record States namely, Andhra Pradesh, Assam, Bihar, Gujarat, Haryana, Himachal Pradesh, Jammu & Kashmir, Karnataka, Madhya Pradesh, Maharashtra, Rajasthan,

Tamil Nadu, Uttar Pradesh, Uttarakhand, Jharkhand and Chhattisgarh and the two Union Territories namely, Delhi and Puducherry. The Implementing States provide break-up of area under irrigated/un-irrigated and high yielding varieties (HYVs).

Improvement of Crop Statistics (ICS)

3.19 The objective of the ICS component is to improve the quality of statistics on area and production of crops through checking and supervision of work of (a) Area enumeration, (b) Area aggregation and (c) Crop Cutting Experiments (CCE). Under the component, 10,000 villages are covered, equally shared by Central Agency (NSSO) and State machinery, every year. About 30,000 CCEs are checked every year. ICS component is implemented in all TRS States except Delhi.

Establishment of an Agency for Reporting of Agricultural Statistics (EARAS)

3.20 EARAS is implemented in three non-land record States namely, Kerala, Odisha and West Bengal and four North Eastern States namely, Arunachal Pradesh, Nagaland, Sikkim and Tripura. In the absence of any Government Department for regular updation of land records in these States, full time agency for collection of statistics of area, production and yield has been established in each of these States. The basic methodology under this component is the same as in TRS.

Crop Estimation Survey on Fruits & Vegetables (CES-F&V)

3.21 Under CES-F&V, 11 States namely Andhra Pradesh, Gujarat, Haryana, Himachal Pradesh, Karnataka, Maharashtra, Odisha, Punjab, Rajasthan, Tamilnadu and Uttar Pradesh are covered and 7 fruit crops (apple, mango, citrus, pineapple, grapes, banana and guava), 5 Vegetable crops (potato, cabbage,

cauliflower, onion and tomato) and 2 spice crops (ginger and turmeric) are covered. Under the component, estimates of area, production and yield for crops covered by respective States are generated on the basis of enumeration of area and conduct of Crop Cutting Experiments following multi stage stratified sampling techniques.

3.22 The scheme is monitored through Quarterly Progress Reports (QPRs) and Seasonal Progress Reports (SPRs), submitted by implementing States and UTs. For the financial year 2011-12 under Improvement of Agricultural Statistics Scheme against total allocation of Rs. 110.00 Crores (BE), Rs. 29.28 Crores, Rs. 18.67 Crores and 25.39 crores have been released in the first, second and third installment respectively.

Comprehensive Scheme for Studying the Cost of Cultivation of Principal Crops in India

3.23 The Comprehensive Scheme for studying Cost of Cultivation of Principal Crops in India is being implemented since 1971 as a 100% Central Sector Plan Scheme on the basis of recommendations made by Standing Technical Committee on Indices of Input Costs constituted in 1967 under the Chairmanship of Dr. Ashok Mitra. The main objectives of scheme are (i) Collection and compilation of field data on cost of cultivation and cost of production in respect of 28 principal crops and (ii) Generation of state-wise and crop-wise estimates of Cost of Cultivation (CoC) and Cost of Production (CoP).

3.24 The estimates of CoC of principal crops are used by the Commission for Agricultural Costs and Prices (CACP) for recommending Minimum Support Prices (MSPs) of 25 crops. Directorate of Economics & Statistics (DES) in the Ministry of Agriculture gets this study conducted through 16 Agricultural/General Universities/Colleges and the Directorate of Tobacco Development, Chennai. Under

the scheme, field data pertaining to CoC and CoP are collected, compiled and processed to generate cost of cultivation/production estimates, which are used as inputs for firming up the recommendations for MSPs of important crops by CACP.

3.25 The scheme is implemented in 19 states namely Andhra Pradesh, Assam, Bihar, Chattisgarh, Gujarat, Haryana, Himachal Pradesh, Jharkhand, Karnataka, Kerala, Madhya Pradesh, Maharashtra, Odisha, Punjab, Rajasthan, Tamil Nadu, Uttar Pradesh, Uttarakhand and West Bengal. The scheme presently generates estimates of 27 crops i.e. paddy, wheat, jowar, bajra, maize, ragi, barley, moong, urad, arhar, gram, lentil, peas, groundnut, rapeseed and mustard, nigerseed, soyabean, sunflower, sesamum, cotton, jute, sugarcane, VFC tobacco, onion, potato, safflower and coconut. On an average about 150 cost estimates are generated annually.

3.26 Field data for the scheme are collected on Cost Accounting Method under which daily entries of debit/credit for expenditure/income are made in order to assess total cost incurred/benefit accrued by/to each farmer covered under the scheme. Detailed questionnaires are filled up on monthly/annual basis after making enquiries on a daily basis from 10 farm holdings 2 each from 5 different size classes viz. upto 1 hectare, 1-2 hectares, 2-4 hectares, 4-6 hectares and above 6 hectares.

3.27 For the financial year 2011-12 under the component against total allocation of Rs. 49.30 crores (BE), Rs. 11.06 Crores, Rs. 8.21 Crores and Rs. 13.32 crores have been released in first, second and third installment respectively.

Agro Economic Research (AER) Scheme

3.28 The Agro-Economic Research (AER) Scheme was initiated in 1954-55 for undertaking research studies on Agro-

economic problems of the country. The scheme is being implemented through a network of 12 Agro Economic Research Centers and 3 Regional Units which are fully funded by Government through Central Sector Plan Scheme Funds. The Centres carry out studies on regional agricultural problems and issues with a view to update information and understanding regarding field level conditions and suggesting ways and means for improving implementation and monitoring of various programmes/schemes of Ministry. Similarly, the three Units undertake inter-regional and national level studies for suggesting policy prescription for improving monitoring and implementation of various Central Sector Schemes and Centrally Sponsored Schemes.

3.29 The 12 Agro- Economic Research Centres(AERC) are located at Allahabad, Bhagalpur, Chennai, Delhi, Jabalpur, Jorhat, Ludhiana, Pune, Shimla, Vallabah Vidyanagar, Visva-Bharati and Waltair. Three Agro-Economic Research Units are located at ISEC-Bangalore, IEG Delhi and IIM Ahmadabad. AER Centre, Jorhat was set up in 1960 for conducting studies in North-Eastern region. The centre has been carrying out annually 3-4 studies concerning various agricultural issues and problems of North-Eastern States.

3.30 In totality, putting all the Centres and Units together, during 2010-11, 46 studies were completed and during the current year (2011-12), 32 studies have been completed up to October, 2011. On an average, about 35-40 research studies are being completed annually by these Centres and Units. In terms of coverage of issues and problems, these studies deal with not only agricultural sector, but also allied sectors, such as animal husbandry, water management, fisheries & horticulture.

3.31 AER Scheme has already been reviewed thrice: in the 1960 by the Dantawala Committee; in 1984 by Poduval

Review Committee and in 2006 by Technical Advisory Committee (TAC) of the Planning Commission. The TAC Committee found this scheme worth continuing, and its recommendations have been approved by Hon'ble Minister of Agriculture. Department of Expenditure has revived 91 posts for AER Centres and Units in addition to its present strength.

3.32 During Eleventh Five Year Plan (2007-12), the Scheme received an amount of Rs.40.30 crores for its continuation, and an amount of Rs. 12.30 crores was released during 2010-11 for implementation of AER Scheme for the year 2011-12, An allocation of Rs.16.55 Crore has been approved out of which an amount of Rs.6.33 crore has been released till date.

Planning and Management of Agriculture

3.33 In order to assess impact of changes on farm economy with focus on the state of Indian farmers, Planning and Management of Agriculture, a Central Sector Scheme, was formulated during 1998-99 with a view to organize conferences and seminars involving eminent economists, agricultural scientists, 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 work shops, seminars, conferences, etc. The inputs gathered from studies, seminars, workshops are very useful for formulation of national agricultural policy, sub-sectoral policies, monitoring and implementation of programmes etc.

3.34 For the financial year 2011-12, a total allocation of Rs.3.98 Crores has been made. Included under the component is a project on Development of Extended Range Forecast System for Risk Management in Agriculture implemented through IIT, Delhi.

Drought Management (DM)

3.35 The Drought Management Programme, an independent Central Sector Plan Scheme, was discontinued in the Tenth Plan and the scheme was subsumed with aforesaid Umbrella Scheme during 2007-08. For the financial year 2011-12, a total allocation of Rs. 0.10 Crore has been made under the component.

Strengthening of Agricultural Statistics and Policy Formulation (SAS&PF)

3.36 The scheme involves holding a National Workshop on Improvement of Agricultural Statistics every year. Officers from State departments of agriculture, revenue, economics and statistics, horticulture, agricultural marketing, and Central Ministries, organizations participate in the workshop. In the workshop ways and means to bring about improvement in collection and compilation of agricultural statistics are discussed. The methodological issues relating to preparation of advance estimates of area and production of crops, reconciling estimates of cotton production with Cotton Advisory Board, compiling statistics relating to horticulture crops, forecasting area and production of crops through remote sensing, timely conduct of agricultural census and timely release of its reports, reducing time lag in collection of land use statistics, improving collection of wholesale and retail prices, cost of cultivation studies etc. are also discussed. For the financial year 2011-12, a total allocation of Rs. 0.07 Crore has been made under the component.

Forecasting Agricultural Output using Space, Agro-meteorology and Land based observation (FASAL)

3.37 To strengthen current capabilities of in-season multiple crop estimation through combination of Remote Sensing, Econometric, Agro-met and Land based observations, a plan scheme entitled "Forecasting Agricultural output using

Space Agro-meteorology and Land based Observations" (FASAL) was launched in August, 2006. Outsourcing agencies involved in the project are Space Application Centre (SAC), Ahmedabad, Institute of Economic Growth (IEG), New Delhi and India Meteorological Department (IMD), New Delhi. SAC, Ahmedabad and IEG, New Delhi have developed methodology to provide remote sensing and econometric based forecasts for area & production of a few selected crops. Development of methodology for other specified crops is in progress. India Meteorological Department (IMD) have also commenced work on agro met component during 2010-11.

3.38 To further expand the scope of Remote Sensing technology for more accurate and detailed assessment of crop situation in the country at national and district level, the need for establishing adequate infrastructure in the Ministry itself was considered necessary. The Standing Finance Committee (SFC) under the Chairmanship of Secretary (A&C) in its meeting dated 23rd March, 2011 has approved continuation of the scheme for next seven years, i.e., till 2017-18. A new centre National Centre for Crop Forecasting (NCCF) has been created in DAC itself. The NCCF will operationally carry out work based on methodologies developed by Space Application Centre (SAC) for in-season and multiple crop production forecasting and by National Remote Sensing Centre (NRSC) for drought assessment.

Development and Application of Extended Range Forecast System For Climate Risk Management in Agriculture (ERFS)

3.39 In view of the immense importance of extended range forecasting in agriculture applications, the DES, has sponsored a project entitled "Development and Application of Extended Range Forecast System for Climate Risk Management

in Agriculture (ERFS)" in collaboration with other partner organizations, viz. IIT Delhi, India Meteorological Department (IMD), National Centre for Medium Range Weather Forecast (NCMRWF), Space Application Centre (SAC) Ahmedabad and Indian Council of Agriculture Research (ICAR). These six partners have signed a co-operative Agreement in Dec. 2005 to work jointly on various aspects of project implementation.

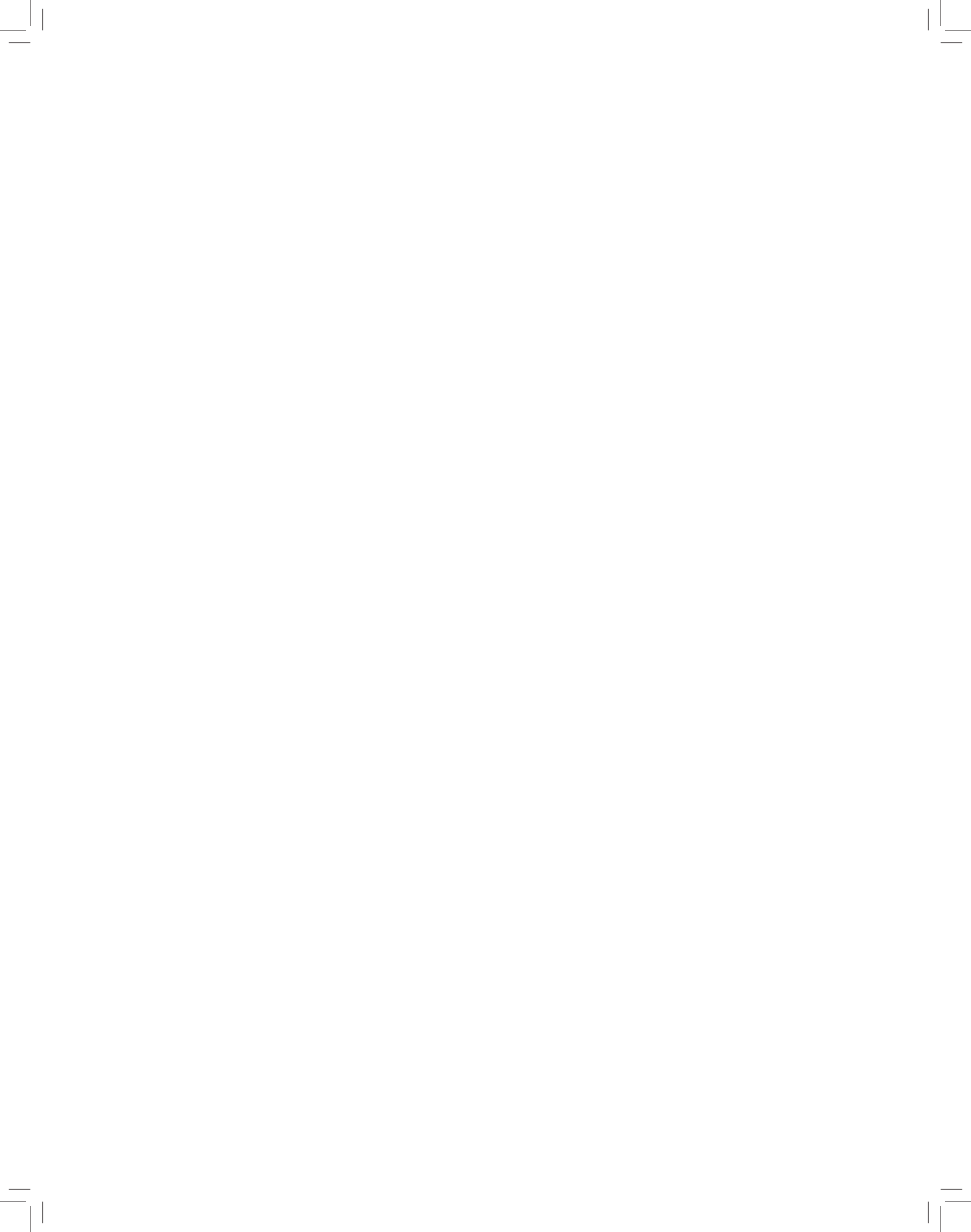
3.40 The objective of the ERFS is to generate and disseminate information on rainfall and temperature with a lead-time of 25-30 days. It is expected to give sufficient time to farmers to plan their cropping activities and help policy makers to take necessary corrective measures for any contingency which may arise. Under the ERFS, forecast for each month at regional/district level is the ultimate goal.

The project is likely to be completed in 5-6 years time frame in two phases. In the first phase (2-3 years), it is envisaged to develop a seasonal forecast system for met sub-divisions/agro-climatic zones. In the second phase, monthly forecast is targeted. Experimental monthly rainfall forecast for 2010 monsoon was generated on meteorological sub-division scale and in respect of 13 identified districts and disseminated to identified farmers/users for risk management purposes in the field. Monthly forecast for rainfall and temperature for winter (December to March, 2010-11) was also generated. First forecast of rainfall in the extended range commenced in monsoon 2009 and of maximum and minimum temperatures during December, January and February months in 2009-10. The project period has been extended till March 2013.

CHAPTER-4

Crops







4 Crops

4.1 Crop Prospects for 2011-12.

A record production of 241.56 million tonnes of foodgrains has been achieved during 2010-11 which includes highest production of 18.09 million tonnes of Pulses. As per 2nd advanced estimates, the production of foodgrains during the year 2011-12 is estimated at 250.42 million tonnes compared to 244.78 million tonnes achieved during 2010-11. The production of Rice is estimated at 102.75 million tonnes, which is about 6.77 million tonnes higher compared to 95.98 million tonnes achieved during 2010-11. The production of coarse cereals during 2011-12 is estimated at 42.08 million tonnes.

4.2 The production of Sugarcane during 2011-12 is estimated at 347.87

million tonnes (2nd advance estimate) against 342.38 million tonnes achieved during 2010-11. The Cotton production is estimated at 340.87 lakh bales during 2011-12 (2nd advance estimate) against 342.38 lakh bales during 2010-11. The production of Jute & Mesta during the year 2011-12 is estimated at 116.13 lakh bales (2nd advance estimate) as against 106.20 lakh bales during 2010-11.

4.3 The National Target for foodgrains production for the year 2011-12 has been fixed at 245.00 million tonnes, which is 0.22 million tonnes higher than the achievement of 244.78 million tonnes during 2010-11 (Final estimate). The crop wise production target is given as under: -

(Million Tonnes)

S.No.	Crops	Kharif	Rabi	Total
1	Rice	87.0	15.0	102.0
2	Wheat	-	84.0	84.0
3	Jowar	3.5	3.3	6.8
4	Bajra	9.5	-	9.5
5	Maize	16.81	4.69	21.5
6	Ragi	2.3	-	2.3
7	Barley	-	1.5	1.5
8	Small Milletes	0.4	-	0.4
9	Total Coarse Cereals	32.51	9.49	42.00
10	Total Pulses	6.73	10.27	17.0
	Total Foodgrains	126.24	118.76	245.0

4.4 Integrated Cereals Development Programme in Rice/Wheat/Coarse Cereals Based Cropping System Areas (ICDP-Rice/Wheat/Coarse Cereals) and Sustainable Development of Sugarcane Based Cropping System(SUBECS): To increase the productivity and production of Rice, Wheat, Coarse Cereals (except Maize) and Sugarcane, ICDP-Rice/Wheat/Coarse Cereals and SUBECS are being implemented in the country under Macro Management of Agriculture since October, 2000 on 90:10 sharing basis between Government of India and State Governments. Under these Schemes, assistance is provided for transfer of technology through demonstrations, training of farmers and extension workers as well as supply of critical inputs such as seeds, farm implements, IPM measures, water saving devices etc. Besides, states can utilize 20% funds allocated for new interventions as per their needs. The ICDP schemes would be implemented only in areas not covered under the three components of National Food Security Mission (NFSM).

4.5 Mini Mission-II of Technology Mission on Cotton & Jute Technology Mission: To increase the production and productivity of Fibre Crops, Centrally Sponsored Scheme of Mini Mission– II of Technology Mission on Cotton and Jute Technology Mission were implemented in important fibre growing states in the country. As suggested by Planning Commission both schemes (MM-II of TMC & JTM) are likely to be dropped during 12th Plan. The cotton area in Northern India is almost entirely irrigated. Maharashtra, which has one third of cotton area in the country, has hardly 4% irrigated area, while in the remaining states, about 35 % of the area under cotton is irrigated.

4.6 The area under cotton was 111.42 lakh hectares during 2010-11 as compared to 101.32 lakh hectare in 2009-10. During the current year i.e. 2011-12,

it is estimated that area coverage under cotton may reach to about 121.78 lakh hectares with a production of 340.87 lakh bales (2nd Advance Estimates).

During 2010-11 an area of 7.68 lakh hectare was under jute with the production of 99.95 lakh bales. However, during 2011-12 both area and production likely to increase 9.04 lakh hectare and 109.46 lakh bales as per 2nd Advance Estimates of DES.

4.7 Under the scheme, assistance is provided on production and supply of certified seeds, transfer of technology through field demonstrations as well as training of farmers through Farmers Field Schools, establishment of retting tanks, supply of fungal culture etc. for improving fibre quality, supply of farm implements, soil ameliorants, popularization of IPM practices etc.

4.8 National Food Security Mission (NFSM): The Mission aims to produce additional 10, 8 and 2 million tonnes of Rice, Wheat and Pulses respectively, there by achieving an additional production of 20 million tonnes of food grains by 2011-12 so as to meet the projected consumption requirement of food grains. The Mission covers about 13 million hectares of Wheat areas, 20 million hectares of Rice area and 98% of Pulses area. Mission also aims to restoring soil fertility, creating employment opportunities, and enhancing farm level economy to restore the confidence of the farmers of the targeted districts. Mission promotes proven technology and knowledge inputs packaged to deliver end-to-end agriculture services to reach out to farmers in 482 districts of 19 states that blend technology promotion with responsive administration for timely delivery of the agricultural services to bridge the yield gaps in the selected districts. By incentivizing collaborative working, mission aims to harness the capacities of the participating institutions and meet the

challenge of administering its progress in the targeted relatively backward districts.

4.9 Strategy: The basic strategy of the mission is to promote and extend improved technologies i.e., seed, micronutrients, soil amendments, Integrated Pest Management, Farm Machinery and resource conservation technologies along with capacity building of farmers with effective monitoring and better management. Fund flow is closely monitored to ensure that interventions reach the target beneficiaries on time. The strategy also includes timely and complete reach of the proven technology and associated knowledge input to the farmer; promoting collaboration among various institutions at the District, State and the National level dealing with different aspects of agriculture and rural development; empowering local administration for district specific promotion of additional locally relevant interventions; and recognizing good performance against objective parameters set for delivery of inputs and outcomes reached.

4.10 Monitoring and Evaluation of NFSM: At the national level, 9 National Level Monitoring Teams (NLMTs) have been constituted with members drawn from various central and state organizations. All the nine Crop Development Directorates of the Department of Agriculture and Cooperation are also monitoring the implementation of NFSM activities in the 19 NFSM States. Monitoring committees have also been constituted at state level and district level for monitoring the implementation of the Mission.

4.11 Project Management Team has been appointed at national level for providing continuous technical supports to the states regarding formulation of action plans, implementation of various components prescribed under NFSM and also for monitoring the progress of various activities of NFSM through extensive field visits and technical guidance of the states.

4.12 Various monitoring/reporting formats (quarterly & annual) have been developed and issued to the states for obtaining the information about progress of NFSM activities. Hand books on log frame analysis, reporting and monitoring formats, and criteria for selection of districts for awards have been prepared with the help of National Productivity Council for assisting the states in implementation and monitoring of the mission activities.

4.13 Management Information System (MIS) for online submission of progress report at state, district and block level has been developed for maintaining transparency

4.14 Recently an agency has been entrusted for Mid-Term Evaluation of NFSM.

4.15 OUTCOMES / ACHIEVEMENTS OF THE MISSION:

- Mission has helped to widen the food basket of the country with significant contributions coming from the NFSM districts. The focussed and target oriented implementation of mission initiatives has resulted in bumper production of wheat, rice and Pulses. The production of wheat has increased from 75.81 million tonnes (in pre-NFSM year of 2006-07) to 88.31 million tonnes during 2011-12 (2nd Advance Estimate) i.e. nearly 12.50 million tonnes is achieved against the envisaged target of 8 million tonnes at the end of 11th plan period. Similarly, the total production of rice has increased from 93.35 million tonnes (in pre –NFSM year 2006-07) to 102.75 million tonnes in 2011-12 (2nd Advance Estimate) with an increase of nearly 9.40 million tonnes against the target of 10 million tonnes. The total production of pulses has also increased from 14.20 million tonnes during 2006-07 to 18.24 million tonnes during 2010-11 with an increase of 4.04 million tonnes against the envisaged target of 2.0 million tonnes. During 2011-12, production

of 17.28 million tonnes of Pulses is achieved (2nd Advance Estimate).

- Farmers have enthusiastically responded to NFSM supported farm machinery components, especially to Zero till seed drills, rotavators etc. which is evident from the increased sale of these machines supported by Mission.
- The awareness generated through demonstrations and distribution of seed minikits of newly released varieties to the farmers has triggered substantial increase in the use of high yielding varieties of wheat and rice seeds in identified district.
- Capacity building exercises for farmers through Farmers Field Schools are found to be helpful in orienting the farmers towards adoption of new agriculture technologies.
- As per the Progress Reports received from the States, significant achievements under NFSM have been recorded during the course of implementation of Programme in the last four years i.e. during 2007-08, 2008-09, 2009-10, 2010-11 and current year i.e. 2011-12 (as on 09.02.2012). New farm practices have been encouraged through 6.52 lakh numbers demonstrations of improved package of practices on Rice, wheat and Pulses. As many as 97,252 numbers of demonstrations on System of Rice Intensification (SRI) as well as

52,127 demonstrations on hybrid rice have also been conducted. Nearly, 167.55 lakh qtls of seeds of high yielding varieties of Rice, Wheat and Pulses and hybrid rice have been distributed. About 111.58 lakhs ha of area has been treated with soil ameliorants (gypsum/lime/micro nutrients) to restore soil fertility for higher productivity. An area of about 44.68 lakh ha has been treated under Integrated Pest Management (IPM). Further, nearly 33.94 lakh numbers of improved farm machineries including water saving devices have been distributed. Capacity building of farmers has been encouraged through arranging 47,444 Farmers' Field Schools (FFS) at the farm level so far.

4.16 Enhancement of input consumption in NFSM districts: There has been an increase in input consumption of seeds, Integrated Nutrient Management (INM), IPM and machinery components under Rice, Wheat and Pulses from 2007-08 to 2011-12 which indicates the awareness generated at the district level towards use of quality seeds, nutrients, plant protection chemicals and farm machinery.

4.17 Impact on productivity: During 2008-09, nearly 50% of the rice districts (70 out of 143), 58% of the wheat districts (82 out of 141) and nearly 60% of pulses districts (103 out of 171) have recorded enhancement in productivity compared to the base year 2006-07.

CHAPTER-5

Seeds







5 Seeds

5.1 Seeds are basic and critical input for enhancing agricultural production and productivity. 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 2010-11 and anticipated for 2011-12 are shown below in Table 5.1:-

Table 5.1 : Production of breeder, foundation and certified/quality seeds

Type of Seeds	Unit	2005-06	2006-07	2007-08	2008-09	2009-10	2010- 11	2011-12 (anticipated)
Breeder Seed production	Metric Ton	6865	7382	9196	9441	10604	11921	12727
Foundation Seed production	Metric Ton	74000	79654	85254	96274	180817	180640	222681
Certified / Quality seed Production/ Availability	Metric Ton	1405000	1481800	1943100	2503500	2797200	3213592	3536200

5.2 Seed Policy Reforms: The Seeds Bill, 2004: In response to changes that have taken place in seeds sector, the Seeds Act, 1966 is proposed to be replaced by a suitable legislation to, inter alia, i) create an enabling climate for growth of seed industry, ii) enhance seed replacement rates for various crops, iii) boost export of seeds and encourage import of useful

germplasm, iv) create a conducive atmosphere for application of frontier sciences in varietal development and for enhanced investment in research and development. The Government introduced the Seeds Bill in Rajya Sabha in December, 2004. The Bill was referred to Parliamentary Standing Committee on Agriculture, which recommended several modifications in the

Bill. Based on the recommendations of Committee and comments of concerned Ministries/Departments, Government of India approved official amendments and these were moved in Rajya Sabha. Some of the suggestions/amendments received from several Members of Parliament and VIPs have been accepted and incorporated in the Seeds Bill, 2004.

Presently further suggestions have been received from Hon'ble Members of Parliament which are under consideration.

5.3 Strengthening of Seeds Quality Control Organizations (State Seed Certification Agencies and State Seed Testing Laboratories): The responsibility of seed law enforcement is vested with State Governments. Seed inspectors notified under relevant provisions of Seeds Act, 1966 and Seeds (Control) Order, 1983, inspect premises of seed distribution agencies to draw samples for testing. Appropriate action is taken against sellers of sub-standard seeds as per provisions of Seeds Act/Rules and Orders. These inspectors are also authorized to stop sale of sub-standard seeds and to seize their stocks. Seed Inspectors have also been provided with powers of enforcement under Environment (Protection) Act, 1986 to regulate quality of genetically modified (GM) Crops.

5.4 Policy on Export/Import of Seeds and Planting Materials: The export/import of seeds has increased with rationalization and simplification of export/import regime. This has benefited Indian farmers, seed industry and entrepreneurs. 92 cases were recommended for issue of export and 132 cases were recommended for import during the year 2010-11.

5.5 Implementation of Protection of

Plant Varieties and Farmers' Rights Legislation: Legislation for Protection of Plant Varieties and Farmers' Rights enacted in year 2001 provides for establishment of an effective system for protection of plant varieties, the rights of farmers and plant breeders to encourage development of new varieties of Seeds and plants. The Central Sector Scheme for Protection of Plant Varieties and Farmers' Rights (PPV&FR) provides necessary back-up support for implementation of legislation i.e., PPV&FR Act, 2001. The PPV&FR Authority in coordination with this Department implements the Scheme. The main objectives of the Scheme are to provide grants to Authority for its operational cost and implementation of provision of the Act and financial assistance to DUS Centres for developing guidelines of identified crops for Distinctness, Uniformity and Stability (DUS) test. The functions of the Authority include registration of plant varieties to protect plant breeder's rights, which would stimulate investment for research & development for development of new plant varieties and to protect the rights of farmers in respect of their contribution made at any time in conserving, improving and making available plant genetic resources. A total of 346 certificates of registration have been issued by the Authority comprising of 321 Extant Varieties, 22 New Varieties and 3 Farmers' Varieties as on 31.01.2012. Plant Genome Savior Community awards for the year 2009-10 have been awarded by the Authority to two communities in recognition of their contribution in conserving indigenous Varieties.

5.6 National Seed Research and Training Centre (NSRTC) at Varanasi: The National Seed Research and Training Centre (NSRTC), Varanasi (Uttar Pradesh) has been functioning since Oct.,2005 and has been notified as Central Seed Testing

and Referral Laboratory (CSTL) with effect from 01.04.2007. The mandate of NSRTC is to have a separate National Seed Quality Control Laboratory to maintain uniformity in testing of Seeds required to ensure supply of quality seeds. Besides, it also acts as Referral Laboratory for seed related issues.

5.7 It 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 also a member Laboratory of ISTA, since 2007. As per National programme to maintain uniformity in seed testing, NSRTC has analysed approximately 14,000 nos. of seed sample tested during 2010-2011 under re-testing programme. Besides, Seed Samples referred by Courts have also been analysed in CSTL as and when received. During 2010-11, NSRTC has organized 10 in campus/ off campus National Level Training programmes on various seed related issues, for the benefit of various stakeholder of Public and Private Sector. In addition, NSRTC has also organized one National Workshop and the National Seed Congress.

5.8 Development and Strengthening of Infrastructure facilities for production and distribution of Quality Seeds: This is a Central Sector Scheme being implemented from the year 2005-06. The Scheme is intended to develop and strengthen existing infrastructure for production and distribution of certified/ quality seeds.

The following components of scheme are being implemented:-

1. Transport Subsidy on Movement of Seeds
2. Establishment and Maintenance of Seed Bank

3. Quality Control Arrangement on Seed
4. Seed Village Programme
5. Creation/strengthening of Infrastructure Facilities in Public Sector
6. Assistance for Boosting Seed Production in Private Sector
7. Use of Bio-technology in Agriculture
8. Promoting Hybrid Rice Seeds

5.9 Bt. Cotton Seeds: At present, 890 Bt Cotton hybrids inclusive of one variety BN Bt cotton developed by Central Institute for Cotton Research, Nagpur (ICAR) have been approved by Genetic Engineering Approval Committee (GEAC) for commercial cultivation in States of Haryana, Punjab, Rajasthan, Gujarat, Madhya Pradesh, Maharashtra, Andhra Pradesh, Karnataka and Tamil Nadu. The area under coverage of Bt Cotton has increased from 0.29 lakh hectare in 2002-2003 to 93.36 lakh hectare in 2010-2011.

5.10 Seed Village Programme: The Seed village Programme, a component of the scheme 'Development and Strengthening of Infrastructure Facilities for Production and Distribution of Quality Seeds' aims at upgrading quality of farm saved seeds. During the year 2010-11 the Department has covered about 1,01,067 seed villages under this component producing about 161.553 lakh quintals of Seeds produced compared to 79.564 lakh quintals in 2009-10.

5.11 Certified/Quality seed production:- Certified/ Quality seed production has increased from 140.51 lakh quintals during 2005-06 to about 353.62 lakh quintal during 2011-12.

5.12 Boosting Seed Production in Private Sector:- Under this component of the scheme 'Development and

Strengthening of Infrastructure Facilities for Production and Distribution of Quality Seeds', credit linked back-ended capital subsidy is provided at the rate of 25% of project cost subject to a maximum limit of Rs. 25.00 lakh per unit on seed infrastructure development. Private Companies, partnership firms, individual entrepreneurs, self-help groups and seed co-operatives are eligible for subsidy. So far, 359 such projects have been sanctioned for small entrepreneurs in 16 States with 70.65 lakh quintals seed processing capacity and storage capacity of 24.35 lakh quintals.

5.13 The Department has two Central Public Sector Undertakings namely National Seeds Corporation (NSC) and State Farms Corporation of India (SFCI) for production of quality seeds.

- (i) In 2010-11, National Seeds Corporation earned profit after tax of Rs. 37.38 crore and declared dividend of Rs. 226.81 lakh @ 11% on Paid up Capital of the Corporation. Sale of seeds by National Seeds Corporation has increased to 17.97 lakh quintal in 2010-11 from 14.35 lakh quintal in 2009-2010. 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. NSC is now a scheduled 'B' CPSE as against schedule 'C' earlier and has also been granted Mini Ratna (Category-I) status.
- (ii) SFCI has achieved an all time high turnover of Rs.324.43 crore in 2010-11 with an increase of 21.87% over previous year's turnover. The profit after tax has shown an appreciable increase to Rs.29.87 crore as against

Rs.21.53 crore in the previous year. The Corporation has also declared a Dividend of Rs.1.57 crore for 2010-11 @ 5% of the paid up equity share capital. The earnings per share has also increased substantially to Rs. 948.51 in 2010-11 from Rs. 683.86 in previous year.

5.14 Programme being implemented in the North-Eastern States : Details of programmes being implemented in North-Eastern region are provided in **Annexure 5.1**.

5.15 Other Important Activities:

- (i) **NEW POLICY ON SEED DEVELOPMENT:** The National Seed Policy, 2002 provides that all import of seeds and planting materials, etc. will be allowed freely subject to EXIM Policy Guidelines and requirements of 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 imported seed to the Gene Bank maintained by National Bureau of Plant Genetic Resources (NBPGR). The New Policy on Seed Development, 1988 aims to facilitate import of best seeds and planting materials available abroad for benefit of Indian farmers. It lays down norms for imports and testing. In order to harmonize New Policy on Seed Development, 1988 with National Seed Policy, 2002, following two modifications have been made in

the New Policy on Seed Development, 1988:

- a) In order to provide to Indian farmer best planting material available in the world to increase productivity, import of seeds of wheat and paddy may also be allowed as per provisions of 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 foreign supplier agrees to supply parent line seeds/nucleus or breeder seeds/technology to Indian company within a period of two years from date of import of first commercial consignment. A quantity of 16 kg. of seeds of wheat and 5 kg. of seeds of paddy for sowing sought to be imported by eligible importers will be given to ICAR or such farms which are accredited by ICAR for trial and evaluation. After trial/evaluation for one crop season, the ICAR will intimate the results, agro-climatic zone-wise, within three months of the season. After receipt of result of the ICAR trials/evaluation, an eligible importer may apply for bulk import of such seeds.
- b) Trial/evaluation of seeds of coarse cereals / pulses and oil seeds for sowing sought to be imported by eligible importers will be conducted by ICAR and / or such farms, which are accredited by ICAR for trial and evaluation, including farms operated by importer and as per the procedures and protocols developed by ICAR and circulated

by the Department and subject to the supervision and monitoring by ICAR. After trial/ evaluation for one crop season, the ICAR and importers will intimate results of the trials agro-climatic zone-wise, within three months of the season to the Department. After receipt of result of these trials/ evaluations, eligible importers may apply for bulk import of such seed.

(iii) IMPLEMENTATION OF OECD SEED SCHEMES IN INDIA:

The Organisation for Economic Co-operation and Development (OECD) is an inter-governmental organisation established in 1961 having its headquarters at Paris, France with a mission to help its participation/member countries to achieve sustainable economic growth and employment in the member countries. The objective of OECD Seed Schemes is to encourage use of seeds of consistently high quality in participating countries. The scheme authorizes use of labels and certificates for seed produced and processed for international trade according to OECD guidelines. India's participation in OECD Seed Schemes aims to enhance its seed export capabilities and probabilities. India's participation in OECD Seed Scheme was accepted by OECD in October, 2008 in respect of five seed schemes viz. (i) Grasses and Legumes; (ii) Cereals; (iii) Crucifers and other oil or fibre species; (iv) Maize and Sorghum and (v) Vegetables.

5.16 Integrated Scheme on Oilseeds, Pulses, Oil Palm & Maize (ISOPOM):

The Department of Agriculture and Cooperation is implementing a Centrally Sponsored Integrated Scheme of Oilseeds, Pulses, Oil Palm & Maize (ISOPOM) in 14 major oilseeds, 15 maize and 9 oil palm growing states w.e.f. 1.4.2004. In order to give focused attention on pulses, Pulses

Development Programme of ISOPOM has now been merged with National Food Security Mission for implementation w.e.f. 1.4.2010. Under ISOPOM, assistance is provided for various components under oilseeds and maize development programme viz: production and purchase of breeder seed, production of foundation and certified seed, distribution of certified seed, development of seed infrastructure, seed minikits, Integrated Pest Management (IPM), block demonstration and frontline demonstration, plant protection chemicals, weedicides, sprinkler sets, micro-nutrients, farm implements, irrigation pipes, trainings

etc. Assistance is also provided for various components of oil palm development programme namely cost of planting material, maintenance of plantation for four years, cultivation inputs, installation of drip irrigation system, diesel pump sets, training, development of waste-land, demonstrations, leaf-nutrients analysis laboratories and testing of genotypes under various environmental conditions, and innovative interventions etc. Due to the initiatives taken by the Government, a record production of oilseeds at 311.01 lakh tonnes has been achieved during 2010-11 as per the Fourth Advance Estimates.

CHAPTER-6

Integrated Nutrient Management







6

Integrated Nutrient Management

6.1. Average estimated consumption of fertilizers (N+P+K) in the country has increased from 135.8 kg/ha in 2009-10 to 144.14 kg/ha in 2010-11. However a great deal of variability exists in fertilizer consumption among States. While consumption of fertilizers is 241.60 kg/ha in Punjab, 252.84 kg/ha in Andhra Pradesh, 209.38 kg/ha in Haryana and 211.06 kg/ha in Tamil Nadu, consumption is comparatively low in Rajasthan (57.91 kg/ha), Himachal Pradesh (58.90 kg/ha), Odisha (59.29 kg/ha), Jharkhand (74.72 kg/ha), etc. Consumption of fertilizers is less than even 5 kg/ha in some of north-eastern States.

6.2. To ensure adequate availability of fertilizers to farmers, Department of Agriculture and Cooperation (DAC) conducts demand assessment well in advance in half-yearly Zonal Conferences

on Agricultural Inputs in consultation with State Governments, Department of Fertilizers and Fertilizer Industry. Under Essential Commodities Act (ECA) and Fertilizer Movement Control Order, for both indigenous and imported urea movement orders are issued by Department of Fertilizers (DoF) based on a supply plan to ensure timely availability of fertilisers to farmers. DoF also facilitates availability of decontrolled phosphatic (P) and potassic (K) fertilizers to States / UTs.

6.3 Consumption of Fertilizers: Consumption of chemical fertilizers (in terms of nutrients) was 281.22 lakh metric tonnes in 2010-11, which is 6.18 % more than previous year. Consumption of major fertilizers alongwith corresponding nitrogenous, phosphatic and potassic (NPK) nutrients since 2000-01 to 2010-11 is as follows: -

(lakh tonnes)

Year	Urea	DAP	MOP	Complex	Nitrogen (N)	Phosphate (P)	Potash (K)	Total (N+P+K)
2000-01	191.86	58.84	18.29	47.80	109.20	42.15	15.67	167.02
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	39.32	97.64	165.58	80.50	35.14	281.22

6.4. Fertilizer Policy: Urea is only fertilizer covered under statutory price control. Government of India has introduced nutrient based subsidy with effect from 1.4.2010 in respect of phosphatic and potassic fertilizers. Under this, subsidy is based on nutrient (N,P,K and S) content of decontrolled P and K fertilizers and MRP is fixed by Industry / Manufacturer. Further, subsidy on micronutrients has been introduced on Boron and Zinc, to encourage micro nutrient application. In order to promote balanced use of fertilizer and encourage use of micronutrients, several fertilizers fortified with Boron and Zinc have been incorporated in Fertilizer (Control) Order, 1985.

6.5 Promotion of Integrated Nutrient Management (INM): Government is

promoting soil test-based balanced and judicious use of chemical fertilizers, bio-fertilizers, and locally available organic manures such as farmyard manure, vermicompost and green manure, to maintain soil health and productivity. A centrally sponsored scheme, namely, "National Project on Management of Soil Health and Fertility" (NPMSH&F) was introduced in 2008-09. Components of this scheme include setting up of new Soil Testing Laboratories (STLs), strengthening of existing STLs, acquisition of mobile STLs, promotion of organic manure/ soil amendment/ micronutrients, setting up new Fertilizer Quality Control Laboratories (FQCLs) and strengthening of existing FQCLs. Achievement under the scheme is indicated below: -

Sl. No	Component	2008-09	2009-10	2010-11	2011-12 as on 15.10.2011)	Total
1.	New Static STLs	42	66	16	0	124
2.	New Mobile STLs	44	62	10	2	118
3.	Strengthening of existing STLs	39	107	9	10	165
4.	New FQCLs	2	11	1*	1	15
5.	Strengthening of FQCLs	19	19	1	0	39
	Total	146	265	37	13	461

*For Advisory purpose on PPP Mode

6.6 As on 31.3.2011, there are 1,049 STLs in the country, with annual analyzing capacity of 106.95 lakh samples. About 74 lakh soil health cards have been issued during 2010-11 and so far, 408.19 lakh soil health cards have been issued.

6.7 Quality Control of Fertilizers - To ensure adequate availability of fertilizers of standard quality to farmers, Fertilizer was declared as an Essential Commodity and Fertilizer Control Order (FCO), 1985, was promulgated under Section 3 of Essential Commodities Act, 1955 to regulate, trade, price, quality and distribution of fertilizers

in India.

6.8 Enforcement of this Order has primarily been entrusted to State Governments and Central Government provides training facilities and technical guidance to States and supplements their efforts through random inspection of manufacturing units and their distribution network. Presently there are 74 laboratories in the country including 4 Central Government Laboratories. Analytical capacity and number of samples analyzed and found Non standard during last 5 years is shown in Table below: -

Analytical Capacity and number of samples of fertilizers analyzed and found Non standard during last five years.

Year	No. of labs	Annual analytical capacity	No. of samples analyzed	% Non standard samples
2005-06	67	1,22,488	1,11,745	6.0
2006-07	68	1,29,250	1,16,142	6.0
2007-08	68	1,29,331	95,866	6.2
2008-09	71	1,32,965	1,04,498	5.5
2009-10	74	1,30,635	1,18,312	5.2
2010-11	74	1,27,930	1,21,868	5.1

6.9 Fertilizer Control Order (FCO), 1985- In order to promote balanced use of fertilizers, Government is encouraging use of fortified fertilizers i.e. site specific nutrients to take care of location and crop specific nutrient requirements, to achieve maximum fertilizer use efficiency. So far 10 (ten) such fertilizers have been included in FCO. These fertilizers are customized for specific soils and crops on the basis of soil testing results. So far, 36 such fertilizers have been notified under clause 20B of FCO.

In order to encourage use of organic and bio-fertilizers, five bio-fertilizers namely; Rhizobium, Azotobacter, Azospirillum, Phosphate Solubilizing Bacteria and Mycorrhizae have been incorporated in FCO, 1985. Specifications of organic fertilizers, namely; city waste compost and vermi compost have been included in FCO,

1985. Composition of Castor de-oiled cake has also been specified in FCO, 1985.

6.10 Central Fertiliser Quality Control & Training Institute (CFQC&TI), Faridabad:

Main activities of CFQC&TI & its three Regional Fertiliser Control Laboratories (RFCLs) located at Navi Mumbai, Chennai and Kalyani consist of drawal, inspection and analysis of both indigenous and imported fertilizers, training of State Fertiliser Inspectors, Analysts and other Enforcement Officers. Analytical methods for assessment have been prescribed in FCO. CFQC&TI also acts as a referee laboratory and advisory body on issues relating to fertiliser quality control.

6.11 During 2010-11, 10,769 samples against target of 8,500 samples, were analysed (achievement 127%), out of which 378 samples were found Non-

standard. During 2010-11, 1,254 ships/containers were inspected by CFQC&TI/RFCLs, out of which six ships/containers were found Non standard. During random inspection of manufacturing units and dealers' premises, central teams collected 64 samples during 2010-11, out of which 37 samples were found non standard.

6.12 During 2010-11, 15 Refresher Training Programmes for Fertiliser Inspectors/Analysts/Notified Authorities were organized by CFQC&TI/RFCLs. Besides, 10 Orientation Courses for State Enforcement Officers and 15 Dealers Training Programmes were organized in states. One exclusive training programme for Foreign Participants under ITEC/SCAAP/AARDO/COLOMBO Plan was also organized at CFQC&TI, in which 14 officers from different countries participated. One Refresher Training Course of two week duration was organized in December, 2009 at RFCL, Kalyani exclusively for benefit of enforcement officers of North Eastern States. One Fertilisers Dealers Training Programme was also organized in Tripura.

6.13 National Project on Organic Farming (NPOF): This scheme is being implemented with outlay of Rs. 101 crores during XIth Plan. The revised mandate lays emphasis on technical capacity building, information generation and promotion of organic farming in the country. Major components include:

- a) Financial assistance for setting up of Fruit and vegetable/Agro waste compost units and Bio fertilisers/ Biopesticides production units.
- b) Technical capacity building and Human Resources Development through trainings and research.
- c) Development and regulation of quality control of organic inputs.

- d) Biological assessment of Soil Health.
- e) Launching and operationalisation of low cost certification system known as Participatory Guarantee System (PGS).
- f) Awareness creation and publicity for increasing adoption of organic farming.

6.14 Major achievement under NPOF during the year 2010-11 (April 2010-March 2011)

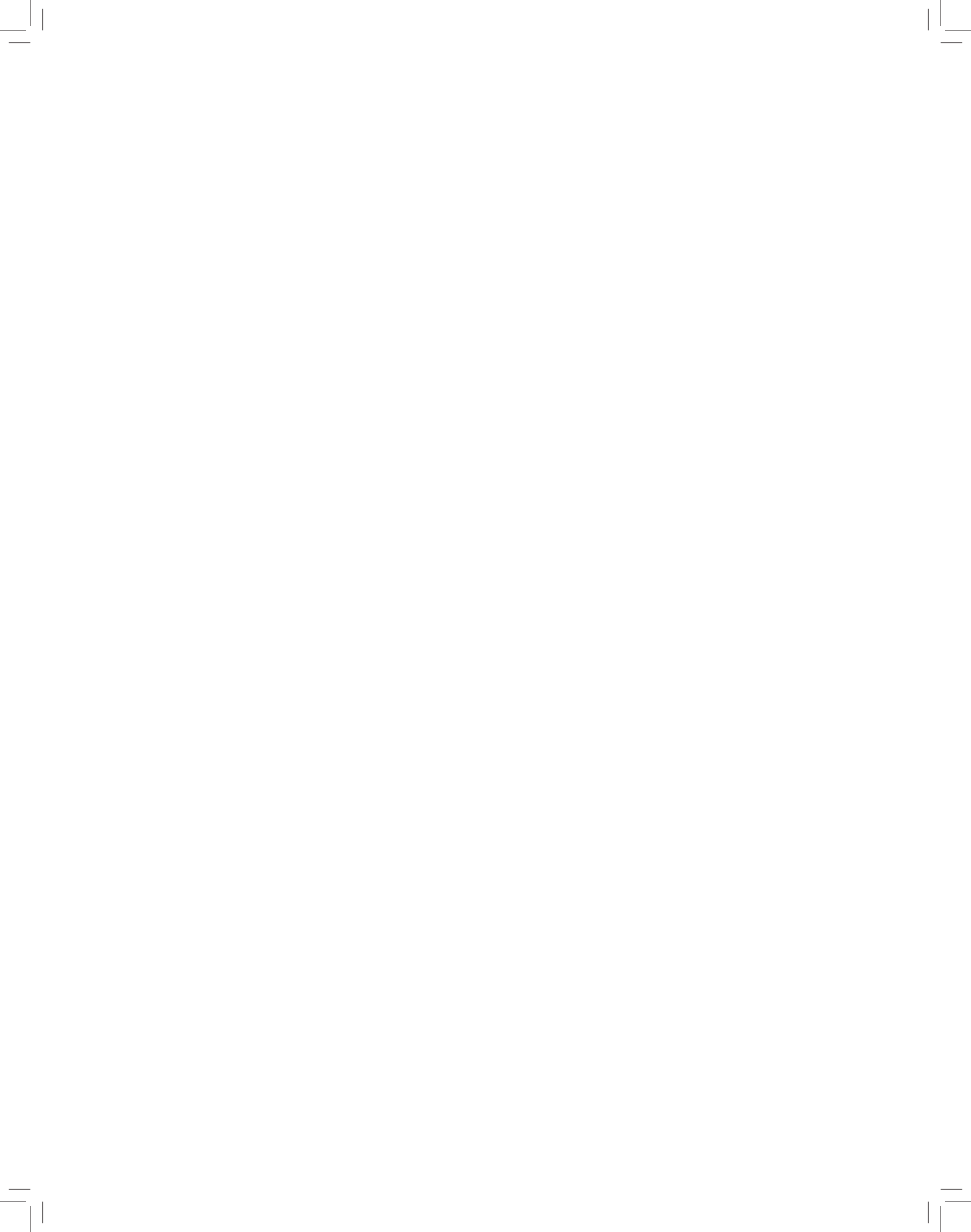
- a) Under Human Resources Development component 07 Training / Refresher Course for Analyst, 21 Trainers' Training Course on various aspects of organic farming, 29 Training for Extension Officers and 3 workshops on Participatory Guarantee System (PGS) and 2 workshops on Biological Soil Health Assessment were organized.
- b) 1,228 samples of bio-fertilisers and 271 samples of organic manures were analysed for quality control.
- c) Four issues of Organic Farming Newsletter and two issues of Biofertilisers Newsletter were published.
- d) 1,465 mother culture strains of different microorganisms were supplied to various biofertilisers production units in the country.
- e) 1,30,471 copies of literature were distributed and 18 exhibitions, 64 radio talk, and 52 television programmes were organised on various activities of NPOF.

To ensure access of organic quality assurance system to small and marginal farmers at marginal cost, a farmers group centric organic guarantee system known as Participatory guarantee system (PGS) has been introduced.

CHAPTER-7

Plant Protection







7

Plant Protection

7.1 Plant protection is an important component of crop production programme. Plant protection activities encompass plant quarantine, regulation of pesticides, activities aimed at minimizing crop losses due to pests including locust control in desert areas, and training and capacity building in plant protection.

7.2 Plant Quarantine: The objective of plant quarantine primarily is to prevent introduction of exotic pests, diseases and weeds through imports of agricultural commodities or plant material into India and similarly prevent introduction of indigenous pests, diseases and weeds in other countries through exports. The Plant Quarantine (Regulation of Import into India) Order, 2003 issued under provisions of Destructive Insects and Pests Act, 1914 (DIP Act) regulates imports. Post entry quarantine inspection is undertaken in case of propagation plant material. Phytosanitary certificates (PSCs) are issued for exports as per International Plant Protection Convention (IPPC), 1951 of the Food and Agriculture Organization (FAO). These functions are being discharged by 36 Plant Quarantine Stations (PQSs) 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 agriculture products.

The plant quarantine infrastructure is created and maintained under central sector plan scheme 'Strengthening and Modernization of Plant Quarantine Facilities'. PQSs at Bongaon, Cochin, Kandla and Tuticorin have acquired ISO 9001:2000 certification now in addition to 5 major PQS at Amritsar, Chennai, Kolkata, Mumbai and New Delhi for quality management in provision of plant quarantine services. Molecular diagnostic facilities have been established at Chennai, Kolkata, Mumbai and New Delhi.

7.3 During 2011-12 (upto December'11), Pest Risk Analyses (PRAs) for import of 31 items were completed and technical information provided for export of 5 items to concerned National Plant Protection Organizations. 10,899 import permits were issued for seeds and plant material and screening of 49.63 lakh metric tonnes of imported agricultural commodities was undertaken. Phytosanitary inspection for export of 69.38 lakh metric tonnes of plants and plant material was conducted and 78,748 PSCs issued. 374 pest control agencies have been accredited for

undertaking fumigation as on 31.12.2011 including 7 new agencies. 181 agencies have been accredited for Forced Hot Air Treatment (FHAT) for wood and wood packaging material including 27 new agencies.

7.4 The web based Plant Quarantine Information System (PQIS) is now providing plant quarantine services relating to issue of import permits, PSCs and release orders to importers and exporters.

7.5 Integrated Pest Management: Integrated Pest Management (IPM) is an eco-friendly approach which aims at keeping pests below economic threshold level (ETL) by employing all available 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 such as *Neem* formulations. The use of chemical pesticides is advised as a last resort when pests cross ETL. IPM related activities are being implemented through 31 Central Integrated Pest Management Centres (CIPMCs) established in 28 States and one Union Territory. These activities are funded under central sector plan scheme 'Strengthening and Modernization of Pest Management Approach (SMPMA)'.

7.6 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 2011-12 (upto December'11), 598 FFSs were conducted by CIPMCs in which 17,370 farmers and 1,222 Agriculture Extension Officers (AEOs) were trained.

7.7 Apart from conducting FFSs, the CIPMCs carry out pest/disease monitoring

and conservation, production and release of bio-control agents. Pest and disease situation was surveyed covering 6.30 lakh hectares. A total of 13.64 crore bio-control agents were mass produced in laboratories and released against insect-pests in various crops. Augmentation and conservation was taken up in 61,500 hectares (upto December'11).

7.8 A national plan on rodent pest management is under implementation to build capacity and train manpower, create awareness, involve community based organizations and launch rodent control campaigns at village level in identified endemic areas.

7.9 Seed Treatment Campaign: Seed treatment is the use and 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 1997, seed treatment campaign is taken up every year by Department of Agriculture and Cooperation (DAC) during Kharif and Rabi seasons involving State Departments of Agriculture and CIPMCs.

7.10 Implementation of the Insecticides Act: The Insecticides Act, 1968 regulates import, manufacture, sale, transportation, distribution and use of insecticides with a view to prevent risk to humans or animals, and for matters connected therewith. A Registration Committee, constituted under Section 5 of the Act, is empowered with registration of insecticides under Section 9 of the Act after verifying that it is efficacious and safe for use by farmers. During 2011-12 (upto December'11), 1,623 registrations were granted. In order to bring about greater transparency and efficiency in the process of registration of pesticides, on-line registration of insecticides on website of the Central Insecticides Board and Registration Committee (CIB&RC) has been operationalized. The system enables on-line filing of applications for

registration, status of processing, reporting of deficiencies, and automated work flow of registration process and generation of Certificate of Registration alongwith label and leaflets.

7.11 A campaign to prevent manufacture and sale of spurious pesticides has been launched by DAC in cooperation with all State Governments and the respective CIPMCs.

7.12 The quality of pesticides is monitored by Central and State Insecticide Inspectors who draw samples of insecticides from market for analysis in 68 State Pesticide Testing Laboratories (SPTLs) in 23 States and one Union Territory. For the States which do not have facilities for testing pesticides, facilities of testing samples at Regional Pesticides Testing Laboratories (RPTLs), set up by Central Government at Chandigarh and Kanpur, are available. In case of dispute, samples are referred to Central Insecticides Laboratory (CIL), Faridabad. Towards greater quality assurance in pesticide analysis services, 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 of bio-pesticide testing facilities is being provided.

7.13 Establishment of a National Pesticide Reference Repository (NPRR) to address issues of supply of reference standards and variation in analysis of pesticide samples has been approved. For detecting presence of chemical pesticides in microbial bio-pesticides/products, setting up of a new laboratory at national level, namely, National Pesticides Investigational Laboratory (NPIL) has also been approved. This laboratory will also

have a Technical Audit Division to test a proportion of pesticide samples being analyzed by pesticides testing laboratories. NPRR and NPIL would help bring about a distinct change in standard of testing of pesticides. New posts for the purpose have been sanctioned.

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

7.15 Monitoring of Pesticide Residue at the National Level: The scheme 'Monitoring of Pesticide Residue at National Level' was launched in 2005 as a central sector scheme to collect, collate and analyse data and information on a centralized basis, on prevalence of pesticide residues in agri produce of farm-gate and market yards. Samples of agricultural commodities and food commodities, including animal produce, are drawn and analysed in 21 laboratories under different Departments, State Governments and Agricultural Universities. During 2011-12 (upto December,2011), 12,650 samples including vegetables, fruits, rice, wheat, milk, butter, meat, fish and marine products, spices, tea, honey and water were analysed.

7.16 Locust Control and Research: The Locust Warning Organization (LWO) under DPPQ&S, which monitors locust development/activities over an area of 2 lakh sq. km of the Scheduled Desert Area

(SDA) in parts of Rajasthan, Gujarat and Haryana, has 10 Circle Offices located at Bikaner, Jaisalmer, Barmer, Jalore, Nagaur, Phalodi, Churu, Suratgarh, Palanpur and Bhuj. Its field headquarter is located in Jodhpur and a central headquarter at Faridabad. Besides, there is a Field Station for Investigations on Locusts (FSIL) in Bikaner. To strengthen locust monitoring, remote sensing images are being used. LWO maintains its own wireless network for exchanging information on locust surveys and control between locust outposts, circle offices and headquarter at Faridabad. Wireless communication between Jodhpur (India) and Karachi (Pakistan) is also maintained every year from June to November for exchanging locust intelligence between the two countries. Four Indo-Pak border meetings were conducted at the Munabao (India)/Khokhrapar (Pakistan) border point during 2011-12 (upto December, 2011). 18 locust situation bulletins were issued and an area of 2.17 lakh hectares in SDA was monitored through locust surveys.

7.17 Capacity Building in Plant Protection: The National Plant Protection Institute (NPPTI), Hyderabad was converted during 2008-09 into a society to give it more autonomy. The institute, re-named as the National Institute of Plant Health Management (NIPHM), is headed

by a Director General. NIPHM has entered into MOUs with selected institutions and has initiated new courses, including training courses for officers of DPPQ&S. A new faculty building is under construction. NIPHM is being developed as the premier institution for capacity building. During 2011-12 (upto December, 2011), 51 regular courses were conducted at NIPHM wherein 1042 trainees from various States and organizations were trained in different aspects of plant protection.

7.18 National Agricultural Biosecurity System: In view of threat perception to biosecurity of country on account of increasing international trade, emergence of trans-boundary diseases of plants and animals (such as Ug-99 wheat stem rust and avian influenza), introduction of genetically modified organisms, climate change and bio-terrorism, Ministry of Agriculture has prepared a proposal for putting in place a National Agricultural Biosecurity System (NABS). The proposal is based on recommendations of National Commission on Farmers headed by Prof. M.S. Swaminathan and National Policy on Farmers 2007. The proposal envisages creation of an autonomous National Agricultural Biosecurity Authority (NABA) for which an Agricultural Biosecurity Bill is being finalized.

CHAPTER-8

Agricultural Credit and Crop Insurance







8

Agricultural Credit and Crop Insurance

8.1 The Government has taken many policy initiatives for strengthening of farm credit delivery system for providing credit at affordable 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.

8.2 INSTITUTIONAL ARRANGEMENTS: Agricultural credit is disbursed through a Multi-Agency network comprising of Commercial Banks (CBs), Regional Rural Banks (RRBs) and Cooperatives. With their vast network (covering almost all the villages in the country), wider coverage and outreach extending to the remotest part of country, the Cooperative Credit

Institutions, both in short and long-term structure are the main institutional agency for dispensation of agricultural credit.

As per the report of National Federation of State Cooperative Banks Ltd., there are 94,647 Primary Agricultural Credit Societies (PACS), 372 District Central Cooperative Banks (DCCBs) with 13181 branches and 31 State Cooperative Banks (SCBs) with 1015 branches providing primarily short-term and medium term agricultural credit in the country. As per the report of National Cooperative Agriculture & Rural Development Banks' Federation Ltd., the long term cooperative credit structure consists of 19 State Cooperative Agriculture and Rural Development Banks (SCARDBs) of which 7 are unitary structure with 716 branches and 12 are federal structure with 655 Primary Agricultural & Rural Development Banks having 1045 branches.

8.3 POLICY INITIATIVES FOR INCREASING THE FLOW OF CREDIT

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:-

- a. In order to improve the flow of credit and mitigate the distressing situation of farmers due to the problem of indebtedness, the Government of India on 18.6.2004 announced a special farm credit package. The package inter alia envisaged that credit to agriculture sector will double in next three years.
- b. Banks have been advised to simplify the procedure for documentation for agricultural loans and to cover all eligible and willing farmers under Kisan Credit Card.
- c. To improve the outreach among the poor and the informal sector, the SHG-Bank linkage programme was intensified. Banks have also been advised to finance Joint Liability Groups and Tenant Farmers' Groups.
- d. As part of the measures announced by the Reserve Bank of India (RBI) for financial inclusion, banks have been advised to open "No Frills" accounts and issue simple overdraft facility against such accounts. Banks have also been advised to issue General Credit Cards upto Rs. 25,000/- without insisting on security and end use of funds.
- e. Banks have been advised to undertake, on a pilot basis, 100% financial inclusion in at least one district in each State. Based on the success of the pilot, the State Level Bankers Committee in the States will draw a time bound plan for achieving 100% financial inclusion in other districts of the State.

8.4 REVIVAL PACKAGE FOR SHORT TERM COOPERATIVE CREDIT STRUCTURE:

In pursuance of recommendations made by the Vaidyanathan Committee Task Force, the Govt. of India had approved a Revival Package for Short Term Cooperative Credit Structure (STCCS) aimed at making it a well managed and vibrant structure to best serve the credit needs of Rural India. Revival Package envisages an outlay of Rs.13,596 crore for recapitalization of STCCS, capacity building & training and computerization subject to legal reforms by the State Governments. The Revival Package seeks to (a) provide financial assistance to bring the system to an acceptable level of health; (b) introduce legal and institutional reforms necessary for their democratic, self-reliant and efficient functioning; and (c) take measures to improve the quality of management as an *integrated* package. So far, 25 States, namely, Andhra Pradesh, Arunachal Pradesh, Assam, Bihar, Chhattisgarh, Gujarat, Haryana, Jammu & Kashmir, Jharkhand, Karnataka, Madhya Pradesh, Maharashtra, Manipur, Meghalaya, Mizoram, Nagaland, Rajasthan, Odisha, Punjab, Sikkim, Tamil Nadu, Tripura, Uttarakhand, Uttar Pradesh and West Bengal have signed the Memorandum of Understanding (MoU) with Government of India and NABARD. These states cumulatively cover 96% of the STCCS units in the country. Under the package an amount of Rs. 9002.98 crore has been released by NABARD as Government of India's share for recapitalisation of 53,205 PACS as on 30th November, 2011.

8.5 KISAN CREDIT CARD

Banks are issuing Kisan Credit Cards to farmers for providing adequate and timely support from the banking system for their cultivation needs including purchase of all inputs in a flexible and cost effective manner. About 1078 lakh KCC have been

issued upto 30th October, 2011. Further, under Kisan Credit Card, a farmer is sanctioned loan for short term / medium term & long term and a reasonable component of consumption credit within the overall limit sanctioned to the borrowers. Banks have been advised to provide active KCCs to all the eligible and willing farmers in a time bound manner.

8.6 RATE OF INTEREST ON AGRICULTURAL LOAN:

From Kharif 2006-07, farmers are receiving crop loans upto a principal amount of Rs. 3 lakh at 7% rate of interest. In the year 2009-10, Government provided an additional 1% interest subvention to those farmers who repaid their short term crop loans as per schedule. The Government has raised this subvention for timely repayment of crop loans from 1% to 2% from the year 2010-11. Again Government has raised this subvention for timely repayment of crop loans from 2% to 3% from the year 2011-12. Thus the effective rate of interest for such farmers will be 4 % p.a. Government has extended the benefit of interest subvention to small and marginal farmers having KCCs for a further period of up to six months post harvest on the same rate as available to crop loan against negotiable ware house receipt for keeping their produce in ware houses.

8.7 REHABILITATION PACKAGE FOR DISTRESSED FARMERS:

Government of India has implemented a Special Rehabilitation Package of Rs. 16978.69 crore for 31 suicide prone Districts in the four States, namely, Andhra Pradesh, Maharashtra, Karnataka and Kerala. The implementation period of the package has ended on 30.09.2011. As on 30.06.2011, Rs. 19910.70 crore has been released to these States for implementation of package.

8.8 The Government has also approved package for Development of Kuttanad

Wetland Eco-system and mitigation of agrarian distress in Idukki district of Kerala envisaging an outlay of Rs.1840.75 crore and Rs.764.45 crore respectively.

8.9 FLOW OF CREDIT-ACHIEVEMENT:

A. 2009-10 (1st April, 2009 to 31st March, 2010)

- i) The target of agriculture credit flow for the year 2009-10 was fixed at Rs. 325000 crore and the achievement as on 31st March, 2010 was Rs. 384514 crore forming 118% of the target.
- ii) During this period, around 54.16 lakh and 5.71 lakh new farmers have been financed by the Public Sector Commercial Banks and Private Sector Commercial Banks respectively. Further, RRBs have financed 17.62 lakh new farmers during this period. Thus the total number of new farmers financed by CBs and RRBs together formed 77.49 lakh, against the target fixed at 50.00 lakh for the year. In addition to this, the Cooperative Banks have financed 13.43 lakh new farmers during this period totaling the new farmers financed by the Banking System to 90.92 lakh.

B. 2010-11 (1st April, 2010 to 31st March, 2011)

- i) The target of agriculture credit flow for the year 2010-11 was fixed at Rs. 375000 crore and the achievement as on 31st March, 2011 was Rs. 446779 crore forming 119% of the target.
- ii) During this period, around 57.96 lakh and 5.63 lakh new farmers have been financed by the Public Sector Commercial Banks and Private Sector Commercial Banks respectively. Further, RRBs have financed 41.37 lakh new farmers during this period. Thus the total number of new farmers financed by CBs and RRBs together formed 104.96 lakh, against the

target fixed at 50.00 lakh for the year. In addition to this, the Cooperative Banks have financed 22.30 lakh new farmers during this period totaling the new farmers financed by the Banking System to 127.26 lakh.

C. 2011-12 (1st April, 2011 to 30th November, 2011)

- i) The target of agriculture credit flow for the year 2011-12 is fixed at Rs. 475000 crore and the achievement as on 30th November, 2011 is Rs. 294022.95 crore forming 62% of the target.
- ii) During this period, around 36.09 lakh and 2.52 lakh new farmers have been financed by the Public Sector Commercial Banks and Private Sector Commercial Banks respectively. Further, RRBs have financed 17.23 lakh new farmers during this period. Thus the total number of new farmers financed by CBs and RRBs together formed 55.84 lakh, against the target fixed at 50.00 lakh for the year. In

addition to this, the Cooperative Banks have financed 12.81 lakh new farmers during this period totaling the new farmers financed by the Banking System to 68.65 lakh.

AGRICULTURE INSURANCE

8.10 Department of Agriculture & Cooperation is administering four Central Sector Crop Insurance Schemes namely (i) National Agricultural Insurance Scheme (NAIS) (ii) Pilot Modified National Agricultural Insurance Scheme (MNAIS) (iii) Pilot Weather Based Crop Insurance Scheme (WBCIS) & (iv) Pilot Coconut Palm Insurance Scheme (CPIS) to provide financial protection/ assistance to the farmers against the crop damages due to natural calamities, pests & diseases and adverse weather conditions. The penetration/coverage of these schemes in terms of area, number of farmers has reached to about 20% of the farmers / cropped area of the country. The details of coverage during last five years are as under: -

(Rs. In lakhs)

Sl. No.	Year	Farmers Insured (no)	Area Insured (ha)	Sumwsured	Premium	Claims Paid/ payable	Farmers benefitted (no)
Xth Plan Terminal Year							
1	2006-07	17912097	27305875.36	2130167.59	61016.99	229087.27	4521941
XI Plan							
2	2007-08	19128731	29210232.09	2626652.13	83138.41	183100.62	3397897
3	2008-09	19599952	26974769.88	2770143.02	88933.08	392853.76	6423542
4	2009-10	26214803	37077862.19	4359426.8	159549.9	515886.52	10383842
5	2010-11	27669862	38195818.13	5151991.96	232720.2	194728.81	6011456

Under aforesaid schemes, Rs. 1539 crore and Rs. 3135.85 crore have been released during the financial year 2009-10 & 2010-11, respectively against committed liability towards subsidy in premium of farmers, claims, administrative expenses and publicity etc and budget provision of Rs. 1151.00 crore has been provided during the financial year 2011-12 under these schemes.

NATIONAL AGRICULTURAL INSURANCE SCHEME (NAIS)

8.11 National Agricultural Insurance Scheme (NAIS) with increased coverage of farmers, crops and risk commitment was introduced in the country from Rabi 1999-2000 replacing the erstwhile Comprehensive Crop Insurance Scheme (CCIS). The main objective of the scheme is to protect the farmers against

the crop losses suffered on account of natural calamities, such as, drought, flood, hailstorm, cyclone, pests and diseases. The scheme is implemented by the Agriculture Insurance Company of India Ltd. (AIC).

8.12 The scheme is available to all the farmers both loanee and non-loanee irrespective of their size of holding. It envisages coverage of all the food crops (cereals, millets and pulses), oilseeds and annual commercial/horticultural crops, in respect of which past yield data is available for adequate number of years. Among the annual commercial/horticultural crops, sugarcane, cotton, ginger, jute, onion, potato, tomato, brinjal, turmeric, chillies, garlic, pine-apple, annual banana, tapioca, Isabgol, methi, coriander, cumin and fennel have been covered under the scheme. Other annual commercial/horticultural crops are covered subject to availability of past yield data. The scheme is operating on the basis of 'Area Approach' i.e. defined

areas for each notified crops.

8.13 The premium rates are 3.5% of sum insured for bajra and oilseeds, 2.5% for other Kharif crops; 1.5 per cent for wheat, and 2 per cent for other Rabi crops. In the case of commercial/horticultural crops, actuarial rates are charged. Under the scheme, Small and Marginal farmers were originally provided the subsidy of 50% of the premium charged from them which has been phased out over a period of 5 years and at present, 10% subsidy in premium is available to small & marginal farmers which is shared equally by Centre and State Governments. The scheme is optional for States/UTs. At present, the scheme is implemented by the following 25 States and 2 Union Territories. State-wise details of farmers covered, area covered, sum insured and insurance charges under NAIS during the last twenty three crop seasons (i.e. from Rabi 1999-2000 to Rabi 2010-11 are given as under :-

(Rs. in lakh)

Sl. No.	States/UTs.	Farmers Insured (no)	Area Insured (ha.)	Sum Insured	Premium Collected	Claims Paid	Farmers Benefitted (no.)
1	Andhra Pradesh	24938178	38656448.35	4396726.93	127067.16	409922.18	6009224
2	A&N Island	1678	2543.79	264.66	5.53	3.30	110
3	Assam	228003	177229.49	33742.97	905.68	951.40	38540
4	Bihar	5691420	6979022.79	1102979.86	28198.80	164680.54	2358588
5	Chhattisgarh	7580035	15584652.19	668009.62	17093.07	36816.83	1604808
6	Goa	7261	12314.38	252.99	4.48	2.36	702
7	Gujarat	11111946	25874389.71	2502157.72	99220.11	391704.36	3747379
8	Haryana	594837	691848.08	67575.11	2073.67	3450.11	118496
9	Himachal Pradesh	245013	185331.19	26654.17	570.85	1563.43	103799
10	J&K	29312	41893.79	3043.76	59.80	54.43	4292
11	Jharkhand	5458199	3079485.20	261984.95	6586.99	46830.73	2096411
12	Karnataka	10997777	18164665.44	1326984.99	40904.89	163506.51	4420588

13	Kerala	383108	332232.88	59354.17	1255.82	2413.32	70235
14	M.P.	21709557	54992193.09	2763626.10	79673.44	123082.81	4338210
15	Maharashtra	27921302	24676990.92	1631648.93	63061.62	187353.56	8668596
16	Manipur	11271	11384.37	3129.34	78.19	234.77	11271
17	Meghalaya	25140	27198.82	3800.90	200.24	42.89	2496
18	Mizoram	121	134.00	23.24	0.58	11.23	119
19	Odisha	11453718	11476524.01	1303880.47	32357.77	65734.37	1971782
20	Puducherry	31274	45472.95	6975.87	130.71	239.03	5818
21	Rajasthan	15058674	31379980.35	1620309.00	45754.35	262165.99	5200566
22	Sikkim	1785	1269.82	206.82	2.47	1.28	86
23	Tamil Nadu	4302721	5751544.71	1066770.53	25593.65	139247.88	1626694
24	Tripura	17302	10718.31	2253.50	65.38	58.31	3432
25	UP	18704064	25308681.41	2299099.98	46780.74	96063.80	4086268
26	Uttarakhand	309435	299297.60	63774.10	1488.34	4107.92	113925
27	West Bengal	9384928	4766598.13	915516.64	40197.90	87087.88	2077728
	Total	176198059	268530045.8	22130747	659332.23	2187331.22	48680163

NB:-Figures are as on 31/12/2011

8.14 The outlay for 11th Plan was fixed up at Rs. 3500 crore. As against, the budget provision of Rs. 500 crore, Rs. 644 crore, Rs. 644 crore, Rs. 950 and Rs.550 crore for the first, second, third, fourth and fifth financial years i.e. 2007-08, 2008-09, 2009-10, 2010-11 and 2011-12, Rs. 718.88 crore, Rs. 694 crore, Rs. 1419 crore, Rs. 2660.00 and Rs.210.00 crore (as on 31.12.2011) have been utilized respectively.

Pilot Modified National Agricultural Insurance Scheme

8.15 To improve further and make the scheme more farmer friendly scheme, a Joint Group was constituted by GOI to study the existing crop insurance schemes. Based on the recommendations of the Joint Group and view/comments of various

stakeholders, a proposal on Modified National Agricultural Insurance Scheme (MNAIS) was prepared which has been approved for implementation on pilot basis in 50 districts during the remaining period of 11th Plan.

The salient improvements made in MNAIS are as under:

8.16 The major improvements made in MNAIS:

- Actuarial premium with subsidy in premium ranging 40% to 75% to all farmers;
- Only upfront premium subsidy is shared by the Central and State Government on 50:50 basis and all claims liability would be on the insurance Company.
- Unit area of insurance reduced to

- village/ village panchayat level for major crops.
- Indemnity for prevented sowing/ planting risk and for post harvest losses due to cyclone;
 - On account payment up to 25% of likely claims as immediate relief to farmers;
 - Uniform seasonality discipline for loanee and non-loanee farmers;
 - More proficient basis for calculation of threshold yield; and minimum indemnity level increased to 70% instead of earlier 60%;
 - The scheme is compulsory for loanee farmers and voluntary for non-loanee farmers;
 - Participation of private sector insurers for creation of competitive environment for crop insurance.
 - It has also been proposed to set up a catastrophic fund at the national level contributed by the central and the state government on 50:50 basis to provide

protection to the insurance companies in the event of premium to claim ratio exceeds 1:5 at national level and failure to procure appropriate reinsurance cover at competitive rates;

- NAIS would be withdrawn for those area(s)/crop(s) of the districts in which MNAIS is proposed to be implemented.

8.17 During Rabi 2010-11, the pilot was implemented by 12 States in 34 districts and 3.58 lakh farmers have been covered over an area of 3.23 lakh hectares insuring a sum amounting to Rs.694.06 crore against the premium income of Rs.47.32 crore. The claims amounting to Rs. 13.45 crores have been provided to 43324 farmers. During Kharif 2011, 14 States in 35 districts and 4.60 lakh farmers have been covered over an area of 7.19 lakh hectares insuring a sum amounting to Rs.3381.60 crore against premium income of Rs.103.96 crore. State-wise details are given in the table below: -

(Rs. in lakh)

Sl. No.	States/UTs.	Farmers Insured	Area Insured (ha.)	Sum Insured	Premium Collected	Claims Paid *	Farmers Benefitted (no.)
1	Andhra Pradesh	156754	226316.53	48953.98	1999.55	69.62	1429
2	Assam	6738	4756	1885.22	99.89	0	0
3	Bihar	61210	90539	19029.11	2664.30	321.66	5133
4	Chhattisgarh	18	32	4.76	0.22	0	0
5	Gujarat	236	336.06	155.17	14.31	0	0
6	Haryana	36700	71531.02	30445.72	1156.94	0	0
7	Jharkhand	2844	2558	561.83	71.69	0	0
8	Karnataka	161031	284976	231945.90	4202.71	0	0
9	MP	55406	96586.57	13042.90	894.79	3.33	209
10	Maharashtra	50621	47963	7402.46	1348.56	0	0
11	Mizoram	453	433	74.49	5.24	0	0
12	Odisha	40434	32704	8843.15	426.41	401.03	7792
13	UP	214964	158468	39237.13	1970.55	549.86	28761
14	Uttarakhand	31623	25797	5984.14	273.35	0	0
	Total	819032	1042996.18	407565.96	15128.51	1345.50	43324

(Figures are as on 31/12/2011)

* Assessment and payment of claims are under progress according to availability of yield data from states.

8.18 The scheme is expected to be implemented in all 50 districts during Rabi 2011-12 season. As against, the budget provision of Rs. 50.00 crore, Rs. 25.00 crore for its first financial year i.e. 2010-11 have been utilized. In 2011-12 budget provision for the scheme has been kept at Rs.150.00 crore and Rs. 62.07 crore has been utilized.

Pilot Weather Based Crop Insurance Scheme (WBCIS)

8.19 With the objective to bring more farmers under the fold of Crop Insurance, a Pilot Weather Based Crop Insurance Scheme (WBCIS) was launched in 20 States (as announced in the Union Budget 2007). WBCIS is intended 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. The WBCIS is based on actuarial rates of premium but to make the scheme attractive, premium actually charged from farmers are restricted at par with NAIS.

8.20 The scheme has been implemented in Kharif 2007 by (1 State), Rabi 2007-08 (4 States), Kharif 2008 (10 States), Rabi 2008-09 (10 States), Kharif 2009 (13 States), Rabi 2009-10 (11 States), and Kharif 2010 (16 States) and Rabi 2010-11 (14 states). The scheme is being implemented in 15 states during Kharif 2011 season. During last five years, i.e. 2007-08, 2008-09, 2009-10, 2010-11 and 2011-12, Rs 69.19 crore, Rs. 100.00 crore, Rs. 120.00, Rs.450 crore and Rs.442.12 crore respectively has been released as Govt. of India share towards subsidy in premium provided to the farmers. State-wise cumulative progress achieved is as under:-

(Rs. in lakh)

Sl. No.	States/UTs.	Farmers Insured	Area Insured (ha.)	Sum Insured	Premium Collected	Claims Paid	Farmers Benefitted (no.)
1	Andhra Pradesh	1029618	1707193.27	382575.38	37748.59	2771.35	74890
2	Bihar	3220363	3539315.86	711502.29	59469.35	20081.68	897052
3	Chhattisgarh	22334	41596.92	5724.56	442.17	188.69	5442
4	Gujarat	497661	413126.4	22394.75	2239.47	857.35	170576
5	Haryana	29109	67094.8	20831	1909.39	375.62	7308
6	Himachal Pradesh	46456	7843.98	10378.09	1198.44	460.39	18979
7	Jharkhand	130096	79687.08	12659.81	1264.68	405.23	61158
8	Karnataka	371026	460285.87	56566.86	6087.59	2816.86	154679
9	Kerala	24564	20209.88	5603.04	600.37	288.92	15329
10	M.P.	1009410	1646998.64	238048.58	28478.19	11607.1	742354
11	Maharashtra	99247	150148.04	85644.08	3341.2	1372.59	83448
12	Odisha	282506	402874.11	50127.2	5012.72	1289.72	115344
13	Punjab	67	338.2	47.58	4.79	0.67	50

14	Rajasthan	1251242	19052480.79	1453322.70	135218.88	53951.94	3758851
15	Tamil Nadu	84015	102761.8	18697.73	1850.42	298.49	20961
16	UP	85220	48706.79	10654.28	1190	5.72	9798
17	Uttarakhand	23127	8534.83	7061.42	847.37	124.25	1143
18	West Bengal	94215	118347.39	15386.61	1497.53	324.24	22377
	Total	19561496	27867544.65	3107225.96	288401.2	97220.81	6159739

(Figures as on 31.12.2011)

Pilot Coconut Palm Insurance Scheme (CPIS)

8.21 The Coconut Palm Insurance Scheme (CPIS) has also been approved for implementation on pilot basis for years 2009-10 and 2010-11 in the selected areas of Andhra Pradesh, Goa, Karnataka, Kerala, Maharashtra, Odisha and Tamil Nadu. The pilot has been extended on existing pattern for 2011-12. The Sum Insured (SI) is based on the average input cost of the plantation and the age of the specific plant. The SI varies from Rs. 600 per palm (in the age group of 4-15 years) to Rs. 1150 per palm (in the age group of 16-60 years). The premium rate per palm ranges from Rs. 4.25 (in the age group of 4 to 15 years) to Rs. 5.75 (in the age group of 16 to 60 years). Fifty per cent of premium is

contributed by GOI; 25% by the concerned State Govt. 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 and responsible for making payment of all claims within a specified period. The CPIS is being administered by the Coconut Development Board (CDB).

8.22 During the financial year of 2009-10 and 2010-11, Rs. 10.00 lakh and Rs. 85.19 lakh respectively were released to Coconut Development Board for the scheme. During the current financial year i.e. 2011-12, Rs.1.00 crore has been earmarked for the scheme. The details of coverage under CPIS as on 31.12.2011 are as under:-

(Rs. In lakh)

Sl. No.	State	No. of farmers	Area (Ha)	No. of Palms	Sum insured	Premium	Claims Paid	Farmers benefitted
1.	Andhra Pradesh	9	13.33	1200	7.20	0.05	0.00	0.00
2	Kerala	31509	37124	1282574	8984.04	70.99	88.37	2314
3	Goa	240	628.39	59643	692.50	3.32	1.63	14
4	Maharashtra	1673	931.14	125469	1301.53	6.83	0.00	0.00
5	Karnataka	615	566.63	82181	897.63	5.08	0.76	22
6	Tamil Nadu	1489	2620	340648	3674.79	18.93	5.66	79
7	West Bengal	692	285.61	28558	328.42	1.64	0.00	0.00
	Total	36227	42169.1	1920273	15886.11	106.84	96.42*	2429

* Claims of nearly 15 lakh are to be settled.

8.23 The above schemes are demand driven, therefore, SC/ST/Women Gender-wise & State-wise allocations are not made under the schemes.

8.24 Other Major Initiatives:

- Insurance proposal for covering hailstorm and cloudburst perils in Pilot Weather Based Crop Insurance Scheme on “add on” basis initially for

apple (Himachal Pradesh) and grapes (Maharashtra) have been finalized for approval of competent authority.

- Number of Crop Cutting Experiments (CCEs) for estimation of crop yield at village/ village panchayat has been reduced from existing 8 CCEs to 4 CCEs except for Groundnut crop under NAIS/MNAIS.

CHAPTER-9

Agricultural Extension







9

Agricultural Extension

9.1 EXTENSION REFORMS – ATMA

MODEL: The Centrally Sponsored Scheme, “**Support to State Extension Programme for Extension Reforms**” based on Agricultural Technology Management Agency (ATMA) model is an important initiative for revitalization of the Extension System in the States. The Scheme aims at promoting decentralized demand-driven and farmer-accountable extension system through an innovative institutional arrangement for technology dissemination in the form of an Agricultural Technology Management Agency (ATMA). This District level institution is an apex body for coordination and management of agricultural extension system in the district. At the block level, the Block Technology Team (BTT) – a team of line Department representatives posted in the Block and Block Farmer Advisory Committee (BFAC) – a group exclusively of farmers in the block are jointly responsible for operationalization of the Scheme’s activities. Extension activities under the scheme are also promoted in Public-Private-Partnership (PPP) Mode with involvement of both - the governmental and non-governmental agencies, including NGOs, PRIs, Farmers’ Organizations, para extension workers, agri-preneurs, cooperatives, input

suppliers and corporate sector.

9.2 The Scheme has been modified and strengthened during 2010-11 to provide manpower, infrastructure and enhanced activity support as enunciated below:

- i) Provision of specialist and functionary support at different levels viz. State Coordinator and faculty & supporting staff for SAMETI at State level, Project Director, Deputy Project Directors and supporting staff at District level and Block Technology Manager and Subject Matter Specialists at the Block level;
- ii) Innovative support through a ‘Farmer Friend’ at Village Level @ 1 Farmer Friend per two villages;
- iii) Revision in ATMA Cafeteria (i.e. list of extension related activities to choose from) which now includes some additional activities and also provides for enhanced unit costs for some of the activities;
- iv) Farmers’ Advisory Committees at State, District and Block levels comprising of a group of farmers to advise and provide inputs to the administrative bodies at each level;

- v) Support to SAMETIs for creating essential infrastructure; and
- vi) Delegation of powers to State Level Sanctioning Committee (SLSCs) set up under Rashtriya Krishi Vikas Yojana, to approve the State Extension Work Plan (SEWP) prepared under the Extension Reforms Scheme.

9.3 The Modified ATMA Scheme which is currently in operation in 604 districts of the country has yielded positive & prompt response from the states with regard to the modifications carried out in the scheme. Consequently, the process of recruitment of manpower began in 22 States with 6937 positions filled up in these States during 2010-11 and 2011-12. Further, the innovative mechanism of Farmer-to-Farmer Extension through 'Farmer Friend' has begun in 11 States with identification of 27829 Farmer Friends. Integration of research and extension systems and convergence of extension activities at various levels have been the important pillars of the scheme. For further improving the Research Extension Farmer Linkages in the field, a Joint Circular under the signatures of Secy. (A&C) and Secy. (DARE) was issued in January' 2011.

9.4 SUPPORT TO STATE EXTENSION PROGRAMMES FOR EXTENSION REFORMS SCHEME (ATMA Model):

The Scheme 'Support to State Extension Programmes for Extension reforms' launched during 2005-06, aims at making extension system farmer driven and accountable to farmers by way of new institutional arrangements for technology dissemination in the form of an Agricultural Technology Management Agency (ATMA) at district level to operationalize the extension reforms. ATMA has active participation of farmers / farmers' groups, NGOs, Krishi Vigyan Kendras, Panchayati Raj Institutions and other stakeholders

operating at district level and below. The release of funds under ATMA scheme is based on State Extension Work Plans (SEWPs) prepared by the State Governments. At present the scheme is under implementation in 604 districts in 28 States and 3 UTs in the country.

9.5 In order to promote key reforms under the scheme, ATMA Cafeteria 2010 continues to support activities in line with the following policy parameters:

- **Multi-agency extension strategies:** Minimum 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 Plans (SREPs).
- **Farmer centric extension services:** The cafeteria provides for group-based extension and has necessary allocation for activities related to organizing and supporting farmers' groups. In order to supplement these efforts, a provision for rewards and incentives to the best organized farmers' 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 those supported under this scheme.

- **Mainstreaming gender concerns:** It is mandated that minimum 30% of resources on programmes and activities is utilized for women farmers. Similarly, 30% of resources meant for extension workers are to be utilized for women extension functionaries.
- **Sustainability of extension services:** It is mandated that minimum 10% contribution should be realized from beneficiaries with respect to beneficiary oriented activities.

9.6 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 fields of outstanding farmers, promoted at Block/ Gram Panchayat level by integrating the Progressive farmers into the Agricultural Extension System (AES) (3-5 Farm Schools/ block).
- Farmer-to-farmer extension support at the village level promoted through Farmers' Groups.
- 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) set up by KVKs promoted under the Programme.
- For Non-Governmental implementing agencies, States have been given the flexibility of having 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 charges 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 agripreneurs.
- Public extension functionaries would be made more effective through trainings and exposure visits. (MANAGE, Hyderabad offers PG Diploma in Agriculture Extension Management for public extension functionaries which is fully funded under the ATMA Programme).

9.7 Implementation Status:

- 604 ATMAs have been constituted in 28 States and 3 UTs.
- Institutional arrangements viz. Inter Departmental Working Group (IDWG)/ in 28 States and 3 UTs, ATMA Core Committees – Governing Board (GB) & ATMA Managing Committees in 604 Districts, Block Technology Teams (BTT) in 4463 Blocks & Block Farmer Advisory Committees (BFACs) reconstituted in 3317 Blocks; and FACs have been constituted at District Level (215) and State Level (8).

- SEWP of 28 States/ UTs prepared and approved based on District Agriculture Action Plans of 582 ATMA districts As against the B.E. of Rs. 500.00 crores, an amount of Rs. 277.35 crores has been released to the States up to December 2011 for implementation of the Scheme and total release since the inception of the scheme in 2005-06 to December 2011 has been to the tune of Rs.1137.20 crores.
- Physical performance of the Scheme since its inception in 2005-06 (April 2005 to December 2011) is as below:
 - Over 1,69,75,357 farmers including 42,30,140 farm women (24.92%) have participated in farmer oriented activities such as exposure visits, trainings, demonstrations & kisan melas.
 - Over 89,292 Commodity based Farmer Interest Groups (CIGs)/ FIGs have so far been mobilized under the scheme.
 - Over 32,399 Farm Schools have been organized on the fields of outstanding farmers.
- Progress of implementation during the current financial year (upto September, 2011):
 - Over 11,66,658 farmers including 3,11,459 farm women (26.69%) have participated in farmer oriented activities like exposure visits, trainings, demonstrations & kisan melas.
 - 12,882 CIGs/ FIGs organized.
 - 6601 Farm Schools organized.
 - 6937 specialists & functionaries have been reported as deployed.

9.8 Mass Media Support to Agricultural Extension:

This Scheme is focusing on the use of Doordarshan and All India Radio (AIR) existing infrastructure for providing Agriculture related information and knowledge to the farming community. 1 National Channel, 18 Regional Kendras and 180 High/Low Power Transmitters (HPT/LPT) of Doordarshan are telecasting agricultural programmes for 30 minutes, five to six days a week. Programmes of Regional Kendras and a few Narrowcasting Centres are being repeated the next day on respective Regional Satellite Channels. Similarly, 96 FM Stations of All India Radio are being utilized to broadcast 30 minutes of programme for farmers 6 days a week.

9.9 For telecasting success stories, innovations and for popularization of front-line technologies and farming practices through the Saturday slot of Doordarshan's National Channel, DAC is producing films which would consciously project inter-alia positive aspects in agriculture in India. During the period, 10 films covering success stories of farmers have been produced. These stories cover various areas of interest like Water conservation, Zero tillage, SRI technique, Vermi-compost, Farm schools etc.

9.10 With a view to increase viewership and provide enhanced content to the farmers, the transmission timings of 'Krishi Darshan' programme telecast from 25 out of 27 Narrowcasting Kendras, where Regional Kendras are also functioning, have been changed so that the farmers can view the programmes telecast by both Regional and NC Kendras, thereby benefiting farmers located in the range of 125 High Power / Low Power transmitters (HPT/LPT) who are now able to view 1 hour Agricultural programmes against the ½ hour programme which was earlier available.

9.11 The Free Commercial Time (FCT) available under Krishi Darshan and Kisanvani programme is being utilized for dissemination of Advisories on Rabi / Kharif, KCC, Kisan Credit Card, package of practices available to the farmers under various schemes of DAC, MSP, contingency plan developed by State Governments on emergent issues like Drought, Flood etc.

9.12 With a view to create awareness about the assistance available under various schemes, the Department of Agriculture & Cooperation, Ministry of Agriculture launched a “**Focused Advertisement Campaign**” cutting across all the Divisions of the Ministry. A number of audio/video spots have been produced and broadcast/telecast through 96 F.M. Stations of AIR under ‘Kisanvani’ programmes through National, 18 Regional & 180 High Power/ Low Power (HTPs/LTPs) of Doordarshan during ‘Krishi Darshan’ under the Scheme “Mass Media Support to Agricultural Extension” and also through National and Regional News and during entertainment programmes, films, etc. The spots have also been telecast through Private Channels operating at National & Regional Level during News, entertainment programmes, serials etc. during 12.00-7.00 p.m., 7.00 – 8.00 p.m. and 8.00-11.00 p.m. During 2011-12 two spots, judicious use of fertilizers and Poorvi Harit Kranti were made and they are being telecast along with other spots. In addition to this during this year, DAC has released six press advertisements on subjects like Judicious use of fertilizers, Safe use of pesticides, success stories of farmers etc.

9.13 Community Radio Stations (CRS) would make a major contribution to agricultural extension by utilizing the reach of radio transmitter and disseminating information and knowledge, produced locally having relevance for a specific area.

In order to give further boost to this, the guidelines for funding of private institutions have been revised. Till date 68 proposals have been received from KVKs/Private Institutions for funding of community Radio Stations under ATMA. 43 which were complete and eligible for funding, have been submitted to Ministry of Information & Broadcasting for issue of license. Out of these, Letter of intent (LOI) i.e. permission for issue of license has been issued to 18 KVK/Private Institutions, 6 proposals have been rejected by Ministry of Information & Broadcasting, 11 proposals are under process and 8 CRS are in operation upto November 2011.

9.14 Establishment of the Agri-Clinics and Agri-Business Centres (ACABC):

The ACABC scheme is under implementation since 2002. The scheme aims at creating gainful self-employment opportunities to unemployed agricultural graduates, agricultural diploma holders, and intermediates in agriculture and science graduates with post graduation in agriculture related courses; supporting agriculture development; and supplementing the efforts of public extension.

MANAGE is the implementing agency for training component under the scheme at identified Nodal Training Institutes (NTIs) in various states.

NABARD is the implementing agency for banks for implementing subsidy component under the scheme and is monitoring credit support to Agri-Clinics through Commercial Banks.

The scheme is open to graduates in agriculture and allied subjects/ biological science graduates with post graduation in agriculture & allied subjects from SAUs/ Central Agricultural Universities/ Universities recognized by ICAR/ UGC,

diploma / post graduate diploma holders in agriculture and allied subjects from State Agricultural Universities and also Intermediate (i.e. plus two) students with agriculture courses.

Credit linked back-ended subsidy @ 36% of the capital cost of the project funded through bank loan is available under the scheme. This subsidy is 44% for candidates belonging to SC/ST, Women and other disadvantaged sections and for those from North-Eastern and Hill areas.

So far, 27562 candidates have been trained and 9754 agri-ventures have been established in the country during the period of implementation of the scheme (since inception till December, 2011). During the year 2011-12, 3333 candidates have been trained and 1150 agri-ventures have been established till December 2011.

The ACABC scheme has recently been revised during the XIth Plan in relevant operational aspects and its scope has been expanded so as to harness the potential of rural educated unemployed youths to start agri-enterprises in rural areas for serving the farming community.

9.15 Pre-seasonal DAC-ICAR Interfaces: Pre-seasonal DAC-ICAR Interfaces are organized under the co-chairmanship of Secretary (A&C) and Director General (DG), ICAR to evolve joint strategies on the emerging Issues of Agriculture Sector. During the Interface both - the Department of Agriculture & Cooperation (DAC) and Indian Council of Agricultural Research (ICAR) share a common platform to deliberate on various recommendations made by expert groups in different Subject Matter Areas. Action Taken on the recommendations of previous Interface is also reviewed. The participants in DAC-ICAR Interface include senior officers from DAC, Department of Animal Husbandry,

Dairy and Fisheries (AHD&F) and ICAR. The Pre-Rabi DAC-ICAR Interface was organized in September, 2011 and the recommendations of the said interface were circulated to the concerned Divisional Heads of DAC, DAHD&F, ICAR, the states and related institutes for necessary follow-up action.

9.16 Kisan Call Centers – The scheme was launched on 21st January '04 to provide agricultural information to the farming community through toll free telephone lines. A country wide common eleven digit number '1800-800-1551' has been allocated for KCC. The replies to the queries of the farming community are being given in 22 local languages. Calls are attended from 6.00 am to 10.00 pm on all 7 days of the week. Since inception of the scheme till 30th November, 2011 over 73.79 lakh calls have been received. During the current year around 11.28 lakh calls have been received upto 30th November, 2011. In order to make farmers aware of this facility, audio and video spots on Kisan Call Centres have been broadcast/telecast through All India Radio, Doordarshan and private television channels. Kisan Knowledge Management system (KKMS) to provide correct, consistent and quick replies to the queries of farmers has been developed by putting therein validated information on agriculture and allied sectors. Modified Call Escalation Matrix has also been circulated.

Guwahati call Center caters to the needs of the North Eastern Region. Queries are replied in different languages depending on the area from where the query is received. Since the beginning of the scheme, the calls received from various states of North-Eastern Region are: Arunachal Pradesh (3734), Assam (55216), Manipur (24167), Meghalaya (12204), Mizoram (6896), Nagaland (1771), Sikkim (2482)

and Tripura (18248). The calls received from various states during the current year up to 30th November, 2011 are Arunachal Pradesh (604), Assam (10326), Manipur (58), Meghalaya (521), Mizoram (51), Nagaland (4), Sikkim (524) & Tripura (236).

9.17 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 (EElS) at the Regional level and the State Agricultural Management & Extension Training Institutes (SAMETIs) at the State level.

9.18 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 180 training courses planned, 128 training courses with 3148 participants have been organized by MANAGE up to August, 2011. Against the budget estimates of Rs.600.00 lakhs, an amount of Rs.437.42 lakhs has been released till August, 2011.

The self-financing educational training courses viz. two-year Post Graduate Programme in Agri-Business Management, one-year Post Graduate Diploma in Agri-Warehousing and Cold Chain Management (AWACCM), and one year distance education Diploma in Agricultural Extension Services for Input Dealers (DAESI) are being continued during the year 2011–12 at MANAGE. MANAGE has also launched a P.G. Diploma programme on Agricultural Extension Management during 2007-08 on distance learning mode. The training and capacity building of 1731 candidates has been undertaken under this programme in 2010-11. During

this year, for the first time, candidates from Jammu & Kashmir, Nagaland and Sikkim have been enrolled for this course.

During 2010 “Outlook” magazine has ranked MANAGE as 19th among all Business Schools in India; 10th among all Government Business Schools and 2nd among Sectoral Colleges. This is a quantum leap from the previous year’s rankings of 65th, 290th and 5th respectively under these categories.

9.19 Extension Education Institutes (EElS): Four Extension Education Institutes located at Nilokeri (Haryana), Rajendranagar, Hyderabad (Andhra Pradesh), Anand (Gujarat) and Jorhat (Assam) are functioning at the regional level. The objectives of EElS are to improve the skills and professional competence of middle level Extension field functionaries of Agriculture and allied departments in the field of (a) Extension Education; (b) Extension Methodology; (c) Information and Communication Technology; (d) Training Methodology; (e) Communication; (f) Extension Reforms Scheme; (g) Market led Extension etc.

During 2011-12, EElS have planned 181 courses with 2260 participants. Till December, 2011, 1436 participants have been trained through 94 courses. Out of the budget allocation of Rs. 489.45 lakhs, an amount Rs.185.00 lakhs has been released to EElS under the Plan Scheme till December, 2011.

Extension Education Institutes set up at Jorhat (Assam) in 1987 has been providing training support at the regional level to the middle level functionaries of 8 states of North East Region and West Bengal. During the year 2011-12 (till November, 2011) 14 courses have been organized and 506 officers trained in this Institute. An amount of Rs. 55.62 lakhs has been

released to EEI Jorhat till November, 2011 as against the budget estimate of Rs. 100.00 lakhs.

9.20 Model Training Courses (MTCs):

Model Training Courses of eight days duration on thrust areas of Agriculture, Horticulture, Animal Husbandry, Fisheries extension are supported 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. During the current financial year 86 Model Training Courses have been planned, out of which 57 training courses have been organized till December, 2011. Against the budget grant of Rs. 178.00 lakh an amount of Rs.151.00 lakh has been released till December, 2011.

9.21 National Gender Resource Centre in Agriculture (NGRCA) has been set up as a unit of Directorate of Extension (DOE) of the DAC under the Scheme of Extension Support to Central Institutes/DOE to reflect the national commitment of empowerment of women through the 'strategy of mainstreaming and agenda setting'. The Centre acts as a focal point for convergence of gender related activities and issues in agriculture and allied sectors within and outside DAC; add gender dimension to agriculture policies and programmes; and render advocacy/ advisory services to the States /UTs to internalize gender specific interventions for bringing the farm women to the mainstream of agriculture development.

9.22 The following macro/ micro level and action research studies were undertaken:

- 'Mainstreaming Gender Concerns in Agriculture' was outsourced to Centre For Management Development,

Thycaud, Thiruvananthapuram, Kerala. The study has been completed and Final report has been received

- Analytical Study on Existing State Policies, Programmes, Interventions, Processes and their impact on Women's access to Land was outsourced to CESS, Hyderabad through MANAGE, Hyderabad. The Study has been completed and the draft Final Report has been received. Other activities of the Centre include:
 1. Coordination with various divisions of Ministry from time to time to collate gender disaggregated data on flow of benefits (physical as well as financial) to women farmers, SC/ST farm women under various schemes and strategies being adopted by the divisions for empowerment of women.
 2. Preparation of material in respect of the Department of Agriculture & Cooperation for inclusion in the 4th & 5th Periodic Country Report on the Convention for Elimination of Discrimination Against Women (CEDAW).
 3. Preparation of Comments of DAC for the All India Conference to identify the challenges faced by the under privileged women and children on issues related to women & children belonging to SC/ST, Backward classes organized by Ministry of Women & Child Development.
 4. Examining draft Cabinet Notes for various new schemes proposed by Ministry of RD, Ministry of Women and Child Development from the perspective of women in agriculture.
 5. Examination of Schemes/

Proposals of various Departments/ Ministries regarding issues related to women from gender perspective in agriculture.

6. Collating material from the divisions for preparing suitable replies to parliament questions related to women farmers.
7. Preparation of separate chapter on 'Gender Perspective in Agriculture' for the Annual Report of DAC, Ministry of Agriculture.
8. Preparation of Gender Related Write-up for the Outcome Budget of DAC, Ministry of Agriculture.

9.23 CENTRAL MONITORING AND EVALUATION:

Support to Extension Reforms is a scheme that started in May 2005 and draft model TORs for commissioning third party monitoring & evaluation of this Scheme were prepared by DAC in consultation with the States and circulated to all the States for taking up M&E Studies. 14 States namely **Andhra Pradesh, Gujarat, Haryana, Himachal Pradesh, Kerala, Madhya Pradesh, Rajasthan, Punjab, Odisha, Uttarakhand, West Bengal, Arunachal Pradesh, Mizoram and Nagaland** have submitted their study reports. The other States are in the process of commissioning the study. The Extension Division has also conducted the centralized evaluation of the scheme through an independent agency i.e. AFC. The Agency has undertaken the study in the States of U.P. and Haryana and the final report has been received.

9.24 EXHIBITIONS: Agricultural Exhibitions/ Fairs are an excellent means of reaching to a large number of farmers. DAC participates in India International Trade Fair (IITF) at Pragati Maidan, New Delhi, 10 Ad hoc exhibitions/fairs at different

places in the country being organized by government and private sector agencies and 2 international exhibitions/fairs abroad for creating export potential for agricultural products and services at the international level. DAC supports 5 Regional Agricultural Fairs in 5 regions viz. North, South, East, West and North East which are organized by State Agricultural Universities/ICAR Institutes. In pursuance of the objectives of participation in different exhibitions/fairs, DAC has participated in the following events.

1. India International Trade Fair (IITF 2011) during 14-27 November 2011.
2. Krishi Fair at Puri (Odisha) during 24-28 May 2011.
3. Agri Tech India at Bangalore (Karnataka) during 9-11 September 2011.
4. Uttarakhand Science Expo Exhibition at Dehradun (Uttarakhand) during 21-23 September 2011.
5. AgriCorp 2011 at Mumbai (Maharashtra) during 21-22 September 2011
6. Kisan at Pune (Maharashtra) during 14-18 December 2011.
7. Vision Rajasthan at Jaipur (Rajasthan) during 15-17 January 2012.
8. Agri-Pak Exhibition at Lahore during 14-16 February 2012.
9. Haritotsavam at Kochi (Thiruvananthapuram) during 3-7 September, 2011.
10. EIMA AGRIMACH 2011 at IARI, Pusa, New Delhi during 8-10 December 2011.
11. Southern Zone Regional Agricultural Fair at Dharwad (Karnataka) during 9-12 September 2011.

12. Northern Zone Regional Agricultural Fair at Faizabad (U.P) during 1-4 November 2011.

Besides the above events, DAC has been continuously participating in Republic Day Parade from 2009 and this year also it participated in it by displaying the Tableaux of the Ministry of Agriculture on "Diversification in Agriculture" on 26th January 2012.

9.25 NATIONAL PRODUCTIVITY AWARDS:

The National Productivity

Awards are given to Organizations/ Institutions/Departments, which have achieved excellence in raising productivity in specific agriculture and allied areas through National Productivity Council (NPC), New Delhi. For this DAC provides funds as grants-in-aid to NPC.

9.26 PROGRAMMES OF NORTH-EASTERN STATES: The status of implementation of the scheme in the North Eastern Region is as follows: -

S. No	Name of the State	No. of ATMA Registered	Districts covered under Extension Reforms (ATMA) Scheme
1.	Arunachal Pradesh	16	East Siang, Lower Dibang Valley, Lohit, Lower subansiri, Papumpare, Tirap, West Kameng, Along, Anini, Anjaw, Changlang, Daporijo, Kurung Kumey, Seppa, Twanag, Yingkiona.
2.	Assam	14	Kokrajhar, Bongaigaon, Golpara, Karimganj, Cachar, NC Hills, Darrang, Lakhimpur, Sivsagar, Golaghat, Tinsukia, Morigaon, Chirang, Udalguri.
3.	Manipur	9	Imphal (E), Imphal (W), Thoubal, Senapati, Bishnupur, Churachandrapur, Chandel, Ukhrul & Tamenglona
4.	Mizoram	8	Aizawl, Champhai, Kolasib, Lunglei, Serchhip, Mamit, Lawngtlai & Saiha.
5.	Meghalaya	7	East Khasi Hills, West Khasi Hills, Ri-Bhio, Jaintia Hills, East Garo Hills, West Garo Hills and South Garo Hills.
6.	Nagaland	11	Dimapur, Kohima & Mokokchung, Tuensang, Mon, Phek, Zunheboto, Wokha, Longleng, Kiphire, Peren.
7.	Sikkim	4	South Distt., East Distt, North Distt., West District
8.	Tripura	4	North Tripura- Dharma Nagar, South Tripura-Udaipur, West Tripura & Dhalai.
	Total	72	

9.27 During the current year 2011-12, Budget Estimate of Rs.50.00 crores was earmarked for North Eastern States for implementing the scheme and out of which, an amount of Rs.25.18 crores has been released to Arunachal Pradesh (Rs.2.93

Crore), Assam (3.00 Crore) Manipur (Rs.2.68 Crore), Mizoram (Rs.4.03 Crore), Nagaland (Rs.5.97 Crore), Tripura (Rs.4.08 Crore) and Sikkim (Rs.2.49 Crore) till December, 2011.

9.28 Mass Media Support to Agricultural Extension: List of Narrowcasting

and FM Kisan Vani Stations in the North Eastern Region is given below:-

Sl	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	Aizwal Lawangtlal Lunglei	Lunglei
6	Nagaland	-	Mokokchung
7	Tripura		

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

9.30 A Kisan Call Centre is functioning at Guwahati catering to the needs of the North Eastern Region.

9.31 An Extension Education Institute has

been functioning at Jorhat (Assam) and it is providing training support to the middle level functionaries of the eight states of NE Region and West Bengal.

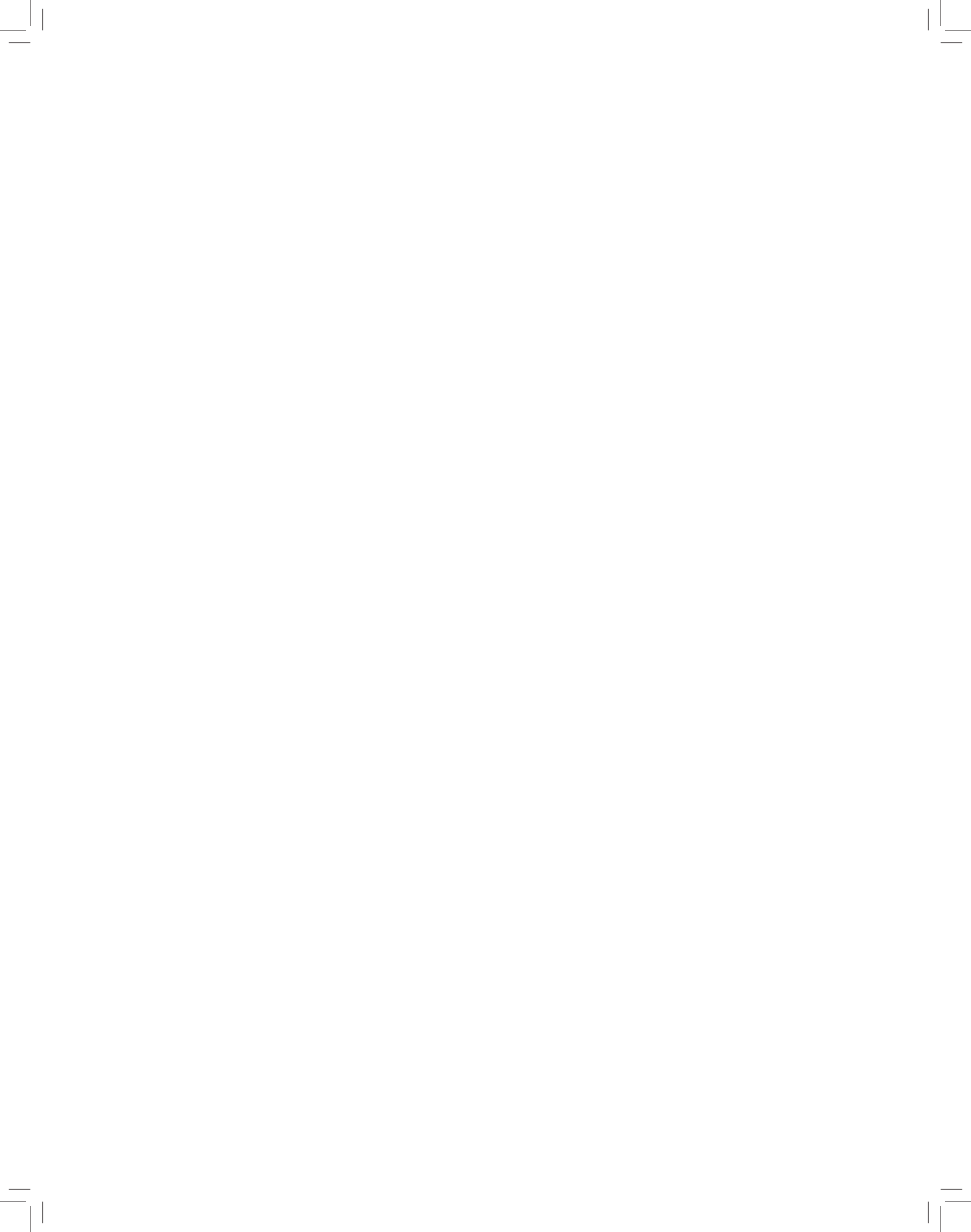
9.32 Details of the extension programmes being implemented in the North Eastern States are given in **Annexure 9.1**.



CHAPTER-10

Agricultural Marketing







10

Agricultural Marketing

10.1 The Government has been playing an important role in developing Agricultural Marketing System in the country. Department of Agriculture and Cooperation has three organizations dealing with marketing under its administrative control, namely, the Directorate of Marketing & Inspection (DMI) Faridabad, Ch. Charan Singh National Institute of Agricultural Marketing (NIAM), Jaipur and Small Farmers Agri-Business Consortium (SFAC), New Delhi.

10.2 DIRECTORATE OF MARKETING AND INSPECTION: The Directorate of Marketing and Inspection (DMI) is an attached Office of Ministry of Agriculture. It was set up in the year 1935 to implement agricultural marketing policies and programmes of the Central Government. Since its very inception, the Directorate continues to be responsible for bringing about an integrated development of marketing of agricultural and allied produce in the country with a view to safeguard interests of producer-sellers as well as consumers. It maintains a close liaison between Central and State Governments in implementation of agricultural marketing policies in the country.

10.3 ORGANISATIONAL SET UP: Headed by Agricultural Marketing Adviser to Govt. of India (AMA), the Directorate has its Head Office at Faridabad (Haryana), a Branch Head Office at Nagpur (Maharashtra), 11 Regional Offices, 26 sub offices, the Central Agmark Laboratory at Nagpur and 11 Regional Agmark Laboratories (RALs) spread all over the country as per details given below: -

Regional Offices	Sub-Office under Regional office	Agmark Laboratories under Regional Office
1. Delhi	1. Dehradun	1. Delhi
2. Kolkata	1. Patna 2. Bhubaneshwar 3. Ranchi	1. Kolkata
3. Mumbai	1. Nasik Road 2. Ahmedabad 3. Rajkot 4. Surat 5. Panaji 6. Pune 7. Sangli	1. Mumbai 2. Rajkot
4. Bhopal	1. Raipur	1. Bhopal
5. Chennai	1. Bangalore 2. Madurai 3. Hubli	1. Chennai
6. Kochi	1. Calicut 2. Thiruvananthapuram	1. Kochi

7. Hyderabad	1. Guntur 2. Vishakhapatnam	1. Guntur
8. Guwahati	1. Shillong	--
9. Lucknow	1. Kanpur 2. Varanasi	1. Kanpur
10. Jaipur	Nil	1. Jaipur
11. Chandigarh	1. Jammu 2. Amritsar 3. Abohar 4. Shimla	1. Amritsar

10.4 Major functions of DMI:

- Promotion of Standardization and Grading of agricultural and allied produce under Agricultural Produce (Grading & Marking) Act, 1937 as amended in 1986;
- Encourage reforms in Agricultural Marketing and guide/persuade States/UTs for Development and Management of Agricultural Produce Markets;
- Implementation of Central Sector Plan Schemes:
 - (i). Agricultural Marketing Research and Information Network (MRIN);
 - (ii). Construction /Renovation of Rural Godowns (RGS);
 - (iii). Development/ Strengthening of Agricultural Marketing Infrastructure, Grading & Standardization (AMIGS);
- Marketing Extension;
- Training of personnel in Agricultural Marketing.

10.5 ACTIVITIES: The activities of the

Directorate cover the following areas of agricultural marketing:

10.6 Standardization and Grading: The Agricultural Produce (Grading & Marking) Act, 1937 provides for grading and marking of agricultural and other produce. The Act empowers Central Government to make Rules for (a) fixing grade designation to indicate quality of any scheduled article (b) defining quality indicated by every grade designation and (c) specifying grade designation marks to represent particular grade designations. Standards notified as per provisions of the Act are popularly called AGMARK Standards. These standards differentiate between quality and 2-3 grades are prescribed for each commodity. Grades help farmers/traders get prices for agricultural commodities as per quality produced by them and consumers get the desired quality. Till date, grade standards for 205 agricultural commodities have been notified. These include fruits and vegetables, cereals, pulses, oilseeds, vegetable oils, ghee, spices, honey, creamery butter, wheat atta, besan, etc. Vegetable oils, spices, ghee, creamery butter, honey, wheat atta, besan, etc. are popularly certified under Agmark. Grading and marking of agricultural commodities is voluntary as per provisions of the Act.

As on date, 108 Commodities Grading and Marking Rules covering 205 agricultural commodities have been notified under provisions of AP (G&M) Act, 1937. All final notifications have been uploaded on the AGMARKNET website www.agmarknet.nic.in for benefit of its users.

Grading & Marking Rules notified in 2010-2011

S. No	Nature of Notification	Name of Commodity	Gazette Notification Extra Ordinary Part II
1.	Preliminary	Guar Grading & Marking Rules-2010	GSR No. 658(E) dt. 5/8/2011
2.	Preliminary	Jetropha Seed Grading & Marking Rules, 2010	GSR No.781(E) dt. 28/9/2011
3.	Final	Guar Seed Grading & Marking Rules, 2011.	GSR No. 55 (E) dt. 31/1/2011
4.	Final	Jetropha Seed Grading & Marking Rules, 2011	GSR No. 105(E) dt. 22/2/2011
5.	Preliminary	Organic Agricultural Produce (Amendment) Rules, 2011	GSR No. 54 (E) dt. 31/1/2011
6.	Preliminary	Castor Seeds Grading & Marking Rules, 2011	GSR No. 193 (E) dt. 8/3/2011

Grading & Marking Rules notified in 2011-12

S. No	Nature of Notification	Name of Commodity	Gazette Notification Extra Ordinary Part II
1.	Final	Organic Agricultural Produce (Amendment) Rules, 2011	GSR No. 394 (E) dt. 23/5/2011
2.	Final	Castor Seeds Grading & Marking Rules, 2011	GSR No. 564 (E) dt. 25/7/2011
3.	Preliminary	Mustard & Rape Seed Grading & Marking Rules, 2011	GSR No.574 (E) dt. 28/7/2011
4.	Preliminary	Soybean Grading and Marking Rules, 2011	GSR No.573 (E) dt. 28/7/2011
5.	Preliminary	Jaggery Grading & Marking Rules, 2011.	GSR No.777 (E) dt. 21/10/2011

10.7 Certification of Products under Agmark: The number of 'Certificate of Authorization' holders for domestic trade is 5956 and for export 323 as at the end of March, 2011. Agricultural commodities valued at Rs. 8,614.58 crore and Rs. 10,664.12 crore were certified under Agmark for domestic trade during the years 2009-10 and 2010-11 respectively. The respective figures for export are Rs.306.65 crore and Rs.180.84 crore.

Total revenue of Rs.11.21 crores was realized by DMI on account of grading charges, etc. during the year 2009-10. This increased substantially in 2010-11 to Rs.13.20 crores.

Reforms in Agricultural Marketing and Development and Management of Agricultural Produce Markets

10.8 Marketing Reforms: Agriculture Sector needs well-functioning markets to drive growth, employment and economic prosperity in rural as well as urban areas. The State monopoly over agricultural markets has to be eased to facilitate greater participation of private sector and in particular to attract large investments required for post harvest and cold chain infrastructure. The State Governments have been advised suitably to modify their Agriculture Produce Market Committee Act to facilitate (a) development of competitive markets in private and cooperative sectors;

(b) allow procurement of agricultural commodities directly from farmers fields and (c) to establish effective linkage between farm production and retail chain and food processing industries. In the wake of economic liberalization, the concept of contract farming in which national and multi-national companies enter into contracts for marketing of agricultural produce and to provide technology and capital to farmers has gained importance. These arrangements have to be promoted as an effective method of linking small farmers to sources of extension, advice, mechanization, seeds, credit and to assure profitable markets. The Ministry has formulated a model APMC Act and model APMC Rules, for guidance of States in bringing reforms to agriculture markets.

10.9 The States of Andhra Pradesh, Arunachal Pradesh, Assam, Goa, Gujarat, Himachal Pradesh, Jharkhand, Karnataka, Madhya Pradesh, Maharashtra, Mizoram, Nagaland, Odisha, Rajasthan, Sikkim and Tripura have amended their APMC Acts on the lines of the Model Act. Bihar State has repealed APMC Act since September, 2006. Other States are in the process of amending their APMC Act. Nine States have amended their APMC Rules so far.

10.10 In order to persuade the States to undertake Agricultural Marketing reforms, to progress towards a barrier free national market as well as to recommend measures for effective dissemination of market information and promote grading, standardization, packaging and quality certification of agricultural produce, the Ministry of Agriculture constituted an Empowered Committee of 10 state Ministers, incharge of Agriculture Marketing on 2nd March, 2010. The Committee deliberated upon various issues related to market reforms, investment in development of post-harvest infrastructure, alternative channels of marketing, barrier free national markets etc, with member States and other stakeholders and has submitted its First

Report to the Union Minister of Agriculture on 8th September, 2011.

Central Sector Plan Schemes

10.11 Marketing Research and Information Network (MRIN): This central sector Plan Scheme was launched in March, 2000. The scheme aims at progressively linking important agricultural produce markets spread all over the country and State Agricultural Marketing Boards/ Directorates and DMI for effective exchange of market information. The market information network, AGMARKNET (agmarknet.nic.in) is being implemented jointly by DMI and NIC, using NICNET facilities available throughout the country and facilitates collection and dissemination of information for better price realization by farmers.

10.12 The markets are reporting daily prices and arrivals data using a comprehensive national level database at AGMARKNET Portal (<http://agmarknet.nic.in>). More than 3000 markets have been linked to Central AGMARKNET Portal. Wholesale prices and arrival information in respect of more than 300 commodities and 2000 varieties are being disseminated through the portal on daily basis. More than 1800 markets reported data during month of December, 2011. Movement of weekly prices and arrival are also being disseminated using the portal. Monthly prices and arrival bulletins are being generated using national database. The prices and arrival information are being disseminated in eleven languages. In addition to price, several other market related information is provided on the portal. These relate to accepted standards /grades, labeling, sanitary and phyto-sanitary requirement, physical infrastructure of storage and warehousing, marketing laws, fees payable, etc. Efforts are on to prepare a National Atlas on agricultural markets on a GIS platform that would indicate availability of entire marketing infrastructure in the country.

10.13 The portal also has linkages with various organizations concerned with agricultural marketing. Besides spot prices, the portal also provides access to future prices, MSP and international commodity prices. It also provides information on schemes of DMI, weather, e-directory of markets, CODEX standard, etc. The portal is constantly being enriched. The data base developed under AGMARKNET is also serving various Commodity Directorates of Department of Agriculture and Cooperation by providing customized hyperlinks to data pertaining to specific commodities. An arrangement has been made for dissemination of market data through SMS with service providers i.e., NOKIA, IFFCO, Kisan Sanchar Ltd., BSNL, REUTERS, etc. at grass root level. An arrangement has also been made for dissemination of arrival and prices data through price Ticker Boards being set up by the Forward Markets Commission (FMC) in different markets.

10.14 Construction of Rural Godowns: Small farmers do not have the economic strength to retain produce with themselves till market prices are favourable. A need has therefore been felt to provide facilities for scientific storage so that wastage and produce deterioration are avoided and also enable the farmers to meet their credit requirement without being compelled to sell produce at a time when prices are low. Accordingly, Ministry of Agriculture launched 'Grameen Bhandaran Yojana' w.e.f. 01.04.2001. The main objectives of the scheme include creation of scientific storage capacity with allied facilities in rural areas to meet various requirements for storing farm produce, processed farm produce, agricultural inputs, etc., and to prevent distress sale by creating facility of pledge loan and marketing credit.

10.15 The project for construction of rural godowns can be taken up by individuals, farmers, Group of farmers/ growers, Partnership/ Proprietary firms,

Non-Government Organizations (NGO's), Self Help Groups (SHGs), Companies, Corporations, Co-operatives, Local Bodies other than Municipal Corporations, Federations, Agricultural Produce Marketing Committees, Marketing Boards and Agro Processing Corporations in the entire country. Presently, subsidy @ 25% of project cost is being given to all categories of farmers, agriculture graduates, cooperatives & CWC/ SWCs, while all other categories of individuals, companies and corporations are entitled to subsidy @ 15%. In case of NE States/ hilly areas & SC/ST entrepreneurs and their cooperatives and Women farmers, subsidy given is 33.33%. The scheme continued during XIth Plan with a target of 90 lakh MT of capacity creation with a Budget allocation of Rs.400 crore.

10.16 The scheme is demand-driven and not location specific. Banks sanction the projects depending on viability. Since the inception of the scheme and up to 31st December, 2011, 25,978 godowns having a capacity of 299.61 lakhs tonnes with a subsidy release of Rs.812.64 crore have been sanctioned by NABARD & NCDC all over the country. During 2011-12 (upto 31/12/2011), 1272 rural godowns with a capacity of 16.35 lakh MTs have been sanctioned by NABARD / NCDC.

10.17 Development/ Strengthening of Agricultural Marketing Infrastructure, Grading & Standardization: Under the Scheme which was launched on 20.10.2004, credit linked investment subsidy is provided for general or commodity specific marketing infrastructure for agricultural and allied commodities and for strengthening and modernization of existing agricultural markets. The scheme covers all agricultural and allied sectors including dairy, poultry, fishery, livestock and minor forest produce. It is reform linked and is being implemented in those states/ UTs which have amended their APMC Act (i) to permit setting up of agricultural

markets in private and cooperative sectors, (ii) allow direct marketing, and (iii) contract farming.

10.18 Beneficiaries under this scheme may be Individuals, Group of farmers/ growers/ consumers, Partnership/ Proprietary firms, Non-Government Organizations (NGOs), Self Help Groups (SHGs), Companies, Corporations, Autonomous Bodies of Government, Cooperatives, Cooperative Marketing Federations, Local Bodies, Agricultural Produce Market Committees & Marketing Boards in the entire country. The subsidy provided is (i) 25% of capital cost of project with a ceiling of Rs.50 lakh per project, and (ii) 33.33% with a ceiling of Rs.60 lakh for projects located in North Eastern States, Uttarakhand, Himachal Pradesh, Jammu & Kashmir, hilly and tribal areas, and to entrepreneurs belonging to Scheduled Caste/Scheduled Tribe and their cooperatives

10.19 Assistance under the scheme is credit linked and subject to sanction of infrastructure project by banks. Subsidy is released through NABARD, and for cooperative sector projects, through NCDC. However, for projects promoted by State Agencies (APMC etc.), stipulation of credit linkage and sanction of infrastructure project by Banks is optional. To encourage adequate investment in the sector, from 25th February, 2010, State Agency projects are considered if two conditions are fulfilled viz. market fee waived off for perishable horticulture commodities and direct marketing by farmers to consumers, processing units, bulk buyers, providers of cold chain facilities /storage /contract farming etc. is permitted.

10.20 Since inception and upto December 2011, a total 7017 projects have been sanctioned and Rs.566.30 crore of subsidy released. 4829 projects have been sanctioned by NABARD and subsidy of Rs.412.93 crore has been released. In cooperative sector, NCDC has sanctioned

1803 projects and subsidy of Rs.38.95 crore has been released. Besides this, 385 projects of different State Agencies have been sanctioned by Directorate of Marketing & Inspection and subsidy of Rs.114.43 crore has been released.

10.21 Marketing Extension: Quality control programmes under Agmark as well as different plan schemes of Directorate are given wide publicity through mass media. The information is disseminated through documentaries, video spots, printed literature, exhibitions, conferences, seminars and workshops. A quarterly journal 'AGRICULTURAL MARKETING' is brought out regularly by Directorate.

10.22 The Directorate participated in AHARA-2011 at Chennai during 25-27 August, 2011, Upbhokta Suraksha Mela at Kolkata during 8-11 September, 2011, Hartisolvam at Kochi during 3-7 September, 2011. The Directorate also participated in IITF-2011 from 14-27 November 2011 at Pragati Maidan, New Delhi. Agmark exhibition was organized on 22-24 March, 2011 at Lucknow. Six programs were organized on World Consumer Day during 2010-11 at different places by setting up Agmark stalls and mini laboratories to show simple tests for detection of adulteration in edible products.

10.23 An amount of Rs. 37.94 lakh was spent towards creating awareness campaign of Agmark all over the country by telecasting/broadcasting of video/audio spots in various languages through DAVP, New Delhi during 2010-11. The officers of the Directorate also regularly participate in various workshops / seminars to create awareness about Agricultural Marketing schemes at field level.

10.24 Training: The Directorate of Marketing and Inspection conducts a number of training courses relating to agricultural marketing for benefit of State Governments/ Union Territories, Co-operatives, Corporations, Market

Committees, Marketing Boards and other statutory bodies. Under these training programs, 12,744 Agricultural Marketing Personnel have been trained since inception. During 2011-12, 69 personnel were trained up to 31/12/2011.

10.25 Small Farmers Agri-Business Consortium (SFAC): Small Farmers Agri-Business Consortium (SFAC) was registered on 18th January, 1994 as a society under the Societies Registration Act, 1860. Its members include RBI, SBI, IDBI, EXIM Bank, Oriental Bank of Commerce, NABARD, Canara Bank, NAFED, United Phosphorous Ltd. etc. 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.

10.26 A Central Sector Scheme for agri-business development is being implemented by SFAC in close association with Commercial Banks for providing (i) Venture capital to agribusiness projects and (ii) assistance to farmers / producer groups for preparing quality Detailed Project Reports (DPR). For effective implementation of the scheme, SFAC has already signed MOU with 21 commercial banks. The scheme is open to women entrepreneurs also. SFAC has assisted project proposals from two women entrepreneurs which have been granted Venture Capital Assistance (VCA) as per norms.

10.27 During 2011-12, SFAC surpassed its physical targets of 65 projects and 30 DPRs by achieving 78 projects and 67 DPRs. Since inception, Rs. 136.43 crore has been released by Department of Agriculture and Cooperation (DAC) till 31.12.2011 against which expenditure incurred has been Rs. 132.55 crore. SFAC has also assisted 466 agribusiness projects and released VCA of Rs. 123.79 crore generating private investment of Rs. 1378.64 crore, thereby providing market

to 84,848 farmers for their produce, and creating direct employment for 36,682 persons.

10.28 CCS National Institute of Agricultural Marketing: Ch. Charan Singh National Institute of Agricultural Marketing (NIAM) is a premier National level Institute set up by Government of India in August, 1988 to offer specialized training, research, education and consultancy in the field of Agricultural Marketing. NIAM is playing a vital role in expediting the market reform process and making available quality managers.

10.29 NIAM is engaged in organising training programmes in the field of agricultural marketing and allied areas for senior and middle level officers from various line departments of State Governments, Cooperatives, Marketing Boards and Agribusiness Entrepreneurs. The institute is also playing an active role in orienting agricultural extension personnel towards agricultural marketing. The training programmes are delivered as core programmes, awareness programmes and workshops for different stakeholders.

10.30 CONSULTANCY 2011-12: The Institute has been undertaking consultancy as per mandate assigned. During 2011-12 following consultancy projects are in progress:

1. Preparation of Detail Project Report for setting-up of Modern Terminal Market at Rudrapur, Uttarakhand.
2. Accreditation of Warehouses across country.
3. Capacity building of Warehouse men of Accredited Warehouses.
4. Capacity building of state agricultural marketing boards on future trading in agricultural commodities.

10.31 RESEARCH 2011-12: Two research studies assigned during current financial

year are on topics of Marketing reforms and APMC Act. These studies are being

conducted as per details given below: -

S No	Research Study	States Identified
1.	Market Study of Odisha and Assam.	Assam, Odisha
2.	Investment in agricultural marketing and market related infrastructure and agricultural marketing system in the absence of APMC Act.	Bihar, Kerala

10.32 Post Graduate Diploma Program in Agribusiness Management (PGDABM):

NIAM has been conducting a two year Post Graduate Diploma Programme in Agribusiness Management (PGDABM) for students with graduation in Agriculture and Allied Sciences. The admission for the program is done through a national level written examination followed by group discussion, extempore, and personal interview. This course comprises a mix of agribusiness courses like agri-input marketing, farm production management, extension management & rural marketing and core management subjects like marketing management, financial management and strategic management etc.

10.33 For the year 2011-12, 60 students have been offered admission in 11th batch (2011-13). NIAM invites faculty from reputed institutes to impart teaching to various modules which constitute integral part of this specialized sectoral management programme. Programme also organizes a series of lectures imparted to students on contemporary agribusiness issues by chief executives/ senior executives from industry.

10.34 Highlights:

- 7246 number of Regulated markets exist in the country.
- Till date 108 Commodities Grading and Marking Rules covering 205 agricultural commodities have been notified under AP (G&M) Act, 1937.
- 12,744 Agricultural Marketing Personnel

have been trained in different programmes since inception. During the year, 69 personnel have been trained upto December, 2011.

- Rs. 37.94 lakh was spent on an awareness campaign of Agmark all over the country through telecast/ broadcast of video/audio spots in various languages during 2010-11.
- More than 3000 markets have been linked to the Central Agmarknet portal. Wholesale prices and arrival information in respect of more than 300 commodities and about 2000 varieties are disseminated through the Agmarknet portal on daily basis.
- 25,978 storage projects having a capacity of 299.61 lakh tonnes with subsidy release of Rs.812.64 crore, has been sanctioned under Rural Godown Scheme since inception of the scheme w.e.f. 1.4.2001 and upto 31.12.2011.
- 4829 projects have been sanctioned by NABARD and subsidy of Rs.412.93 crore has been released. In cooperative sector, NCDC has sanctioned 1803 projects and subsidy of Rs.38.95 crores has been released. Besides this, 385 projects of different State Agencies have been sanctioned by Directorate of Marketing & Inspection and subsidy of Rs.114.43 crores has been released. 7017 projects have been sanctioned and Rs.566.30 crore of subsidy released under the scheme of Development of AMIGS since inception of Scheme, upto 31.12.2011.

CHAPTER-11

Agricultural Trade



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Organisation





11

Agricultural Trade

11.1 India has developed export competitiveness/niche for certain specialized products- basmati rice, oil meals, cotton, maize etc. India is among 15 leading exporters of agricultural products in the world and has also emerged significant exporter having share of more than 5% of global exports in certain crops like cotton, rice, eggs and oil meals. As per International Trade Statistics, 2010, published by WTO, India's agricultural exports amounted to US \$ 17 billion with a share of 1.4% of world trade in agriculture in 2009. India's agricultural imports during 2009 amounted to US \$ 14 billion with a share of 1.2% of world trade in agriculture.

11.2 Year 2009-10 was marked by severe drought while 2010-11 turned out to be a bountiful year. Consequently, agricultural exports increased from Rs. 89341.50 crore in 2009-10 to 120185.95 crore in financial year 2010-11 registering a growth of 34.52%. Increase in value of

agricultural exports during 2010-11 was primarily on account of higher exports of sugar, cotton, pulses, wheat, guar gum, oil meal, tea, jute and molasses compared to previous year. Export of non-basmati rice, tobacco, floriculture, cashew, fresh fruits & vegetables and processed fruit juice registered a decline compared to previous year. However, share of agricultural exports in total exports decreased from 10.57% in 2009-10 to 10.47% in 2010-11. India's top 10 export in terms of quantity and value for the year 2008-09, 2009-10 and 2010-11 are given in Table I.

11.3 Agricultural imports recorded overall decrease from Rs. 59528.33 crore in 2009-10 to Rs 56196.20 crore in 2010-11 registering decline of Rs. 3332.13 crore (-5.6%) over the corresponding previous period. Decrease in value of agricultural imports during this period was primarily due to lower imports of other cereals, pulses, cotton, oilseeds and tea. Share

Table-I (Top 10 Agricultural Export)

(Qty. in '000'tonnes and value in Rs crore)

S.No.	Item	2008-09		2009-10		2010-11	
		Qty.	Value	Qty.	Value	Qty.	Value
1	Cotton Raw incl. waste	457.56	2865.85	1357.99	9537.08	1258.09	12981.04
2	Marine products	465.00	7066.37	709.88	9899.98	800.95	11547.97
3	Oil Meals	6742.93	10269.24	4671.13	7831.79	6797.86	10845.91
4	Rice Basmati	1556.41	9477.03	2016.87	10889.6	2186.45	10581.51
5	Sugar	3332.08	4448.74	44.74	110.21	3241.34	10339.01
6	Meat & Preparations		5371.42		6286.1		8775.91
7	Spices	673.87	6338.41	663.21	6157.33	749.03	7870.14
8	Other Cereals	3999.65	3920.58	2892.41	2973.19	3187.86	3596.1
9	Tea	207.45	2688.87	207.53	2943.53	233.40	3174.5
10	Tobacco unmgd.	208.31	2766.26	230.8	3621.44	207.55	3007.6

of agricultural imports in the total imports also decreased from 4.37% in 2009-10 to 3.50% in 2010-11. India's top 5 agriculture

import for the year 2008-09, 2009-10 and 2010-11 are given in Table II.

Table-II (Top 5 Agricultural Imports)

(Qty. '000'tonnes, Value: Rs. In crores.)

S. No.	Item	2008-09		2009-10		2010-11	
		Qty.	Value	Qty.	Value	Qty.	Value
1	Vegetable Oils fixed edible	6719.35	15837.46	8033.92	26483.3	6717.72	29442.11
2	Pulses	2474.11	6246.39	3509.58	9813.37	2591.25	6979.95
3	Fruits & Nuts (excl. Cashew nuts)		2372.89		2873.15		3684.25
4	Sugar	386.10	583.16	2551.14	5965.8	1198.38	2787.27
5	Cashew Nuts	614.46	2672.42	755.96	3047.5	504.14	2479.75

11.4 There has been generally a surplus in agricultural trade over the years. The trade surplus increased from Rs. 29813.17

crore in 2009-10 to Rs. 63989.75 crore in 2010-11.

CHAPTER-12

Mechanisation and Technology







12

Mechanisation and Technology

12.1 In its endeavour to promote agricultural mechanization, the strategy and programmes of Department of Agriculture and Cooperation have been directed towards promotion of eco-friendly and selective agricultural equipments. The aims are to optimally and efficiently utilize different sources of human, animal and mechanical/electrical power; increase productivity of land, labour, seeds, fertilizers, pesticides and irrigation water; improve quality of farm operations by promoting equipments with appropriate technology thereby reducing cost of production and drudgery associated with

various agricultural operations. As a result of different programmes implemented by Government of India over the years, total farm power availability is estimated to have increased from 0.295 kW/ha in 1971-72 to 1.66 kW/ha in 2009-10.

12.2 As a result of joint efforts made by Government and private sector, the level of mechanization has been increasing steadily over the years. This is evident from sale of tractors and power tillers, taken as indicators of adoption of mechanized means of farming, during the last six years, as given in Table below:

Year-wise sale of Tractors and Power Tillers

Year	Tractors Sold (Nos.)	Power Tillers Sold (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	55,000
2011-12 (Upto December 2011)	4,19,270	39,000

12.3 Training of Farmers and Technicians: The Farm Machinery Training & Testing Institutes (FMTTIs) located at Budni (Madhya Pradesh),

Hissar (Haryana), Garladinne (Andhra Pradesh), and Biswanath Chariali (Assam), have been imparting training to farmers, technicians, retired/retiring defence

personnel etc., in the selection, operation, maintenance, energy conservation and management of agricultural equipments. These Institutes have also been conducting testing and performance evaluation of various agricultural implements and machines. During the year 2011-12 (till 31st December, 2011), 4625 persons have been trained against annual target of 6000 in different courses. The target of training during Eleventh Plan has been increased to 28,000 from 25,000 during the Tenth Plan. To supplement the efforts of FMTTIs in human resource development, outsourcing of training through SAUs, Agricultural Engineering colleges, polytechnics, etc., has been approved during the Eleventh plan. For training of farmers, identified institutions are reimbursed @ Rs 5,200 per trainee per month, which also includes a stipend of Rs 1,200 per month and to and fro travel expenses by normal mode of transport. The target of training by outsourcing during the Eleventh Plan is 10,000 persons and the target for 2011-12 is to train 2000 farmers.

12.4 Testing of Farm machines and Equipments: The Institute at Budni has been authorized to conduct tests on tractors and other agricultural machines and the institute at Hissar conducts tests on self-propelled combine harvesters, irrigation pumps, plant protection equipments, agricultural implements and other machines including issuing of Central Motor Vehicle Rules (CMVR) certificate of combine harvester. The Institute at Garladinne has been authorized to test power-tillers and also conduct tests on various agricultural implements/equipments and components. This Institute is being developed as a specialty institute for meeting mechanization demands in rain-fed/dryland farming systems. The institute at Biswanath Chariali (Assam) tests bullock-drawn implements, manually operated equipments, tractor drawn implements, self propelled machines and small hand tools.

For Eleventh Plan, the target of testing has been kept as 550 machines/tools.

12.5 Authorized Testing Centers: To cope up with ever increasing demand for testing of newly developed agricultural machines and equipments, DAC has authorized 21 State Agricultural Universities (SAUs)/ICAR Institutions and 3 State Agriculture Departments as Testing Centers for testing and certifying certain categories of agricultural machinery and equipments namely, Hand tools, Manually Operated Equipments/ Machines etc. Relevant information has been made available on departmental website for wider publicity among users/manufacturers. For tractor mounted Combined Harvesters, CIAE, Bhopal and PAU, Ludhiana have been designated as authorized testing centres in addition to NRFMTTI, Hisar.

12.6 Four FMT&TIs altogether have tested 145 machines of various categories including tractors, power-tillers, combine harvesters, reapers, rotavators and other implements, till 31st December, 2011, against the target of 165 for the whole year.

12.7 Demonstration of Newly Developed Agricultural/Horticultural Equipments at Farmers' Fields: For enhancing production and productivity, as well as for reducing cost of production, induction of improved/new technology in agricultural production system is inescapable. With this objective in view, demonstration of newly developed agricultural equipments including horticultural equipments at farmers' fields has been included as a component of restructured scheme of 'Promotion and Strengthening of Agricultural Mechanization through Training, Testing and Demonstration' which continued during the Eleventh Plan. This scheme envisages demonstration of improved/newly developed agricultural/horticultural equipments identified by State Governments/ Government Organizations

at farmers' fields, to acquaint them about their use and utility for production of different types of crops.

12.8 It has been reported by State Governments that during the year 2011-12 (up to 31st December, 2011), 20509 demonstrations have been conducted. Under outsourcing of training, 2400 beneficiaries have been trained.

12.9 Farm Mechanization Programmes under the scheme 'Macro Management of Agriculture': Assistance in the form of subsidy @ 25-50% of cost with permissible ceiling limits is made available to farmers for purchase of agricultural equipments including hand tools, bullock-drawn/power-driven implements, planting, reaping, harvesting and threshing equipments, tractors, power-tillers and other specialized agricultural machines under the centrally sponsored scheme of Macro Management of Agriculture.

12.10 The feedback from the State Governments indicates that during the year 2011-12 (up to 31st December, 2011), 5056 tractors, 958 power tillers, 12307 hand tools, 404 bullock-drawn implements, 635 tractor-driven implements, 645 and 404 self-propelled/power-driven equipments, 1998 plant protection equipments, 1109 irrigation equipments are reported to have been supplied to farmers.

12.11 State Agro Industries Corporations: Government of India had advised State Governments in the year 1964, to set up State Agro Industries Corporations (SAICs) in public sector to act as catalysts in providing access to industrial inputs for farmers for their use in agriculture. Thus, 17 SAICs were set up in the joint sector with equity participation of Government of India and respective State Governments, namely 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 these State Governments have increased their equity participation as a result of which 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. Government of India is implementing the policy of disinvestment of its shares in SAICs with a view to giving greater decision making power to state governments by allowing transfer of its shares to state governments as per the following guidelines:

- Where net worth of SAIC is positive, Government of India would be willing to consider offering shares to State Governments at a price 25% cent less than the book value of shares on the basis of latest available audited balance sheet.
- In case of SAICs whose net worth is negative, Government of India would be willing to pass on its stake for a token consideration of Rs 1,000 for the value of shares.

12.12 So far, Government of India's shares in SAIC's of Gujarat, Karnataka, Uttar Pradesh, Tamil Nadu, Rajasthan and West Bengal have been transferred to State Governments concerned. The State Governments of Madhya Pradesh and Jammu & Kashmir have since agreed, in principle, for transfer of Government of India's shares held in these SAICs. It is reported that the State Government of Assam had notified closure of Assam State Agro Industrial Corporation w.e.f. 31.8.2006.

12.13 Activities in the North-Eastern States: A FMTTI has been established at Biswanath Chariali in Sonitpur district of Assam, to cater to the needs of human resource development in the

field of agricultural mechanization and also to assess quality and performance characteristics of different agricultural implements and machines in the region. During the year 2011-12, the Institute imparted training to 671 persons and tested 16 machines (up to 31st December, 2011). The details of various programmes launched in the North-Eastern States during the year 2011-12 are indicated in **Annexure 12.1**.

12.14 Post Harvest Technology and Management: As one of the thrust areas for Ministry of Agriculture, a scheme on Post Harvest Technology and Management has been proposed to be implemented with an outlay of Rs. 40.00 crores during Eleventh Plan period. Under the scheme, technologies developed by ICAR, CSIR and those identified from within the country and abroad for primary processing, value addition, low cost scientific storage/transport of cereals, pulses, oilseeds, sugarcane, vegetables and fruits and crop by-product management shall be given a boost. Technologies for fruits and vegetables which have not been covered under the National Horticulture Mission shall also be promoted in production catchments. The Scheme will basically focus on lower end of the spectrum of post

harvest management and processing i.e areas that are not covered under Ministry of Food Processing programmes or under the National Horticulture Mission. The main components of the scheme are as under:

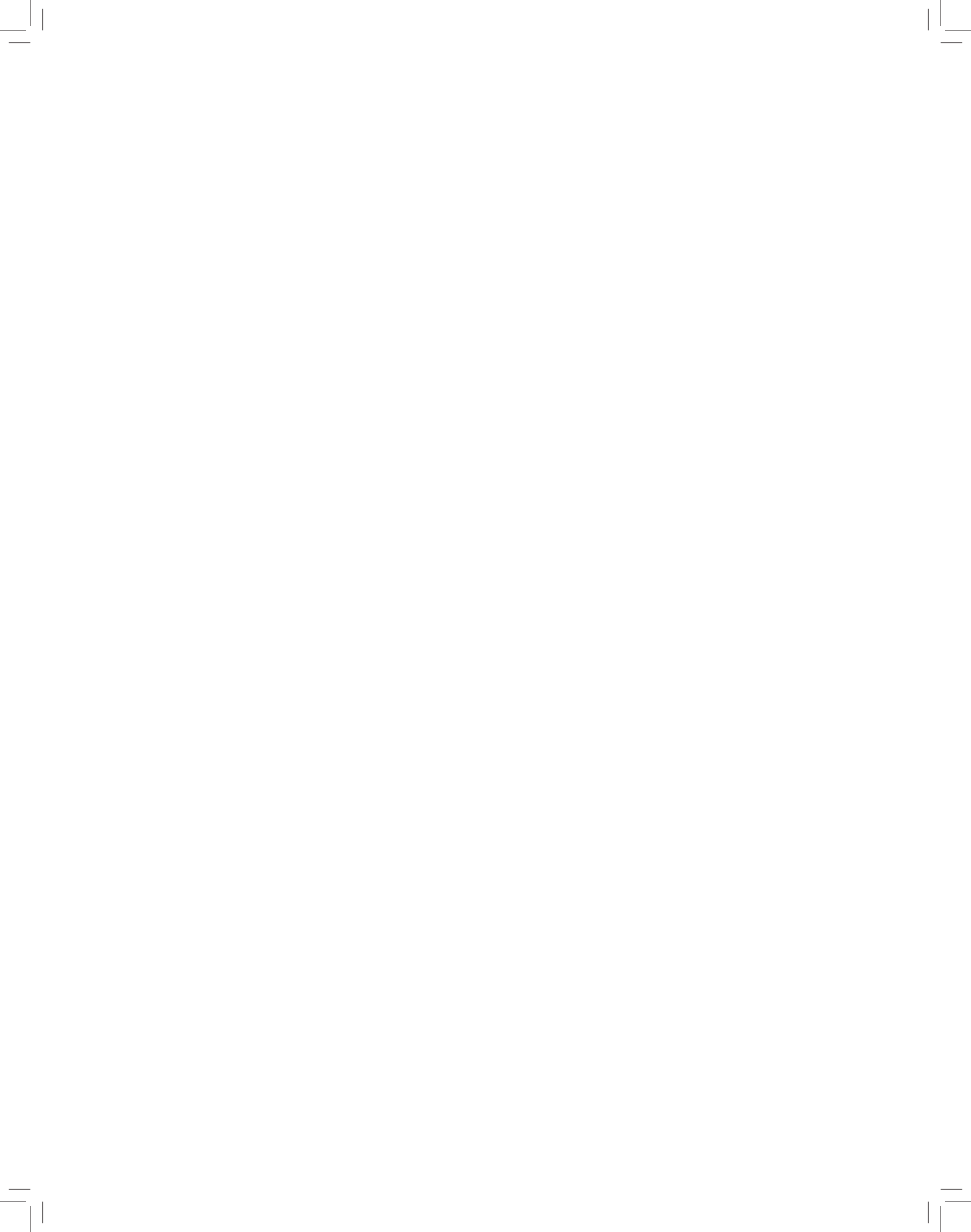
- Establishment of units for transfer of primary processing technology, value addition, low cost scientific storage, packaging units and technologies for by-product management in production catchments under tripartite agreements.
- Establishment of low cost Post Harvest Technology (PHT) units/supply of PHT equipments with Government assistance.
- Demonstration of technologies.
- Training of farmers, entrepreneurs and scientists.

12.15 During the year 2011-12 (upto 31st December, 2011), 7947 demonstrations have been carried out to promote Post Harvest Technology and Management (PHT) and 1221 additional PHT units have been established and 1770` trainees have been trained by States concerned through outsourcing.

CHAPTER-13

Horticulture





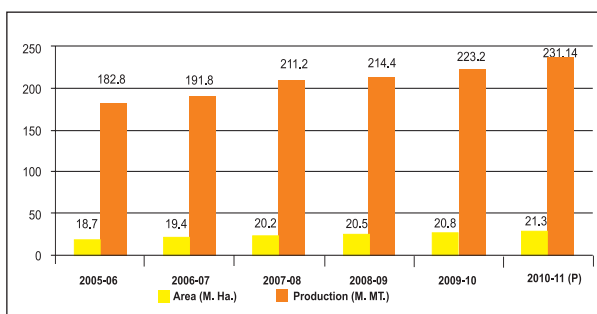


13

Horticulture

13.1 Horticulture includes a wide range of crops such as fruits, vegetables, root and tuber crops, flowers, aromatic and medicinal plants, spices and plantation crops, and facilitates diversification in agriculture. There is a growing realization that horticulture is now an option to improve livelihood security, enhance employment generation, attain food and nutritional security and increase incomes through value addition. As of 2010-11, horticultural crops occupied an area of 21.3 million hectares producing 231.1 million tonnes of horticultural produce. Area and production of horticulture crops during the past five years is depicted in Fig. 13.1.

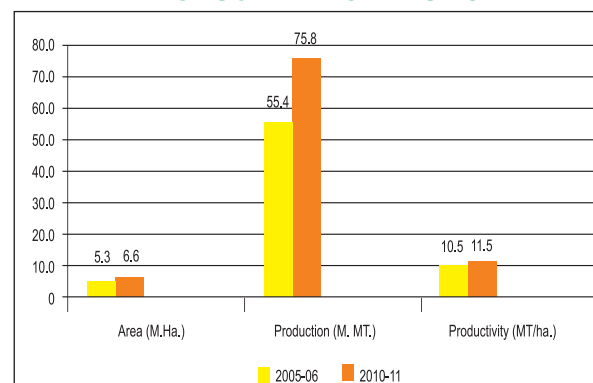
FIG. 13.1: AREA & PRODUCTION OF HORTICULTURE CROPS



13.2 Fruits and vegetables together constitute about 92.4 percent of total horticultural production in the country. The

area under fruit crops during 2010-11 was 6.6 million hectare with a total production of 75.8 million tonnes, as shown in Fig. 13.2 below:-

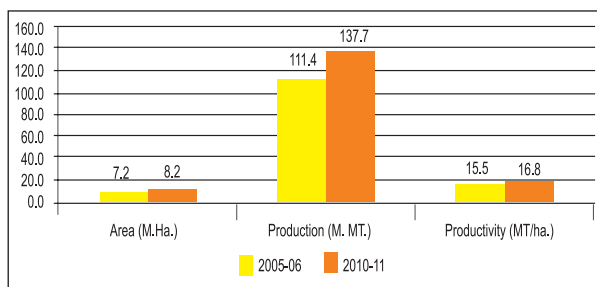
FIG. 13.2: AREA, PRODUCTION AND PRODUCTIVITY OF FRUITS



13.3 Similarly, vegetables are an important crop in horticulture sector, occupying an area of 8.2 million hectares during 2010-11 with a total production of 137.7 million tones and having an average productivity of 16.8 tones/ha. The comparative details are shown in Fig. 13.3.

13.4 India is second largest producer of vegetables after China and 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

FIG. 13.3: AREA, PRODUCTION AND PRODUCTIVITY OF VEGETABLES



and tomato in the world. Vegetables such as potato, tomato, brinjal, okra and cucurbits are produced abundantly in the country.

13.5 Interventions in horticulture including National Horticulture Mission (NHM) in the country, have led to increased per capita availability of fruits and vegetables from 138 gms/per/day in 2005 to 175 gms/per/day in 2011. Similarly, per capita availability of vegetables has increased from 279 gms/pers/day in 2005 to 316 gms/pers/day in 2011.

13.6 India has also made noticeable advancements in production of flowers, particularly cut flowers, which have a high potential for exports. Floriculture during 2010-11 covered an area of 0.19 million hectares with a production of 1.03 million metric tonnes of loose and 6902 million number of cut flowers.

13.7 India is largest producer, consumer and exporter of spices and spice products. The total production of spices during 2010-11 was 4.02 million metric tonnes from an area of 2.47 million hectares.

13.8 Development of horticulture is a focus area for the Department of Agriculture & Cooperation and is being promoted through a number of schemes viz. (i) National Horticulture Mission (NHM), (ii) Horticulture Mission for North Eastern and Himalayan States (HMNEH), (iii) National Mission on Micro Irrigation (NMMI), (iv) National Bamboo Mission (NBM), (v) Schemes of the National Horticulture Board

(NHB) and (vi) Integrated Development of Coconut including the Technology Mission on Coconut coordinated by the Coconut Development Board (CDB). Besides, a Central Institute of Horticulture (CIH) is functioning at Nagaland for providing technology & HRD support to horticulture sector in North-Eastern states.

13.9 National Horticulture Mission (NHM):

This Centrally Sponsored Scheme, launched in 2005-06 aims at the holistic development of horticulture sector by ensuring forward and backward linkages through a cluster approach, with the active participation of all stake-holders. This mission covers all States and three Union Territories of Andaman Nicobar Islands, Lakshadweep and Puducherry, except the North Eastern and Himalayan States, which are covered under the Horticulture Mission for North East & Himalayan States (HMNEH). At present, 372 districts in 18 States and 3 Union Territories are covered under NHM. 13 National Level Agencies (NLAs) have also been included for providing support for developmental efforts which require inputs at the National Level.

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

13.11 Physical Progress: The summary details of progress achieved so far are given in Table 13.11.

Table 13.11

(Area in lakh hectares)

S.No.	Component	Progress during 2005-06 to 2010-11	Progress During 2011-12 (as of December, 2011)
1	Nurseries (No.)	2295	49
2	Area Expansion	18.96	1.88
3	Rejuvenation of old and senile orchards	3.25	0.51
4	Organic farming	1.40	0.05
5	Integrated Pest/Nutrient Management	8.61	0.67
6	Pack house (No.)	2202	1140
7	Cold Storage (No.)	367	103
8	Mobile/Primary processing units (No.)	540	85
9	Markets (No.)	198	9
	(a) Whole Sale	23	1
	(b) Rural	175	8

13.12 Financial Progress: With effect from 2007-08, the first year of Eleventh Plan, State Governments are contributing 15 percent and Government of India is providing 85 percent of the total outlay. From 2005-06 to 2010-11, an amount of Rs. 5273.98 crore was released for implementation of the scheme, out of which an expenditure of Rs. 5243.30 was reported. During 2011-12 an outlay of

Rs. 1200.00 crore has been earmarked against which an amount of Rs. 913.80 crore was released till December, 2011 for implementation of the scheme.

13.13 The comparative details of area, production and productivity of various horticultural crops during 2004-05 and 2010-11 viz. pre and post NHM are given in Table 13.13.

Table – 13.13 Pre and Post NHM Scenario: Area, Production & Productivity

Area in 000ha, Production 000 MT, Productivity t/ha

Crop	Area			Production			Productivity		
	2004-05	2010-11 (P)	Annual Growth Rate %	2004-05	2010-11 (P)	Annual Growth Rate %	2004-05	2010-11 (P)	% diff.
Fruits	5049	6512	4.8	50867	75648	8.1	10.1	11.6	14.8
Vegetables	6755	8217	3.6	101246	137687	6.0	15.0	16.8	12.0
Flowers									
Loose	116	191	10.8	655	1031	9.6	5.6	5.4	-3.6
Cut*				1952	6902	42.3	16.8	36.1	114.9
Spices**	5909	2464	-11.7	8051	4016	-10.0	1.4	1.6	14.3
Medicinal & Aromatic Plants	192	516	28.1	226	610	28.3	1.2	1.2	-
Plantations	3119	3287	0.9	13171	11968	-1.5	4.2	3.6	-14.3
Others	28	113	50.6	46	178	47.8	1.6	1.6	-
Total	21168	21,300		174262	231138	5.4	8.2	10.8	31.7

* Production of cut flowers in million Nos. ** Spices included mustard also in 2004-05, which was excluded subsequently.

P – Provisional, as per second estimates.

13.14 Horticulture Mission for North East and Himalayan States (HMNEH):

Centrally Sponsored Scheme on Technology Mission for Integrated Development of Horticulture has been renamed as Horticulture Mission for North East and Himalayan States (HMNEH) during 2010-11. The scheme is being implemented in a mission mode with an end to end approach which includes development and introduction of high yielding varieties and technologies, expansion of area, post harvest handling and management, marketing, value addition and processing of horticulture produce.

13.15 During the current financial year 2011-12 an amount of Rs. 490.00 crore (R.E.-Stage) was earmarked and an amount of Rs. 427.64 crore has been released, out of which Rs. 300.51 crore to North Eastern States and Rs. 127.13 crore to Himalayan States has been released.

13.16 During the year 2010-11 an amount of Rs. 400.00 crore was earmarked and an amount of Rs. 399.98 crore has been released, out of which Rs.269.99 crore to North Eastern States and Rs. 129.99 crore to Himalayan States has been released.

13.17 Under the Mission, progress made since inception of the scheme up to 2010-11 has helped in bringing in an additional area of 5,79,910 ha under various horticulture crops in the states. Of this, fruits contributed 3,15,346 ha, vegetables 1,16,125 ha, spices 82,316 ha, saffron 168 ha, plantation crops (cashew) 14,111 ha, medicinal 6,464 ha, aromatic plants 10,412 ha, flowers 33,649 ha, root & tubers crops 1319 ha. In addition, 56,593 ha of senile and unproductive orchards have been rejuvenated to increase productivity. Infrastructure facilities such as model nurseries (1,129), community tanks (11,191), tube wells/dug wells/water harvesting system (16,549), protected cultivation/greenhouses (94,92,717 sqm.),

model floriculture centres (27), herbal garden (57), tissue culture unit (27), disease forecasting unit (33) and 39 mushroom units have been setup. Besides, wholesale (48), rural primary markets (306), apni mandies (70), state grading laboratories (18), 81 processing units and 38 cold storages have been established.

13.18 During 2011-12, so far an additional area of about 24,223 ha has been brought under cultivation of various horticulture crops in North Eastern and Himalayan States. Of this, fruits contributed 9,613 ha, vegetables 8,456 ha, spices 5,155 ha, aromatic plants 13 ha, and flowers 986 Ha. In addition, during the current year, Rs. 2.53 crore has been released for setting up of 2 Processing units in Himalayan States.

13.19 Under the mission, 3,55,523 farmers were trained on different aspects of horticulture up to 2010-11. During the year 2011-12, under training components including women, so far 43,302 farmers have been trained on various aspect of horticulture.

13.20 National Mission on Micro Irrigation (NMMI): The DAC has been implementing Centrally Sponsored Scheme on Micro-Irrigation since 2005-2006 for promoting efficient methods of irrigation such as drip and sprinkler irrigation in the country.

13.21 With effect from 2010-11, this scheme has been converted to mission mode and renamed as National Mission on Micro Irrigation (NMMI) with enhanced scope for coverage and revised cost norms. Transfer of technology through demonstrations, human resource development, including training programmes, publications, awareness programmes are also taken up under the scheme.

13.22 Progress: Since launching of MI scheme in 2005-06, an area of 28.51 lakh hectares has been brought under micro irrigation in 18 states at an expenditure

of Rs. 3830.83 crore as Central share. Since inception of the scheme, 12.40 lakh hectares has been covered under drip and 13.96 lakh hectares under sprinkler irrigation up to 2010-11. During current financial year (2011-12) an outlay of Rs. 1150.00 crore (BE) has been earmarked to cover an area of 6.57 lakh hectare. So far, an area of 2.12 lakh ha has been covered involving GOI assistance of Rs. 767.38 crore.

13.23 National Bamboo Mission: In order to harness the potential of bamboo crop, a Centrally Sponsored Scheme called ‘National Bamboo Mission’ was launched in 2006-07 with a total outlay of Rs.568.23 crore. This scheme is being implemented in twenty-seven States namely Andhra Pradesh, Bihar, Chhattisgarh, Gujarat, Goa, Himachal Pradesh, Jammu and Kashmir, Jharkhand, Karnataka, Kerala, Madhya Pradesh, Maharashtra, Odisha, Punjab, Rajasthan, Tamil Nadu, Uttar Pradesh, Uttarakhand, Arunachal Pradesh, Assam, Manipur, Meghalaya, Mizoram, Nagaland, Sikkim, Tripura and West Bengal. The thrust of the Mission is on area-based, regionally differentiated strategy for plantation of bamboo in both, forest and non-forest areas. Important activities being supported for increasing productivity and quality of bamboo under the Mission are: increasing area under bamboo cultivation, mass production of quality planting material of recommended species, improvement of existing stock, pest and disease management, improved post-harvest management, development of human resource and of marketing facilities. The expected benefits of the Mission include coverage of 1.76 lakh ha of new area under bamboo plantation over a period of five years, employment generation of 50.4 million mandays by bamboo plantation and related activities and of about 9.7 lakh mandays in bamboo nursery sector.

13.24 Achievements: During current

financial year (2011-12), an area of 8,479 ha in forest and 4,098 ha in non-forest has been covered so far under bamboo plantation and 1,012 ha of existing bamboo plantation has been improved for higher productivity. Since inception, 1,90,608 ha land has been covered with bamboo plantation. An area of 47,029 ha of existing bamboo plantation has been improved for higher productivity. In addition, 1194 nurseries have been established to supply quality planting material. In different States, 32,785 farmers and 5,228 field functionaries have been trained in the area of nursery management and bamboo plantation. In order to generate awareness among bamboo growers, 42 state-level and 451 district-level workshops/seminars have been conducted.

13.25 Financial Assistance Provided: During 2011-12, a budgetary provision of Rs. 8160.00 lakh (RE) has been made for NBM, against which Rs. 7014.47 lakh has been released to different State implementing agencies so far. In North-Eastern States (including Sikkim), the Mission has been allocated Rs.5678.00 lakh against which a sum of Rs. 5143.47 lakh has been released.

13.26 National Horticulture Board (NHB): NHB was established with its Headquarters at Gurgaon in 1984 and tasked with the main objective to promote hubs of commercial horticulture industry through production, post harvest management and processing. It has 35 field offices located in different states of the country. The Board scheme has a number of components, viz (i) Development of Commercial Horticulture through Production and Post-harvest Management, (ii) Capital Investment Subsidy for Construction / Expansion / Modernization of Cold Storages and Storages for Horticulture Produce, (iii) Technology Development and Transfer for Horticulture produce, (iv) Market Information Service Scheme and (v) Horticulture Promotion Service.

13.27 Apart from above, three new components were introduced during 2010-11 viz.

- (i) Accreditation and rating of nurseries
- (ii) Mother Plants Nurseries for high pedigree planting material for fruit crops, and
- (iii) Assistance for common facilities in Horticulture Parks / Agri Export Zones etc.

13.28 New Initiatives taken up during the year 2011-12 by NHB include (i) Promotion of Capital Investment for Development of Critical Infrastructure for Vegetable Production in Open Field Conditions (ii) Implementation of Quality Testing and Marketing component under National Mission on Saffron including Quality testing lab, export promotion activity, Saffron park and e-auction centers in J&K (iii) Introduction of dedicated Multi Modal Transport System for fresh fruits and vegetables under scheme of Horticulture Park/Common Facility and (iv) Technical Standards of Button Mushroom Production Unit and Protected Structure (Naturally Ventilated Polyhouse, Fan and Pad Type Poly House and Shed / Net House) and (v) Market Intelligence for potato.

13.29 An outlay of Rs. 150.00 crore has been earmarked for NHB during 2011-12 against which an expenditure of Rs. 92.50 crore has been incurred till November 2011.

13.30 Progress: During 2011-12 (till October), NHB has issued Letter of Intent for 1572 projects in commercial horticulture involving an outlay of Rs. 33.95 crore. The Board has so far assisted in creation of additional cold storage capacity of 112.54 lakh MT since inception. During current year 117 projects have been taken up

under nursery accreditation. The Board has been able to disseminate data on market arrival and price through its 36 market information centers with help of mass media and through its web site (nhb.gov.in). NHB has undertaken successful trial run of one prototype insulated and ventilated railway wagon during July-August 2011 for transporting various horticulture produce (table-potatoes from Kharagpur to Coimbtore, Banana from Solapur and Jalgaon to New Delhi and Apples from New Delhi to Kolkatta). The trial runs have brightened the scope for efficient transportation of horticulture produce in different parts of the country with minimum post harvest losses.

13.31 Coconut Development Board (CDB): CDB was established in the year 1981 at Kochi, Kerala as a statutory body of Government of India for overseeing developmental aspects of coconut in the country. The CDB is implementing two major schemes viz (i) Integrated Development of Coconut Industry and (ii) Technology Mission on coconut (TMC) through which various programmes such as production and distribution of quality planting material, area expansion under coconut, productivity enhancement and post harvest management are taken up. Two new schemes of (i) Pilot Project for Replanting and Rejuvenation of Coconut Gardens and (ii) Coconut Palm Insurance Scheme, have been introduced since 2009-10.

13.32 During 2011-12, an allocation of Rs. 86.00 crore has been earmarked for CDB scheme. An expenditure of Rs. 46.00 crore has been incurred till 24th November 2011.

13.33 Progress: The Board has initiated distribution of 11 lakh coconut seedlings from Nurseries attached to seven

Demonstrations cum Seed Production (DSP) farms. Besides, 4 lakh hybrid coconut seedlings are being produced through regional coconut Nurseries. The production of coconut during 2008-09 was 15,730 million nuts from an area of 1.9 million hectare. During the year 2010-11, under area expansion programme of the Board, an area of 2626.749 hectares was brought under coconut by extending financial assistance of Rs. 2.05 crore benefiting 6204 farmers. Under Technology Mission on Coconut, 29 coconut processing units were assisted during 2010-11 by providing Rs. 2.33 crore. Under the scheme "Replanting and Rejuvenation of Coconut Gardens", 36,467 hectares was covered in three districts of Thiruvananthapuram, Kollam and Thrissur in Kerala and Andaman & Nicobar Islands. An amount of Rs. 33.45 crore was incurred under the scheme during 2010-11. Under Coconut Palm Insurance Scheme (CPIS), being implemented in states of Kerala and Maharashtra, an amount of Rs. 0.37 crore was released to Agriculture Insurance Company.

13.34 Central Institute of Horticulture (CIH), Medziphema, Nagaland:

Recognizing the importance of institutional support for development of horticulture in NE Region, a central sector scheme 'Establishment of Central Institute of Horticulture' in Nagaland was approved for implementation in the year 2005-06 at Medziphema, Nagaland. The Institute has been set up in an area of 43.50 ha. Major development activities undertaken by the Institute are establishment of green houses / polyhouses for protected cultivation of high value vegetable and flowers, establishment of mother blocks of identified fruit crops/ varieties and nurseries for mass multiplication of planting

materials, demonstration plots of improved production systems and capacity building through training of extension functionaries and farmers.

13.35 During 2011-12, an amount of Rs.15.00 crore has been earmarked, of which Rs.7.70 crore has been released. During the period, about 2.50 hectares of land has been developed for new plantation activities. A citrus scion block has been developed in a polyhouse of 2000 sq.m. besides, establishment of scion block for eight identified crops. The raising of rootstocks citrus, cashew, mango, guava and roses and mass multiplication of planting material through grafting, budding and suckers, etc. are in progress. The Institute has also organized 41 nos. of training programmes on various aspects of horticulture and imparted training to 261 officer and 2,888 farmers in all the eight North Eastern States.

13.36 Few Highlights:-

- Concept of vegetable villages in Nagaland has been initiated in a systematic and controlled way. Average income from vegetables cultivation in these villages ranges from Rs. 25 to 50 lakh. More than 50% of the population of these villages is involved in vegetable cultivation out of which 45% are supporting education of their children from this income.
- Cymbidium Development Centre in Sikkim has been established for varietal screening, technology up-gradation and training & skill development of farmers for improved cultivation of this orchid.
- Model Floriculture Centres in Meghalaya has proven to be of great assistance to farmers for integrated post harvest management of their crop.

- Before implementing HMNEH scheme, there were only 5 plants in Uttarakhand producing approximately 7500 MT of IQF vegetables, which has increased to 35 plants producing 1.25 lakh MT of IQF vegetables per annum which is a remarkable achievement.
- Canopy management in newly establish orchards (12282 ha) and rejuvenation of senile orchards (5255 ha) has been taken up extensively to maintain tree height and canopy shape for enhancing productivity profitability and sustainability.

CHAPTER-14

Natural Resource Management







14

Natural Resource Management

14.1 Introduction: As per estimates of Indian Council of Agricultural Research (ICAR-2010), out of total geographical area of 328.73 million hectare, about 120.40 million hectare (37%) is affected by various kinds of land degradation. This includes water and wind erosion (94.87 million hectare), water logging (0.91 million hectare), soil sodicity/ alkalinity (3.71 million hectare), soil acidity (17.93 million hectare), soil salinity (2.73 million hectare) and mining and industrial waste (0.26 million hectare). Frequent droughts, floods and climatic variabilities also have an impact on soil fertility and land degradation, thereby, affecting foodgrain production across the country.

14.2 With a view to prevent soil erosion, land degradation and to sustain agricultural production, Natural Resource Management Division, Department of Agriculture & Cooperation is implementing various Soil & Water Conservation Programmes.

14.3 Aims and Objectives: Aims and objectives of various schemes/programmes being implemented by NRM Division are as under:-

- Implementation of soil & water conservation programmes for

prevention of soil erosion and land degradation in order to sustain agricultural production on a watershed approach basis;

- Formulation of policies and strategies to address issues relating to “sustainable agriculture” in the context of risks associated with climate change and suggesting appropriate adaptation and mitigation measures to combat adverse impact of climate change on agriculture production including natural resources;
- Reclamation and development of lands affected by alkalinity and acidity;
- Providing scientific database on soil and land uses for planning and implementation of watershed interventions;
- Prevention of runoff and premature siltation of reservoirs for sustaining irrigation potential and enhancing water storage capacity of reservoirs across the country;
- Encouraging settled cultivation in lieu of shifting cultivation among Jhumia families in states of North East Region and restoration of ecology and

checking land degradation;

- Development of human resources through training and capacity building in areas of soil and water conservation.

14.4 Schemes/Programmes: Central Sector Schemes and Centrally Sponsored Programmes being implemented by NRM Division are given below:-

(A) Central Sector Schemes

14.5 Soil and Land Use Survey of India (SLUSI): Soil and Land Use Survey of India (SLUSI), a pivotal organization under Department of Agriculture & Cooperation, Ministry of Agriculture was established in 1958 with headquarters at Indian Agricultural Research Institute (IARI) Campus, New Delhi. SLUSI has seven Centers located at Noida, Kolkata, Bengaluru, Nagpur, Hyderabad, Ahmedabad and Ranchi. SLUSI has also established Remote Sensing Centre in 1982 for application of advanced technologies in soil survey.

Mandate of SLUSI is to provide detailed scientific database on soil and land characteristics to various States and User Departments for planning and implementation of programmes relating to soil and water conservation and Natural Resource Management. Major activities of SLUSI are:

- Rapid Reconnaissance Survey (RRS) of catchments of River Valley Project and Flood Prone River on 1:50K scale for demarcation of priority watersheds;
- Detailed Soil Survey (DSS) of “Very High” and “High” priority watersheds to provide detailed soil data base for planning and execution of soil conservation measures as well as for scientific land use planning using large scale base map (1:4K to 12.5K scale);
- District-wise Soil Resource Mapping

(SRM) on 1:50K scale to create repository of soil data base in the country;

- Development of Digital Spatial Data Base on Hydrologic Units, Soil and Land Information using Geographic Information System (GIS), Relational Data Base Management System (RDBMS) for GIS based Web Services;
- Organization of short training courses on “Soil and Land Resource Data Base” for Integrated Watershed Development Planning;
- Development of State-wise Micro watershed Atlas of India on 1:50K scale;
- Creation of Platform Free State-wise Microwatershed Atlas for dissemination of watershed information;
- Capacity building of State User Departments such as agriculture, soil conservation, soil survey, forestry and irrigation regarding use of scientific data base for watershed development planning; and
- State level Consultancy Projects on Soil Mapping.

14.6 During 2011-12, Rapid Reconnaissance Survey (RRS) of 101 lakh hectare, Detailed Soil Survey (DSS) of 3.62 lakh hectare and Soil Resource Mapping (SRM) of 121 lakh hectare have been targeted, against which RRS of 82.15 lakh hectare, DSS of 1.65 lakh hectare and SRM of 52.25 lakh hectare have been completed till January, 2012.

SLUSI has designed and upgraded its website during 2011-12 incorporating abstract information of 328 RRS, 1004 DSS, 65 LDM and 30 SRM reports and thus providing easy access to end users. It has also uploaded Platform Free Microwatershed Atlas of Haryana, Punjab

and Madhya Pradesh as an innovative medium for easier dissemination of watershed information. SLUSI has also conducted 2 Short Course Training Programmes for Rajasthan and Madhya Pradesh.

14.7 Soil Conservation Training Centre, Damodar Valley Corporation (DVC), Hazaribagh, Jharkhand: This Centre organizes medium and short duration training courses for field functionaries and Project Officers of State Governments engaged in implementation of soil and water conservation programmes. During 2011-12, it had planned to organize 12 training courses in various sectors of soil and water conservation and watershed management, out of which 9 courses have been organized upto January, 2012.

(B) Centrally Sponsored Programmes (subsumed under Macro Management of Agriculture (MMA):

14.8 Soil Conservation in the Catchments of River Valley Project and Flood Prone River (RVP and FPR): This Centrally Sponsored Programme was launched in III Five Year Plan (1961-62) and from November, 2000 onwards is being implemented through Macro Management of Agriculture (MMA) Scheme in 60 selected inter-state catchments spread over **all States (except Goa)**. Objectives of this programme are;

- Prevention of land degradation by adoption of a multi-disciplinary integrated approach of soil conservation & watershed management in catchment areas;
- Improvement of land capability and moisture regime in watersheds;
- Promotion of land use to match land capability; and,
- Prevention of soil loss from catchments to reduce siltation of multipurpose reservoirs & enhancing in-situ moisture

conservation and surface rainwater storages in catchments to reduce flood peaks & volume of runoff.

14.9 Under this programme, various soil and water conservation measures, namely; contour vegetative hedges, contour/graded bunding, horticulture plantation, contour/staggered trenching, sowing and plantation, silvi-pasture development, pasture development, afforestation, farm ponds, percolation tanks, drainage line treatment (earthen loose boulders, water harvesting structure, check bund, drop spill-way, sediment detention structure, etc.) are implemented on watershed approach. With view to assess impact of soil and water conservation measures, system of continuous monitoring of rainfall, runoff and sediment parameters prior to, during and after treatment is collected by establishing Sediment Monitoring Stations (SMSs) at outlet of watershed. For this purpose, 3% of allocated funds are earmarked to meet cost of establishment and operational cost of SMSs.

14.10 Since inception till 2010-11, an area of 75.85 lakh hectare has been treated at an expenditure of Rs.3256.74 crore under this programme against priority area of 301.50 lakh hectare needing urgent treatment. During 2011-12, 1.78 lakh hectare is targeted for treatment, against which 1.26 lakh hectare has been treated upto January, 2012.

14.11 Reclamation and Development of Alkali and Acid Soils (RADAS): This Programme was launched in VII Five Year Plan (1985-86) and was restructured during XI Plan for development of alkali and acid soils. Presently this programme is being implemented through Macro Management of Agriculture (MMA) Scheme in **seven States, namely;** Arunachal Pradesh, Mizoram, Gujarat, Haryana, Punjab, Karnataka and Rajasthan.

14.12 RADAS aims at improving physical conditions and productivity status of alkali

and acid soils for restoring optimum crop production. Major components permissible under this programme are on farm development viz. land leveling, bunding, community drainage systems, application of soil amendments, organic manures, crop/horticultural/fuel wood production, etc.

14.13 Under this programme, upto 2010-11, 8.41 lakh hectare has been developed at expenditure of Rs.166.49 crore. During 2011-12, 0.22 lakh hectare has been targeted for reclamation and development, against which 0.16 lakh hectare has been reclaimed upto January, 2012.

(C) Special Central Assistance to State Plan Scheme:

14.14 Watershed Development Project in Shifting Cultivation Areas (WDPSCA):

This Scheme is being implemented from 1992-93 in **seven States of North Eastern Region with 100%** special assistance to State Plan. Objectives of this scheme are:

- Protect hill slopes of Jhum areas through soil and water conservation measures on watershed basis and to reduce further land degradation;
- Encourage and assist Jhumia families to develop Jhum land for productive uses with improved cultivation and suitable package of practices leading to settled cultivation;
- Improve socio-economic status of Jhumia families through household/land based activities;
- Mitigate ill effects of shifting cultivation by introducing appropriate land use as per land capability and improved technologies.

14.15 Under this scheme, treatment of arable and non-arable land through various measures viz; drainage line treatment, water harvesting structures, farm ponds,

horticulture, afforestation, silvi-pasture, crop demonstration, etc. is taken up. Rehabilitation Components (RC) include improvement of land based and landless/assetless household production systems like piggery, poultry, fishery, sericulture, basket/rope making, tailoring, carpentry, etc. depending on choice of farmers. One time assistance upto Rs. 25,000 is provided to beneficiaries.

14.16 Since inception upto 2010-11, an area of 5.49 lakh hectare has been developed at an expenditure of Rs. 455.79 crore. During 2011-12, 0.42 lakh hectare of Jhum land has been targeted for development, against which 0.38 lakh hectare has already been developed upto January, 2012.

(D) Externally Aided Project:

14.17 Sodic Land Reclamation & Development Project with World Bank Assistance:

Project proposal on "Uttar Pradesh Land Reclamation and Development Project" at estimated cost of Rs.2000 crore for reclamation and development of 3.10 lakh hectare area was proposed for seeking financial assistance from World Bank. Technical and Financial agreement has been signed in June, 2009 for development of 1.35 lakh hectare of degraded land comprising 1.30 lakh hectare of Sodic lands and 5000 hectare of ravine area at estimated cost of Rs.1224 crore in 6 years. During 2010-11, advance preparatory reclamation work in an area of 0.20 lakh hectare was undertaken with an expenditure of Rs. 85.18 crore. During 2011-12, 0.25 lakh hectare of Sodic land has been targeted for development, against which 0.26 lakh hectare has already been developed upto January, 2012.

14.18 Crop Diversification in Himachal Pradesh with assistance of Japan International Cooperation Agency (JICA): Project agreement for implementation of various interventions for

Crop Diversification in Himachal Pradesh with JICA assistance at estimated cost of Rs.321 crore for 7 years was signed on 1st October, 2010. After detailed deliberations and visit of experts to identified districts of Himachal Pradesh, Overseas Development Assistance (ODA) agreement was signed on 17th February, 2011 and various agreed interventions of project are being undertaken in 5 selected districts namely; Kangra, Hamirpur, Bilaspur, Mandi and Unna.

(E) National Mission for Sustainable Agriculture (NMSA)

14.19 National Mission for Sustainable Agriculture (NMSA) is one of the eight Missions under National Action Plan on Climate Change (NAPCC). NMSA seeks to address issues regarding 'Sustainable Agriculture' in context of risks associated with climate change by devising appropriate adaptation and mitigation strategies for ensuring food security, enhancing livelihood opportunities and contributing to economic stability at National level.

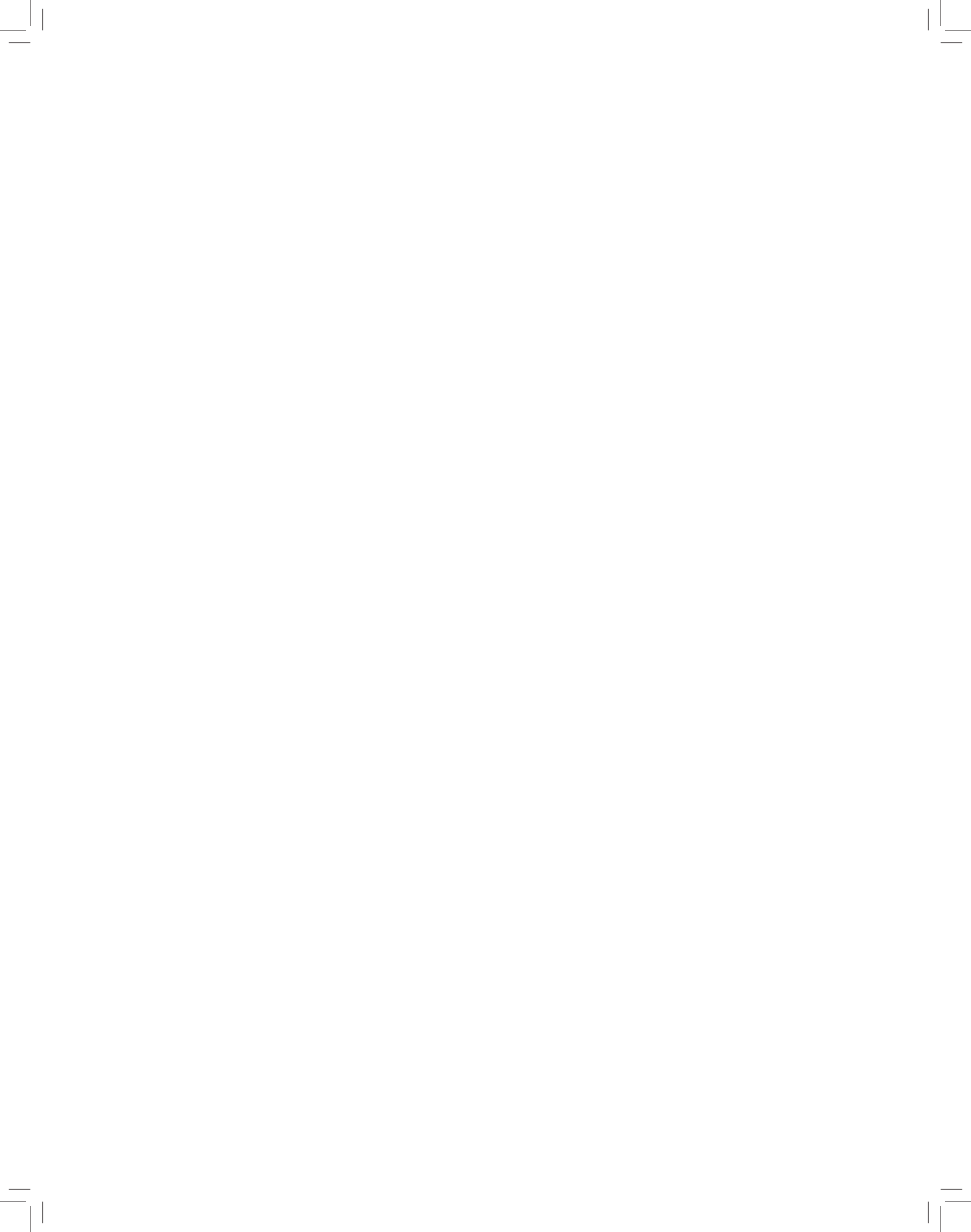
14.20 NMSA identifies ten key dimensions for promoting sustainable agricultural practices, which will be operationalised by implementing **Programme of Action (POA)** that covers both adaptation and mitigation measures through four functional areas, namely, *Research and Development (R&D), Technologies, Products and Practices (TP&P), Infrastructure Development*

(ID) and Capacity Building (CB). While recognizing role of modern technologies and research in promoting sustainability of agricultural production, NMSA emphasizes need to harness traditional knowledge and agricultural heritage for in-situ conservation of genetic resources.

14.21 This Mission will be operationalised by mainstreaming/embedding adaptation and mitigation strategies onto ongoing Research and Development (R&D) programmes and in flagship schemes including Rashtriya Krishi Vikas Yojana (RKVY), National Horticulture Mission (NHM), National Mission of Micro Irrigation (NMMI) and National Food Security Mission (NFSM) etc. through a process of selective upscaling and course correction measures. This would further be supplemented by introduction of new programmatic interventions by seeking convergence with other National Missions and collaboration with key Ministries/ Departments for institutionalizing linkages in order to address cross-sectoral issues.

14.22 NMSA has been accorded *in-principle approval* by Prime Minister's Council on Climate Change (PMCCC).

14.23 Schemes / Programmes implemented in the North Eastern Region: Target, budget allocation and achievement of various schemes/programmes being implemented in States of North Eastern Region are given at **Annexure 14.1**.



CHAPTER-15

Rainfed Farming Systems







15

Rainfed Farming Systems

15.1 Rainfed area assumes special significance in terms of ecology, agricultural productivity and livelihood for millions of rural households in India. These areas not only constitute about three fourth of land mass under arid semi-arid and dry humid zones, but also account for nearly 55% of agricultural land spread across large parts of the country.

15.2 Rainfed agriculture is complex, diverse and risk prone. It is characterized by low level of productivity and input usage which coupled with vagaries of monsoon result in wide variation and instability in yields. These areas, if managed properly have tremendous potential to contribute larger share in food production and faster agricultural growth compared to irrigated areas which have reached a plateau.

15.3 Realizing importance of rainfed areas, a fresh flux of interest has been calibrated into programmes/schemes focusing on three important dimensions like ecological restoration, productivity enhancement and drought mitigation.

15.4 National Watershed Development Project for Rainfed Areas (NWDPR):

This was launched in 1990-91 in 28 States and 2 Union Territories based on

twin concepts of integrated watershed management and sustainable farming systems. NWDPR scheme has been subsumed in Macro Management of Agriculture scheme since 2000-2001. This programme specifically focuses on:

- conservation, development and sustainable management of natural resources;
- enhancement of agricultural production and productivity in a sustainable manner;
- restoration of ecological balance in degraded and fragile rainfed ecosystems by greening these areas through an appropriate mix of trees, shrubs and grasses;
- reduction in regional disparity between irrigated and rainfed areas; and
- creation of sustained employment opportunities for rural community including landless.

15.5 Impact evaluation studies both on ground and through remote sensing techniques have shown that watershed based interventions have led to:

- increase in groundwater recharge;

- increase in number of wells and water bodies;
- enhancement of cropping intensity;
- changes in cropping pattern; and
- higher yields of crops and reduction in soil losses.

15.6 The scheme is being continued during Eleventh Plan based on new Common Guidelines for Watershed Development Projects prepared by National Rainfed Area Authority (NRAA). It is proposed to develop about 2.28 million hectare in the XIth Plan period covering about 3744 micro watersheds. By end of March, 2011, 12.08 lakh hectare has been developed at a cost of Rs. 1065.31 crore. During 2011-12 it is targeted to develop 2.96 lakh hectare with investment of about Rs. 235 crore.

15.7 Rainfed Area Development Programme (RADP): As per advice of Planning Commission this programme has been launched on pilot basis as sub scheme of Rashtriya Krishi Vikas Yojana (RKVY) during the year 2011-12 in states of Andhra Pradesh, Odisha, Tamil Nadu, Karnataka, Madhya Pradesh, Chhattisgarh, Maharashtra, Gujarat, Uttar Pradesh and Rajasthan, with outlay of Rs. 250 crores. The broad objectives are:

- a) Increasing agricultural productivity of rainfed areas in sustainable manner by adopting appropriate farming system based approaches.
- b) To minimize adverse impact of possible crop failures due to drought, flood or un-even rainfall distribution through diversified and composite farming systems.
- c) Restoration of confidence in rainfed agriculture by creating sustained employment opportunities through improved on-farm technologies and cultivation practices.

- d) Enhancement of farmers' income and livelihood support for reduction of poverty in rainfed areas.
- e) Convergence of relevant developmental programmes in project areas for optimal utilization of resources by establishing an integrated and coordinated system involving different sectors and institutions.

15.8 RADP will act as a catalyst to accomplish objectives of enhanced productivity, minimizing risk of crop losses due to uncertainties of weather conditions, harnessing efficiency of resources, assuring food and livelihood / income security at farm level and strengthen farmers' capacity to adapt to climatic changes. 3510 clusters have been selected and about 1.7 lakh farmers have benefited till Dec. 2011.

Externally Aided Projects

15.9 World Bank Assisted Integrated Watershed Management Projects: Three World Bank assisted Integrated Watershed Management Projects in States of Uttarakhand, Himachal Pradesh and Assam are being implemented. This department is involved in supervision, coordination and monitoring of these projects. World Bank provides funds for these projects directly to State Governments.

15.10 Uttarakhand Decentralized Watershed Development Project: Uttarakhand Decentralized Watershed Development Project was launched in September, 2004 and will end in March 2012. The project aims at improving productive potential of natural resources and increasing incomes of rural inhabitants in selected watersheds, through socially inclusive, and environmentally sustainable interventions. It envisages Participatory Watershed Development and Management, Enhancing of Livelihood Opportunities and Institutional Strengthening. Total cost of this project is Rs.402 crore and total area to be covered is 2.26 lakh hectare

in 468 Gram Panchayats spread across 11 districts namely Almora, Champawat, Nainital, Rudraprayag, Uttarkashi, Bageshwar, Dehradun, Pauri Garhwal, Tehri Garhwal, Pithoragarh, and Chamoli. By end of November, 2011, work is in progress in all selected Gram Panchayats with an investment of Rs. 477.42 crore.

15.11 Himachal Pradesh Mid-Himalayan Watershed Development: Mid-Himalayan Watershed Development project became operative in February, 2006 and it will end in March, 2013. Project aims at preventing degradation and protection of bio-diversity, 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. Total cost of project is Rs. 337.50 crore and total area to be covered includes 602 Gram Panchayats in 10 districts namely, Sirmour, Solan, Bilaspur, Shimla, Kullu, Mandi, Hamirpur, Kangra, Chamba and Una. At present work is in progress in all selected Gram Panchayats and a total of Rs. 255.97 crore has been spent upto March, 2011.

15.12 Assam Agricultural Competitiveness Project: The Assam Agricultural Competitiveness Project was launched in February, 2005 and scheduled to close on 31st December, 2011. The project aims at increasing productivity and market access of targeted farmers and community groups to stimulate growth in Assam's agricultural economy. Total cost of project is Rs. 1,022 crore covering 23 districts for infrastructure development, such as rural roads, agricultural services & market chain development and minor irrigation. As on October, 2011 an amount of Rs 693.17 crores has been incurred towards installation of 52,410 shallow tube wells (STW), 12507 lift pump sets, supply of 1084 power tillers and 736 tractors, laying 666 km rural roads and drainage treatment

of 16,000 hectare of area.

15.13 German Technical Cooperation (GIZ) Assisted Project – Strengthening Capacity Building for Decentralized Watershed Development: Objective of this programme was to strengthen capacities and networking of regional and state organizations for decentralized watershed management. In first phase, this project was implemented in States of Karnataka, Rajasthan and Uttarakhand on a pilot basis. The project aimed at strengthening capacity development for Watershed Development Projects at regional and state level. A National Consortium comprising Ministry of Agriculture, GIZ, International Crops Research Institute for Semi-Arid Tropics (ICRISAT) and National Institute of Agricultural Extension Management (MANAGE) was constituted for achieving these objectives. The project was launched in December, 2006 and continued upto 30th November, 2011. The total cost of project was a grant of 3.5 million Euros from GIZ towards Technical cooperation.

15.14 Watershed Development Fund (WDF): The Union Government has established a Watershed Development Fund (WDF) during 2000 with total cost of Rs. 200 crore which includes Rs. 100 crore by Department of Agriculture & Cooperation and Rs. 100 crore by NABARD as matching contribution. The total corpus lies with NABARD.

15.15 Objective of fund is to promote participatory watershed development involving Watershed Community, State Government Departments, Banks and NGOs. Presently WDF scheme is being implemented in Gujarat, Maharashtra, Uttar Pradesh, Uttarakhand, Karnataka, Tamil Nadu, Rajasthan, Chhattisgarh, Odisha, Jharkhand, Madhya Pradesh, Himachal Pradesh and West Bengal. During 2006 after announcement of Prime Minister's Rehabilitation Package in 31 distressed districts in States of

Andhra Pradesh, Karnataka, Kerala and Maharashtra, it was decided to implement participatory watershed development programme in all these distressed districts through WDF. Since inception and up to end of March, 2011 an amount of Rs. 349.35 crore consisting of Rs. 316.77 crore as grant and Rs. 32.58 crore as loan has been released to NGOs by NABARD. Out of Rs. 316.77 crore grant component, Rs. 265.86 crore has been released to 31 non-distressed districts under PM's rehabilitation package. At present, a total number of 1288 watersheds have been selected comprising 515 in non distressed districts of 13 states and remaining 773 watersheds under PM's package for 31 distressed districts in four states under WDF.

15.16 Development of Model Watersheds: To address bio-physical and socio economic dimensions of specific agroclimatic conditions and to develop suitable technologies for maximizing development process under watershed programmes, 18 Model Watershed Projects covering different agro ecological regions of the country have been assigned

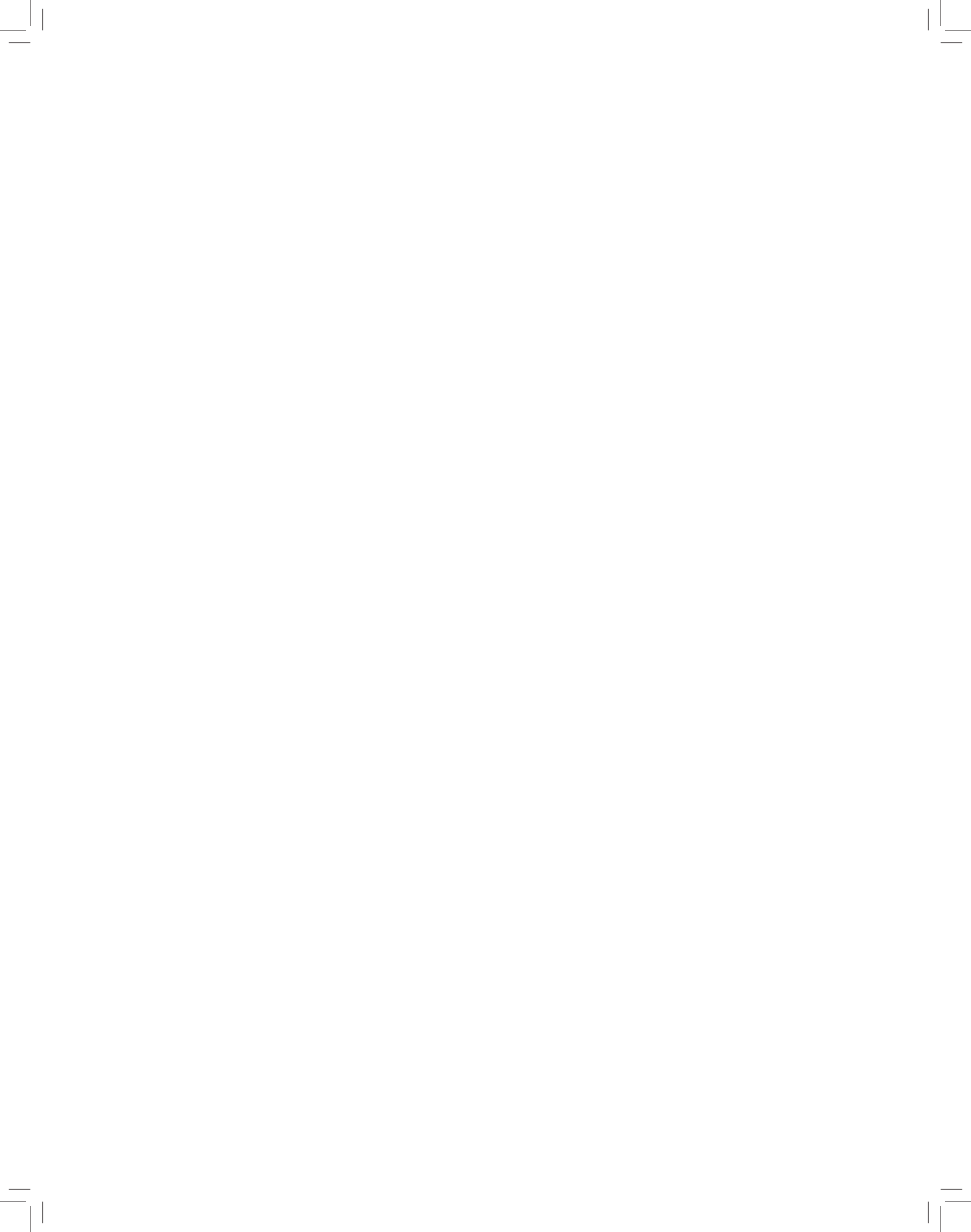
to Central Soil & Water Conservation Research and Training Institute (CSWCRTI), ICAR and International Crop Research Institute for Semi Arid Tropics (ICRISAT), Hyderabad. These watersheds will serve as model projects for replicating successful technologies through NWDPR and other National/State watershed projects. CSWCRTI has been assigned development of nine model watersheds in states of Uttarakhand, Rajasthan, Karnataka, Tamil Nadu, Gujarat, Uttar Pradesh, Punjab, Madhya Pradesh and Odisha. An amount of Rs. 3.67 crore has so far been released to CSWCRTI under Direct Funded Component of MMA. Similarly, ICRISAT has also been assigned nine model watersheds in states of Rajasthan, Gujarat, Maharashtra, Madhya Pradesh, Andhra Pradesh, Karnataka, Uttar Pradesh, Odisha and Tamil Nadu. An amount of Rs. 5.35 crore has so far been released to ICRISAT.

15.17 Programmes in North-Eastern States: Details of programmes being executed in North-Eastern States are indicated in **Annexure 15.1**.

CHAPTER-16

Cooperation







16

Cooperation

16.1 The Cooperative Sector has been playing a significant role in the area of disbursing agricultural credit, providing market support to farmers, distribution of agricultural inputs and imparting cooperative education and training etc. The basic objective of Cooperation Division is to design long term and short term strategies for reducing economic disparities between downtrodden rural people and rural rich as well as regional imbalances including rural and urban differences.

16.2 Cooperation Division is implementing two Central Sector Plan Schemes in the country during the year 2011-12. These are – (a) Restructured Central Sector Scheme for Cooperative Education and Training and (b) Restructured Central Sector Scheme for assistance to NCDC Programmes for Cooperative Development. The budget provision for the schemes during 2011-12 and funds released up to 31.12.2011 is as under:-

(Rs. In lakhs)

S. No.	Name of the Scheme	RE 2011- 12	Funds released as on 31.12.2011
1.	Restructured Central Sector Scheme for Cooperative Education and Training	2500.00	1189.90
2.	Restructured Central Sector Scheme for assistance to NCDC Programmes for Cooperative Development.	7000.00	5350.00
	Total	9500.00	6539.50

(A) Restructured Central Sector Scheme for Cooperative Education and Training.

16.3 The 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 3rd Five year plan. It is a continuing scheme. The programmes relating to cooperative Education are being implemented by

Cooperation

NCUI. NCUI has been implementing the Central Sector Scheme for Cooperative Education in cooperatively under developed States/under developed areas of Developed States. The Government of India is providing 100% grants in aid to NCUI for implementing Special Scheme of Intensification of Cooperative Education in Cooperatively under Developed States. At present NCUI is running 44 cooperative education field projects in the country. During the year 2011-12 (upto 31.12.2011), 192744 persons were educated by NCUI Projects against target of 252450, by 33 general Projects other than N.E. and women projects programmes.

16.4 The Cooperative Training Programmes are being conducted by the National Council for Cooperative Training (NCCT) through its 5 Regional Institutes of Cooperative Management (RICMs),¹⁴ Institutes of Cooperative Management(ICMs), located in different States and Vaikunth Mehta National Institute of Cooperative Management (VAMNICOM), Pune. The Government of India provides 100 percent financial assistance in the form of grants-in-aid to NCCT for conducting cooperative training programmes. The Council also provides academic and financial support to Junior Cooperative Training Centers (JCTCs) in the country. JCTCs are financed by State Cooperative Unions/State Governments. From the year, 2004-05, Ministry of Agriculture, Department of Agriculture and Cooperation (DOAC) has introduced a new component in the Central Sector Scheme (CSS) for Assistance to Junior Training Centers (JCTCs) in conducting Training Programmes.

16.5 The outlay earmarked for imple-

menting Cooperative Education and Training programmes under Re-structured Central Sector Scheme for Cooperative Education & Training during the year 2011-12 is Rs. 2500.00 lakhs including Rs.328.60 lakhs for the N.E. Region.

Cooperative Education and Training Activities in the North Eastern Region

16.6 The Government of India is implementing a special scheme for Intensification of cooperative education in cooperatively under-developed states including North-Eastern Region through NCUI with 100 percent financial assistance. NCUI has established 8 field projects namely Aizwal (Mizoram), Thoubal, West Imphal (Manipur), Jorhat, Moragoon (Assam), Kohima (Nagaland), Shillong (Meghalaya) and West Sikkim in North-Eastern Region. These projects have made tangible impact in improving income of members of self-help groups and cooperatives. During the year 2011-12 (31.12.2011) a total of 41688 persons were imparted education and training by these projects, against the target of 53550 by 7 projects excluding one women project for which target & achievement has been given under the heading "Women Development Activities".

Women Development Activities

16.7 With the overall objective of bringing women in cooperative fold from grass root levels by informal approach and to revitalize and develop women participation in group activities and to improve socio-economic conditions of women of selected blocks, NCUI is now running 4 exclusive women development projects located at Shimoga (Karnataka), Berhampur (Odisha), Imphal (Manipur) and Bhopal (MP) under Special

Scheme of Intensification of Cooperative Education in cooperatively under-developed states. Besides, each field project has got a special women development component. Under this, women are organized into self-help groups and help them to develop thrift habits. Women are also given training to undertake income-generating activities with the help of their own resources or by borrowing from cooperatives. The projects personnel help them in marketing their produce in local market and by organizing fair/exhibitions. One women educational and development project is running in North Eastern Region at East Imphal in State of Manipur. During the year 2011-12 (31.12.2011) a total of 119957 persons were imparted education and training by these projects, against the target of 120000 by 4 projects & Lady Mobilizer of general projects.

(B) Restructured Central Sector Scheme for assistance to NCDC Programmes for Cooperative Development.

Cooperative Development Programmes

16.8 The Government of India implements its cooperative development programmes through National Cooperative Development Corporation (NCDC). The programmes/schemes being implemented through NCDC are (i) Integrated Cooperative Development Projects in selected districts, (ii) assistance to cooperative marketing, processing and storage etc., programmes in cooperatively under-developed/least developed States/Union Territories, and (iii) share capital participation in growers'/weavers' cooperative spinning mills under restructured central sector scheme. It has been decided that under this scheme,

subsidy component will be provided by Government of India and loan component will be arranged by NCDC through its own sources.

16.9 NCDC is a non-equity based development financing institution created exclusively for cooperative sector with the objective of planning and promoting programmes for production, processing, marketing, storage, export and import of agricultural produce, food stuff and certain notified commodities and services on cooperative principles. With amendment of NCDC Act in 2002, scope of activities of Corporation has been widened to cover livestock, cottage and village industries, handicrafts, rural crafts and certain notified services besides enabling NCDC to lend directly to cooperative societies on furnishing security to the satisfaction of Corporation. With notification of additional services like tourism, hospitality, transport, electricity & power, rural housing, healthcare, hospitals and education cooperatives, the scope of NCDC funding has been further broadened. The Central Government has however prescribed an overall ceiling of twenty five percent (25%) of annual budget of NCDC for financing all activities under notified services so that focus of NCDC continues on financing of cooperatives in agriculture & allied sector. The rates of interest on NCDC loans ranged from 10.50% to 13.25% during the year. In 2011-12, (up to 15.11.2011) an assistance of Rs.1086.03 crore (provisional) has been disbursed by NCDC against approved outlay of Rs.4000.00 crore.

COOPERATIVE SPINNING MILLS

16.10 In order to improve economic condition of cotton growers as well as

handloom & powerloom weavers and to consolidate gains achieved so far, the Department, through NCDC, continued to provide financial assistance to spinning mills & ginning and pressing units in cooperative sector under the component of share capital participation in Growers/Weavers Cooperative Spinning Mills of the restructured Central Sector Scheme under the component of share capital participation in Growers/Weavers Cooperative Spinning Mills of the restructured Central Sector Scheme. During the year 2011-12 (upto 15.11.2011) NCDC released an overall amount of Rs.63.32 crore, including Rs.2.94 crore under Restructured Central Sector Scheme.

COOPERATIVE STORAGE AND COLD STORAGE

(i) Storage

16.11 The Department of Agriculture and Cooperation (DAC), 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 has increased from 11 lakh tonnes during 1962-63 to 151.42 lakh tonnes as on 31.3.2011.

16.12 During the year 2011-12 (upto 15.11.2011), under the scheme, storage capacity of 2050 tonnes has been sanctioned by NCDC (at the block cost of Rs. 0.8378 crore) involving financial assistance of Rs.0.6417 crore (Rs. 0.4659 crore loan + Rs. 0.1758 crore subsidy). During the period, financial assistance of Rs.0.111 crore (Rs. 0.083 crore loan + Rs.

0.028 crore subsidy) has been released by NCDC under RCSS of DAC.

(ii) Cold Storage

16.13 The Department of Agriculture & Cooperation through NCDC, has been providing financial assistance through State Government and also directly to cooperative societies for establishment of Cold Storages aimed at facilitating expanded shelf life of potatoes and other fruits and vegetables. By the end of financial year 2010-11, total cold storage capacity created with NCDC's finance has increased to 9.268 lakh tonnes.

16.14 NCDC provides financial assistance to the extent of 90% of block cost to State Govts. for setting up / modernization / expansion / rehabilitation of cold storages and Ice plants by cooperatives. In case of direct funding, assistance to the extent of 75% is provided. NCDC has also dovetailed its cold storage programme with National Horticulture Board (NHB) and acts as a nodal agency to route subsidy to State Govts./ Cooperatives for cold storage projects. In such cases quantum of assistance provided by NCDC is reduced by subsidy available under the Capital Investment Scheme (CIS) of NHB. The scheme provides enhanced back-ended subsidy @ **40%** of project cost for general and **55%** in case of hilly and scheduled areas for maximum storage capacity upto 5,000 ton per project at normative cost @ Rs.6000 / 7000 / 8000 per ton as per prescribed standards under the scheme.

16.15 Due to inability of State Governments / Cooperative Societies to pose suitable proposals during the financial year 2011-12 (upto 15.11.2011), no financial assistance could be sanctioned

so far to cold storage projects under Restructured Central Sector Scheme of Cooperative Development Programme of DAC & Centrally Sponsored Scheme implemented by NCDC.

INTEGRATED COOPERATIVE DEVELOPMENT PROJECTS

16.16 DAC has made systematic efforts to develop primary cooperatives as multi-purpose entities to provide a package of services to rural communities. With this in view, NCDC is implementing Integrated Cooperative Development Projects (ICDP) scheme in selected districts in rural areas. During the year 2011-12 (upto 15.11.2011), 11 Projects in Rajasthan & 2 in West Bengal at project cost of Rs.293.22 crore have been sanctioned, involving NCDC's share of assistance of Rs.272.20 crore (Rs.213.15 crore as loan and Rs.59.05 crore as subsidy). During the same period, NCDC has released loan assistance of Rs.94.69 crore and subsidy of Rs.19.81 crore (totaling to Rs.114.50 crore) for ICDP.

16.17 Under the Restructured Central Sector Scheme during 2011-12 (upto 15.11.2011) for ICDP programme, subsidy of Rs.6.07 crore has been released towards expenditure on Project Implementation Team (PIT).

COOPERATIVES IN UNDER DEVELOPED STATES

16.18 The process of economic development in the country brought to light certain regional disparities and imbalances in some parts due to inherent factors like topography, agro-climatic conditions and poor infrastructure. During formulation of Fifth five-year plan, the limitations

of this approach came to fore and as a consequence, the concept of cooperatively under-developed States evolved to ensure balanced regional development.

16.19 The categorization of States for funding by NCDC was reviewed by Planning Commission in November, 2004. Accordingly, Andhra Pradesh, Uttar Pradesh, Madhya Pradesh and Goa were also placed under the category of cooperatively under developed states. Similarly Jharkhand, Bihar and Jammu & Kashmir were classified as cooperatively least developed States, in addition to existing States. Now 10 States and 2 UTs have been categorized as cooperatively under-developed and 11 States as least-developed.

16.20 During the year 2010-11, financial assistance of Rs.1790.94 crore has been disbursed by NCDC to cooperatives in cooperatively least/ under-developed states/UTs. under its various schemes.

16.21 During 2011-12 (upto 15.11.2011) under Restructured Central Sector Scheme for assistance to cooperatives for marketing, processing, storage programmes, subsidy of Rs.28.08 crore has been disbursed.

STRENGTHENING OF NATIONAL-LEVEL COOPERATIVE FEDERATIONS

16.22 The progressive expansion and diversification of cooperative movement has led to organization of national-level cooperative institutions in different fields of economic activity with a view to accelerating pace of cooperative development and also to strengthen cooperatives in their economic activities in a coordinated manner. National-level cooperative federations have been playing a significant

leadership role. Most of these federations are promotional in nature excepting a few which are involved in commercial activities. DAC has been providing both policy direction and financial support to these federations. The objective of the scheme is to assist national-level federations in undertaking promotional and research activities, bringing about improvement in infrastructural facilities and also to assist in building up their equity base.

GENDER IN AGRICULTURE

16.23 NCDC encourages women cooperatives to avail themselves of assistance under its various schemes. A large number of women members are engaged / involved in cooperatives dealing with fruits & vegetables, ICDP, sugarcane processing, consumer stores, handloom, power loom, spinning and services etc. activities.

16.24 Upto 31.03.2011 NCDC has cumulatively sanctioned and released financial assistance of Rs.140.51 crore and Rs.87.00 crore respectively for development of cooperative societies exclusively organized by women. This included food grain processing, plantation crops, oilseed processing, fisheries, integrated cooperative development projects (ICDPs), spinning mills, handloom and powerloom weaving and sugar mills etc.

REVITALISATION OF COOPERATIVES

16.25 With phenomenal expansion of cooperatives in almost all sectors, signs of structural weakness and regional imbalances have also become apparent. The reason for such weakness could be attributed to large percentage of dormant

membership, heavy dependence on Government assistance, poor deposit mobilization, lack of professional management, mounting overdues, etc. Concrete steps have now been initiated to revitalize cooperatives to make them vibrant democratic organizations with economic viability and active participation of members. The steps taken for revitalization of cooperatives include enunciation of a National Policy on Cooperatives, revamping of cooperative credit structure and reforms in cooperative legislation for providing an appropriate legislative framework for sound and healthy growth of cooperatives.

(a) Amendment to the Multi-State Co-operative Societies Act, 2002

16.26 The MSCS (Amendment) Bill, 2010 was introduced in Lok Sabha on 15.11.2010. The proposed amendment intends to strengthen the Cooperatives by making them more member-driven and professional. Bill has been referred to Standing Committee on Agriculture.

(b) Amendment to the Constitution in respect of Cooperatives

16.27 Pursuant to the Common Minimum Programme of UPA Government to ensure democratic, autonomous and professional functioning of cooperatives, it has been decided to initiate a proposal for amendment to the Constitution for the purpose.

16.28 Since the Constitution Amendment Bill could not be passed in 14th Lok Sabha, it was decided to re-introduce the Bill. The Constitution (One Hundred and Eleventh Amendment) Bill, 2009 was introduced in Lok Sabha on 30.11.2009. The Bill

was referred to Standing Committee on Agriculture for examination and to report. The Standing Committee has since submitted its report. The Suggestions made by Standing Committee were examined in the Department in consultation with Ministry of Law & Justice. The notices were given by Hon'ble AM to Secretary General Lok Sabha on 16.11.2011 for consideration and passing of the Bill. The Bill was passed in the Lok Sabha on 22.12.2011 and in Rajya Sabha on 28.12.2011. Hon'ble President of India has given assent to the Bill on 12.01.2012. The Constitution (Ninety-Seventh Amendment) Act, 2011 has been published in the Gazette of India on 13.01.2012.

(c) National Conference of Cooperation Ministers of States.

16.29 National Conference of Cooperation Ministers of States was held on 20th April, 2011 in New Delhi. The Conference was inaugurated by Union Agriculture Minister and attended by State Cooperation Ministers of Andhra Pradesh, Bihar, Jharkhand, J&K, Karnataka, Kerala, Manipur and Rajasthan. The Conference was also attended by Principal Secretaries and Registrar of Cooperative Societies of States, Chief Executives/ Managing Directors of NABARD, NCDC and National Level Cooperative Federations.

16.30 The Conference expressed concern on the present challenges and constraints being faced by cooperative mainly on account of competitive and changing market environment. Besides, it was also felt that cooperatives have certain weaknesses which need to be addressed on priority. A unanimous view emerged for continuous support from Government to cooperatives

to make them financially strong and viable and promote them as autonomous and member driven institutions through appropriate legal and policy reforms.

16.31 The Conference unanimously resolved to take action in areas which strengthen cooperative movement in the country.

Helping farmers in getting remunerative price for their produce through NAFED

16.32 The Department of Agriculture & Cooperation is implementing Price Support Scheme (PSS) for procurement of oilseeds and pulses through NAFED which is the Central nodal agency at the Minimum Support Price declared by Government. The Department of Agriculture & Cooperation is also implementing Market Intervention Scheme (MIS) for horticultural and agricultural commodities generally perishable in nature and not covered under Price Support Scheme, thus, helping farmers in getting remunerative price for their produce.

Price Support Scheme (PSS)

16.33 The Department of Agriculture & Cooperation is implementing Price Support Scheme (PSS) for procurement of oilseeds and pulses through NAFED which is the Central nodal agency at the Minimum Support Price (MSP) declared by the Government. NAFED is also Central agency for procurement of cotton under PSS in addition to CCI. NAFED undertakes procurement of oilseeds, pulses and cotton under PSS as and when prices fall below MSP. Procurement under PSS is continued till prices stabilize at or above the MSP. Losses, if any, incurred by NAFED in undertaking MSP operations are

fully reimbursed by Central Government. Profit, if any, earned in undertaking MSP operations are credited to the Central Government.

Achievement under Price Support Scheme (PSS)

16.34 During the year 2011-12, the prices of Milling Copra ruled below respective Minimum Support Prices (MSPs) fixed by Government of India for the relevant marketing season. NAFED procured a quantity of 751.600 MTs of Milling Copra valued at Rs. 340.10 lakhs in Andaman & Nicobar Island under Price Support Scheme.

16.35 During the year 2011-12, rates of Urad ruled below the respective MSP. NAFED intervened in the market and procured a quantity of 15.68 MTs of Urad valued at Rs. 60 lakhs in Rajasthan.

Market Intervention Scheme (MIS)

16.36 The Department of Agriculture & Cooperation is implementing Market

Intervention Scheme (MIS) on the request of a State/U.T. Government for procurement of agricultural and horticultural commodities generally perishable in nature and not covered under Price Support Scheme. The MIS is implemented in order to protect growers of these commodities from making distress sale in the event of bumper crop when there is glut in market and prices tend to fall below economic levels/cost of production. Procurement under MIS is made by NAFED as Central Agency and by State designated agencies. Losses, if any incurred by procuring agencies are shared between Central Government and concerned State Government on 50:50 basis (75:25) in case of North-Eastern States. However, the amount of loss to be shared between Central Government and State Government is restricted to 25% of procurement cost. Profit, if any, earned by the procuring agencies is retained by them.

Details of MIS implemented during the year 2010-11

S. No.	State	Commodity	MIP(Rs./ MT)	Qty. (in MTs.)
1.	Uttar Pradesh	Potato	Rs. 3050	1,00,000
2.	Karnataka	Areca nut(white)	Rs.75, 900	3,000
3.	Karnataka	Areca nut (Red)	Rs. 97, 900	4,000
4.	Himachal Pradesh	Apples	Rs.5250	50600
5.	Karnataka	Onion	Rs.6000	54000

CHAPTER-17

Drought Management







17

Drought Management

17.1 Department of Agriculture and Cooperation is mandated to coordinate relief measures necessitated by drought, hailstorm and pest attacks. Spatial distribution and quantum of rainfall during South-West Monsoon (June – September) mainly decides drought in the country, as South-West Monsoon is the main rainfall season when more than 70% of annual rainfall is received. Keeping in view impact of drought on agricultural economy, DAC closely monitors progress of South-West Monsoon in the country, in close coordination with India Meteorological Department (IMD) and keeps watch over deficit rainfall conditions in the country. State Governments are primarily responsible to tackle the situation arising out of disasters, including drought. This Department remains in touch with State Governments and supplements their efforts for taking necessary measures in wake of drought.

17.2 During South West Monsoon 2011 (1st June 2011 to 30th September 2011), the country as a whole received 899.9 mm as against the normal rainfall of 887.5 mm, which is 101% of normal rainfall. Out of 36 meteorological sub-divisions in the country, 7 received excess rainfall (+20% or more), 26 received normal rainfall (+19%

to -19%), and 3 received deficient rainfall (-20% to -59%). There was meteorological no sub-division with scanty rainfall.

17.3 Total live storage in 81 important reservoirs in different parts of the country is monitored by Central Water Commission and as on 29.9.2011 water availability in these reservoirs was 131.491 Billion Cubic Meters (BCM), which is 87% of the storage capacity of Full Reservoir Level (FRL). Current year's storage is nearly 118% of last year's storage and 128% of average of last ten years. Basin-wise storage position was better than normal, at basins of rivers monitored by Central Water Commission (CWC).

17.4 A meeting was held on 8th July 2011 to review preparedness and Agricultural Contingency Plan in view of south-west monsoon-2011, with all line Departments, in which representatives from State Government of Andhra Pradesh, Gujarat, Odisha and Maharashtra were also present to apprise about status of contingency action plan for coping with deficient rainfall conditions. Department of Agricultural Research and Education was requested to remain in touch with district agriculture office and State Departments of Agriculture through Krishi Vigyan Kendras (KVKs)

and State Agriculture Universities (SAUs) in the country to assess the situation, prepare and keep contingency plans in readiness for meeting all kind of eventualities, including drought, flood like / heavy rain situations, arising out of South-West Monsoon. Accordingly, District Contingency Plans were prepared and circulated by Central Research Institute for Dryland Areas (CRIDA) in consultation with State Governments and State Agricultural Universities (SAUs), for managing excess / deficient rainfall situations, to sustain agricultural production..

17.5 The Department has reviewed Crisis Management Plan (CMP) for Drought, an actionable programme, and brought out updated edition "CMP (Drought)-2011" to get into action in event of crisis situation to minimize damage to life and property and environment besides sustaining agriculture production. CMP is overall spectrum of Drought Management Plan and it defines role and responsibility of various agencies involved in crisis management including media management during drought.

17.6 State Governments concerned are primarily responsible for taking necessary relief measures in wake of natural calamities, including flood and heavy rains and Government of India supplements efforts of State Government with financial assistance and logistic support. For undertaking relief measures, funds are available with State Government in form of State Disaster Response Fund (SDRF). Government of India and State government concerned contribute to SDRF in ratio of

3:1 for 17 General Category States and in ratio of 9:1 for 11 Special Category States comprising all the 8 North- Eastern States including Sikkim and 3 Hilly States of Himachal Pradesh, Jammu & Kashmir and Uttarakhand. When additional assistance is required to deal with natural calamities of severe nature and SDRF is inadequate to deal with the situation, same is considered from National Disaster Response Fund (NDRF) in accordance with the established procedure on submission of Memorandum by State Government for assistance from NDRF. For year 2011-12, total allocation to States under SDRF is Rs. 6381.18 crores.

17.7 Government of Karnataka declared drought in 109 taluks in 23 Districts during 2011 and submitted detailed Memorandum seeking central financial assistance of Rs. 2605.99 crores from National Disaster Response Fund (NDRF) for the drought. Financial assistance is being considered to Government of Karnataka in accordance with established procedure, keeping in view items and norms in vogue for assistance. Government of Andhra Pradesh declared drought in 876 mandals in 22 districts during 2011-12 and submitted detailed Memorandum seeking central financial assistance from National Disaster Response Fund (NDRF) for undertaking necessary relief works. An Inter-Ministerial Central Team (IMCT) was constituted to visit drought affected areas of the State and assess extent of damage caused due to drought and recommend amount of financial assistance for consideration as per established procedure and items & norms in vogue.

CHAPTER-18

International Cooperation







18

International Cooperation

18.1 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 is the Nodal contact point in Government of India for Food & Agriculture Organization and World Food Program of the United Nations. Bilateral Agreements with the countries of strategic interest, Memoranda of Understanding, Protocols, Workplans are signed and implemented for furthering cooperation in the field of Agriculture and allied sectors.

A. MULTILATERAL COOPERATION

18.2 Food and Agriculture Organization (FAO): India is a founder member of FAO and has been taking part in all its activities. An Indian delegation led by Shri Harish Rawat, Minister of State for Agriculture and Food Processing Industries and Parliamentary Affairs(A,FPI & PA) attended the 37th Session of FAO Conference held in Rome, Italy from 25th June, 2011 to 2nd July, 2011.

18.3 World Food Day: The World Food Day was celebrated on 17th October, 2011 to mark establishment of FAO. The theme for this year's celebration was

“Food Prices: From Crisis to Stability”. A roundtable discussion was organized at National Centre for Agricultural Economies and Policy Research on the topic “Food Prices- From Crisis to Stability” on the occasion.

18.4 Technical Cooperation Programme: India has been availing services from 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. The details of projects which are currently under implementation with FAO assistance are as under:

- **Bay of Bengal Large Marine Ecosystem (BOBLME):** The duration of project is five years which was initialized in 2008. The project is being signed with FAO on a yearly basis. Total budget for the project is estimated at US\$ 30993500.00
- **Policy Options and Investment Priorities for Accelerating Agricultural Growth in India:** This project was signed on 23rd September, 2011. The duration of the project is 12 months. FAO's contribution for the project is US\$ 273,000.

- **Animal Identification and Traceability Mechanism for India:-** This project was signed on 11th July, 2011. The duration of the project is 7 months. FAO's contribution for the project is US\$ 156,000.

18.5 Office of Minister (Agriculture), Embassy of India, Rome: The Government of India for the purpose of maintaining liaison and coordination with FAO has nominated the Indian Ambassador in Rome as its permanent representative to FAO. Keeping in view, the specialized nature and increasing volume of interaction with FAO and its various bodies, an agricultural wing headed by a senior officer of the rank of Joint Secretary to Government of India with the designation of Minister (Agriculture), EOI, Rome has been set up in Indian Embassy, Rome. The Minister (Agriculture), EOI, Rome has been designated as India's Alternate Permanent Representative (APR) to FAO and World Food Programme (WFP). A provision of Rs 227.000 lakh has been provided during 2011-12 (at B.E. Stage) for meeting expenditure in respect of Office of Minister (Agriculture), Embassy of India, Rome. The Minister (Agriculture), EOI, Rome represents Indian interests at meetings of FAO/WFP and of International Fund for Agricultural Development (IFAD).

18.6 WORLD FOOD PROGRAMME (WFP): The World Food Programme (WFP) was set up in 1963 jointly by 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 the biennium (2010-11 & 2011-12) is US \$ 1.92 million towards WFP which is used by them in support of their India Country Programme. Since its inception, India has contributed US \$ 35.50 million to WFP up to the financial year 2011-2012. During the Financial Year 2011-2012 an amount of Rs. 426 lakhs (approximately)

equivalent to US\$ 0.96 million has been released towards United Nations' World Food Programme.

18.7 Currently, India Country Programme 2008-12 is under operation which focuses on reducing hunger and malnutrition amongst women and children in vulnerable areas, development of appropriate products to deal with malnutrition at early ages of children and livelihood opportunities for poor. WFP has also made notable contributions through product innovations such as Indiamix and mapping of hunger in India through Food Atlases etc.

18.8 India Country Programme 2008-2012 has 3 components viz. (i) *Capacity Development for Food Security*, covering a whole range of programmes in which WFP will provide technical assistance in support of supply chain management of Government, food based programmes, fortification of mid-day meals, nutrition education, village grain banks, integration of nutrition in HIV/AIDS packages etc. These programmes are taken up on the request of State Governments; (ii) *Support to ICDS (Integrated Child Development Schemes)* and (iii) *Support to Livelihood Activities*, a joint programme with IFAD. WFP has committed to provide 184,104 Mt. tonnes of food grains, at a total cost of USD 24 million (which includes distribution/superintendence cost also) to be procured within the country. In addition, WFP will raise USD 5.4 million locally from foundations and private sector to meet costs towards component (i). The country programme will cover an estimated 2 million beneficiaries in five States of Jharkhand, Chhattisgarh, Odisha, Madhya Pradesh and Rajasthan, apart from States which request for assistance under this component (i). The Government of States where WFP will support ICDS programme, will also provide contribution worth USD 23.4 million in terms of 259,000 Mt. tonnes of food grains.

18.9 EXTERNALLY AIDED PROJECTS:

The Department of Economic Affairs is the nodal contact point in the Government of India for multilateral & bilateral externally aided projects. However, following projects at present are being directly coordinated by Department of Agriculture & Cooperation:

18.10 WORLD BANK: There are five agriculture sector based projects which are being operated with assistance of World Bank. These projects mainly relate to watershed development, soil and water conservation measures (Natural Resource Management) and development of competitive agricultural marketing systems with an objective of overall agricultural development. These projects, taken together, involve a total IDA credit of XDR 387.00 million.

18.11 Projects assisted by International Fund for Agriculture Development(IFAD), Japanese International Cooperation Agency(JICA), German Technical Cooperation (GIZ) and Asian Development Bank(ADB) in agriculture sector are also in operation.

B. BILATERAL COOPERATION

18.12 Agreements/MoUs/Work Plans: There are more than 50 countries with whom India has signed MoUs / Agreements/Work Plans for agricultural cooperation. During the year 2011-12, following MoUs/Agreements/Work Plans were signed by Department of Agriculture and Cooperation:

1. Agreement with Kazakhstan, signed on 16.4.2011.
2. Work Plan with Netherlands, signed on 7.6.2011.

18.13 INDO-US AGRICULTURE DIALOGUE: In March, 2010 Government of India and Government of United States signed an MoU on Agricultural Cooperation and Food Security under Indo-US Agricultural Dialogue to work together bilaterally and

in cooperation with other countries to achieve the common goal in food security, increasing agricultural productivity. Under MoU, three Working Groups have been constituted.

C. STRATEGIC GROUPS

18.14 India is a member of multilateral groupings such as IBSA(India, Brazil and South Africa), BRICS(Brazil, Russia, India, China and South Africa), SAARC(South Asian Association for Regional Cooperation) etc.

D. G-20

18.15 In the context of price volatility of agricultural commodities and at the instance of French Presidency of G-20 in 2010-11, a Ministerial on Agriculture related issues was set up. At the meeting of G-20 Agriculture Ministers in Paris on 22-23 June, 2011 a Ministerial Declaration on Action Plan on Food Price Volatility and Agriculture was adopted.

E. OTHERS

18.16 Contributions to International Organisations: This Department is a member of many International Organisations and the annual contributions to these International Organisations are made by IC Division. These International Organizations are as under :

- i) Food and Agriculture Organisation of United Nations (FAO).
- ii) Trust Fund of FAO for Desert Locust in Eastern Region.
- iii) Trust Fund for International Desert Locust.
- iv) Regional Network on Development of Agricultural Cooperatives (NEDAC).
- v) Organisation for Economic Cooperation & Development (OECD).
- vi) Asia and Pacific Coconut Community (APCC).

- vii) World Food Programme (WFP).
- viii) Asia-Pacific Plant Protection Convention (APPPC) Trust Fund.

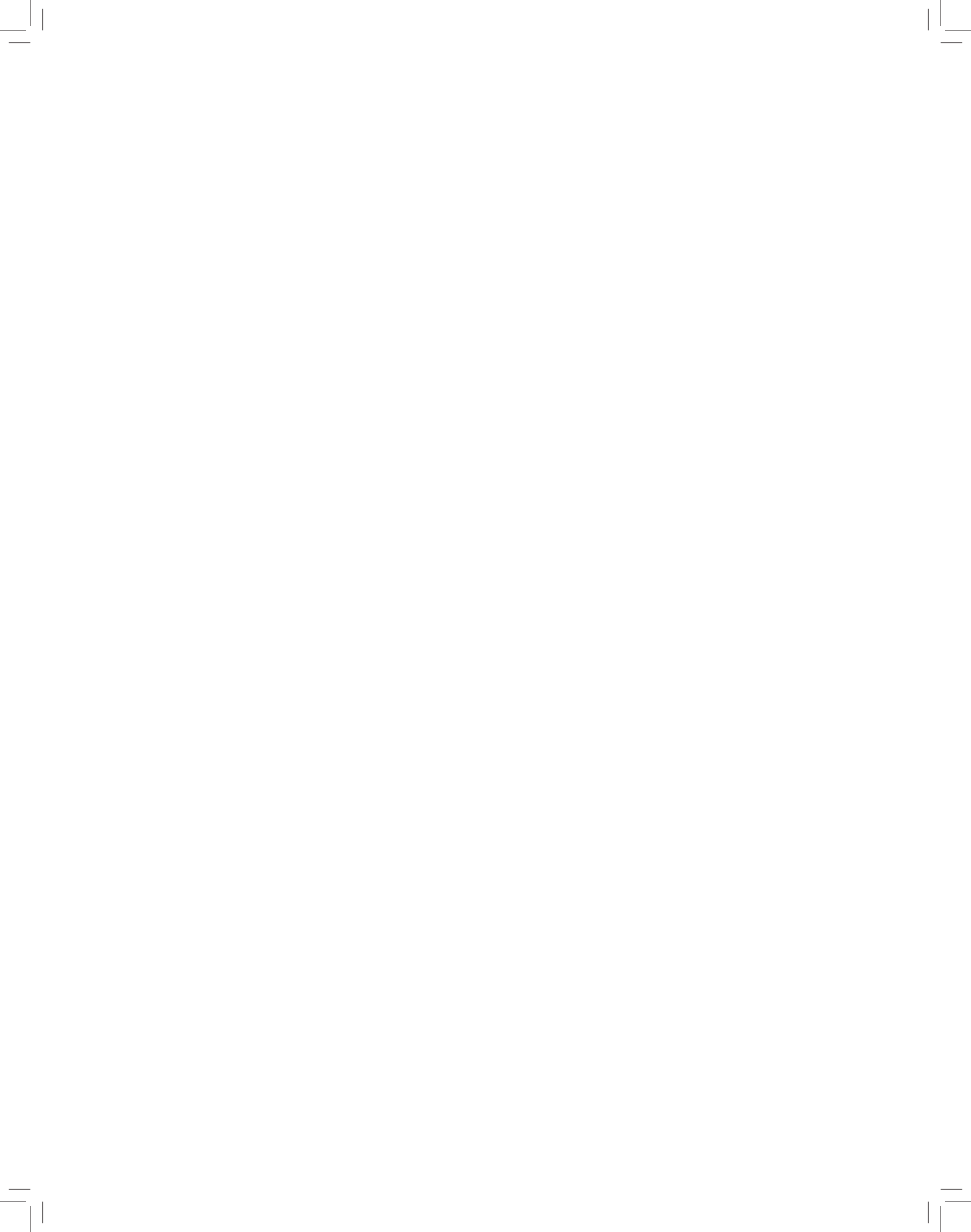
18.17 International Seminars/ Workshops/Conferences etc.: During

2011-12 this Department took part in 80 International conferences/meetings/seminars/training etc. dealing with various aspects of agricultural development organised by the FAO and other International Organisations.

CHAPTER-19

Macro Management of Agriculture







19

Macro Management of Agriculture

19.1 Agriculture is a state subject. Hence, primary role for increasing productivity and production of food grains is that of State Governments. However, in order to supplement the efforts of State Governments, a number of Centrally Sponsored and Central Sector Schemes are being implemented for enhancement of agricultural productivity and production for livelihood security of the farming community and food security in the country.

19.2 Macro Management of Agriculture (MMA), a Centrally Sponsored Scheme, was formulated in 2000-01 with the objective to ensure that central assistance is spent through focused and specific interventions for development of agriculture in States out of a broad menu of agriculture development sub-schemes, as per their priorities & choices. The Scheme consisted of 27 sub-schemes relating to Cooperatives, Crop Production Programmes (for rice, wheat, coarse cereals, jute, sugarcane), Watershed Development Programme (National Watershed Development Project for Rainfed Areas, River Valley Projects / Flood Prone Rivers), Horticulture, Fertilizer, Mechanization and Seeds Production Programme. With the launching of National Horticulture Mission (NHM) in 2005-06, 10 schemes pertaining to horticulture

development were taken out of purview of this scheme.

19.3 In the year 2008-09, MMA scheme was revised to improve its efficacy in supplementing / complementing efforts of States towards enhancement of agricultural production and productivity. The role of the Scheme was redefined to avoid overlapping and duplication of efforts and to make it more relevant to the present agricultural scenario in States to achieve the basic objective of food security and improve livelihoods of rural masses. Revised MMA scheme comprised 11 sub-schemes relating to crop production and natural resource management. Further, one sub-scheme relating to State Land Use Board (SLUB) was discontinued w.e.f. 1st August, 2009. The revised MMA scheme now comprises 10 sub-schemes, which are as under:-

- Integrated Cereal Development Programmes in Rice Based Cropping System Areas
- Integrated Cereal Development Programmes in Wheat Based Cropping System Areas
- Integrated Cereal Development Programmes in Coarse Cereals Based

Cropping System Areas

- Integrated Development Programme for Pulses and Oilseeds (**New Scheme included as one of the crop production programmes**)
- Sustainable Development of Sugarcane Based Cropping System
- Balanced & Integrated Use of Fertilizer
- Promotion of Agricultural Mechanization among Small Farmers
- National Watershed Development Project for Rainfed Areas
- Soil Conservation in Catchments of River Valley Projects & Flood Prone Rivers
- Reclamation & Development of Alkali Soils

19.4 Salient features of revised MMA Scheme are:

- Practice of allocating funds to States/UTs on historical basis has been replaced by a new allocation criteria based on gross cropped area and area under small and marginal holdings.
- Assistance under MMA is provided to States/UTs as 100% grant.
- Subsidy structure has been aligned to make subsidy pattern uniform under all schemes implemented by Department of Agriculture & Cooperation. Revised subsidy norms indicate maximum permissible limit of assistance. States have freedom to retain existing norms, or increase them to a reasonable level provided that the same does not exceed specified revised upper limits.
- Two more modifications have been made to MMA namely, (a) Pulses and oilseeds crop production programmes for areas not covered under Integrated

Scheme of Oilseeds, Pulses, Oil palm and Maize (ISOPOM) has been added as a Scheme and (b) "Reclamation of Acidic Soil" has been added to the existing Scheme of "Reclamation of Alkali Soil".

- Ceiling for New Initiatives has been increased from 10% to 20% of the allocation.
- At least 33% of funds have to be earmarked for small, marginal and women farmers.
- Active participation of Panchayati Raj Institutions (PRIs) of all tiers has to be ensured in implementation including review, monitoring and evaluation at district/sub-district level.

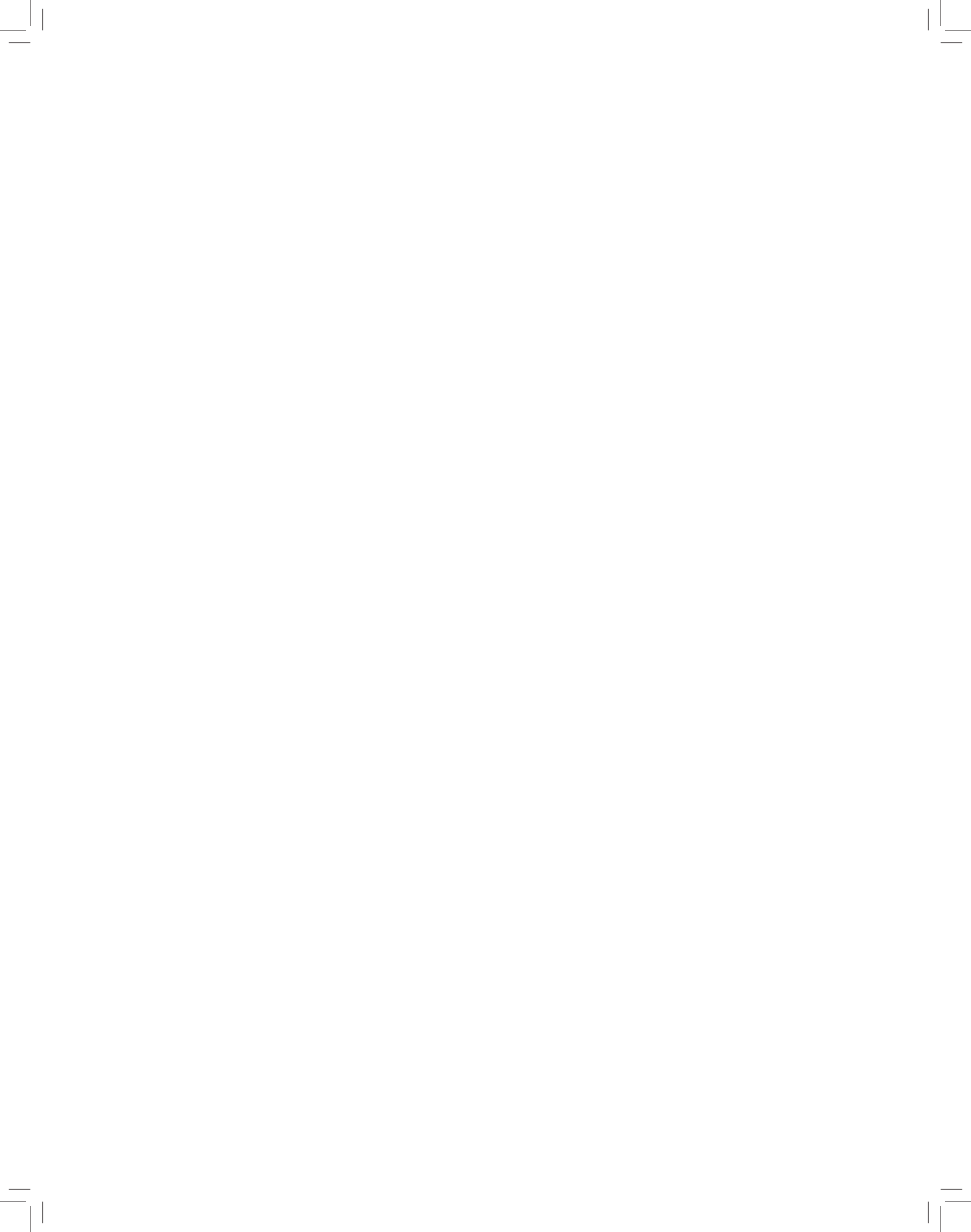
19.5 During 2010-11 an amount of Rs.100000.00 lakhs was provided for implementation of the revised MMA scheme in the BE. Of this, an amount of Rs.99526.00 lakhs was earmarked for States/UTs and Rs.474.00 lakhs for Direct Funded Components (DFCs). Out of this, an amount of Rs. 99502.40 lakhs was released to States/UTs and Rs. 487.00 lakhs for DFCs, totalling to Rs.99989.40 lakhs, which was 99.99% of RE.

19.6 During 2011-12, a sum of Rs.78000.00 lakhs has been provided in Budget Estimates for implementation of revised Macro Management of Agriculture. Of this, an amount of Rs.77860.00 lakhs has been earmarked for States/UTs and Rs. 140.00 lakhs for Direct Funded Component. Work plans of all States/UTs have been agreed to with States for a total of Rs.91704.97 lakhs including unutilized opening balances and States' contribution of 10% (for applicable States). Funds totalling Rs.76274.68 (97.98%) have been released upto 31st December, 2011. The status of State-wise work plans approved, opening balances as on 1.4.2011 and funds released during 2011-12 is given in **Annexure-19.1**.

CHAPTER-20

Information Technology







20

Information Technology

20.1 The National Policy for Farmers emphasizes use of Information and Communication Technology (ICT) at village level for reaching out to the farmers with the correct advisories and requisite information. Sustained efforts have been made to improve and harness latest Information Technology techniques to capture & collate data, add value to it and disseminate the same to all the stakeholders.

20.2 National e-Governance Plan in Agriculture (NeGP-A): The Mission Mode Project has been introduced during the 11th plan to achieve rapid development of agriculture in India through the use of ICT for ensuring timely access to agriculture related information for the farmers of the country. There are a number of current IT initiatives/schemes undertaken or implemented by DAC which are aimed at providing information to the farmers on various activities in the agriculture value chain. These initiatives will be integrated so that farmers would be able to make proper and timely use of the available information. Such information is intended to be provided to farmers through multiple channels including Common Service Centers, Internet Kiosks and SMSs. 12 clusters of services have been identified

and the project has been sanctioned for implementation in 7 States i.e. Assam, Himachal Pradesh, Karnataka, Jharkhand, Kerala, Madhya Pradesh and Maharashtra. The services include Information on Pesticides, Fertilizers & Seeds, Soil Health; Information on crops, farm machinery, training and Good Agricultural Practices (GAPs); Weather advisories; Information on prices, arrivals, procurement points, and providing interaction platform; Electronic certification for exports & import; Information on marketing infrastructure; Monitoring implementation / evaluation of schemes & program; Information on fishery inputs; Information on irrigation infrastructure; Drought Relief and Management; Livestock Management. First phase of the Project is being implemented for a sum of Rs. 227.79 crores.

20.3 Strengthening / Promoting Agricultural Information System: To promote e-Governance in Agriculture at the Centre and to provide support to States/UTs for the same, DAC is implementing this Central Sector Scheme. The scheme has the following components:

- IT apparatus at DAC Headquarters, field offices and Directorates
- Development of Agricultural Informatics

and Communication;

- Strengthening of IT Apparatus in Agriculture and Cooperation in the States and Union Territories (AGRISNET)
- Kisan Call Centers.

20.4 IT Apparatus at DAC headquarters and its Field Offices /Directorate: Under the DACNET Project, the Directorates/field units have been provided basic infrastructure which has helped in achieving e-readiness.

20.5 Development of Agricultural Informatics and Communication: DAC has developed 80 portals, applications and websites (primarily in collaboration with the National Informatics Centre) covering both the headquarters and its field offices/directorates. The important portals include SEEDNET, DACNET, AGMARKNET (prices and arrivals in Mandis), RKVY (Rashtriya Krishi Vikas Yojana), ATMA, NHM (National Horticulture Mission), INTRADAC, NFSM (National Food Security Mission) and APY (Acreage, Productivity and Yield). DAC is getting online data entry done right from the District level at least, so as to expedite generation of requisite queries & reports in an efficient manner.

20.6 Farmers' Portal: This portal aims to serve as One Stop Shop for all the farmers for accessing information on agricultural activities. Besides giving links to appropriate pages of the 80 portals already developed so far, the Farmers' Portal links the location of the farmer (from his Block) with NARP (National Agricultural Research Project) Zone that he belongs to. Thereafter, all information related to the crops grown in that area (coupled with agro-climatic conditions in that region) is then provided to the farmer using a graphical interface. Farmers can get information about package of practices; crop/seed varieties; common pests; dealer network for seeds, fertilizers & pesticides; machinery and tools;

agro-met advisories etc. Data for most States has been entered in one language, but the portal will be launched after the data is entered both in English and in the vernacular language of the State.

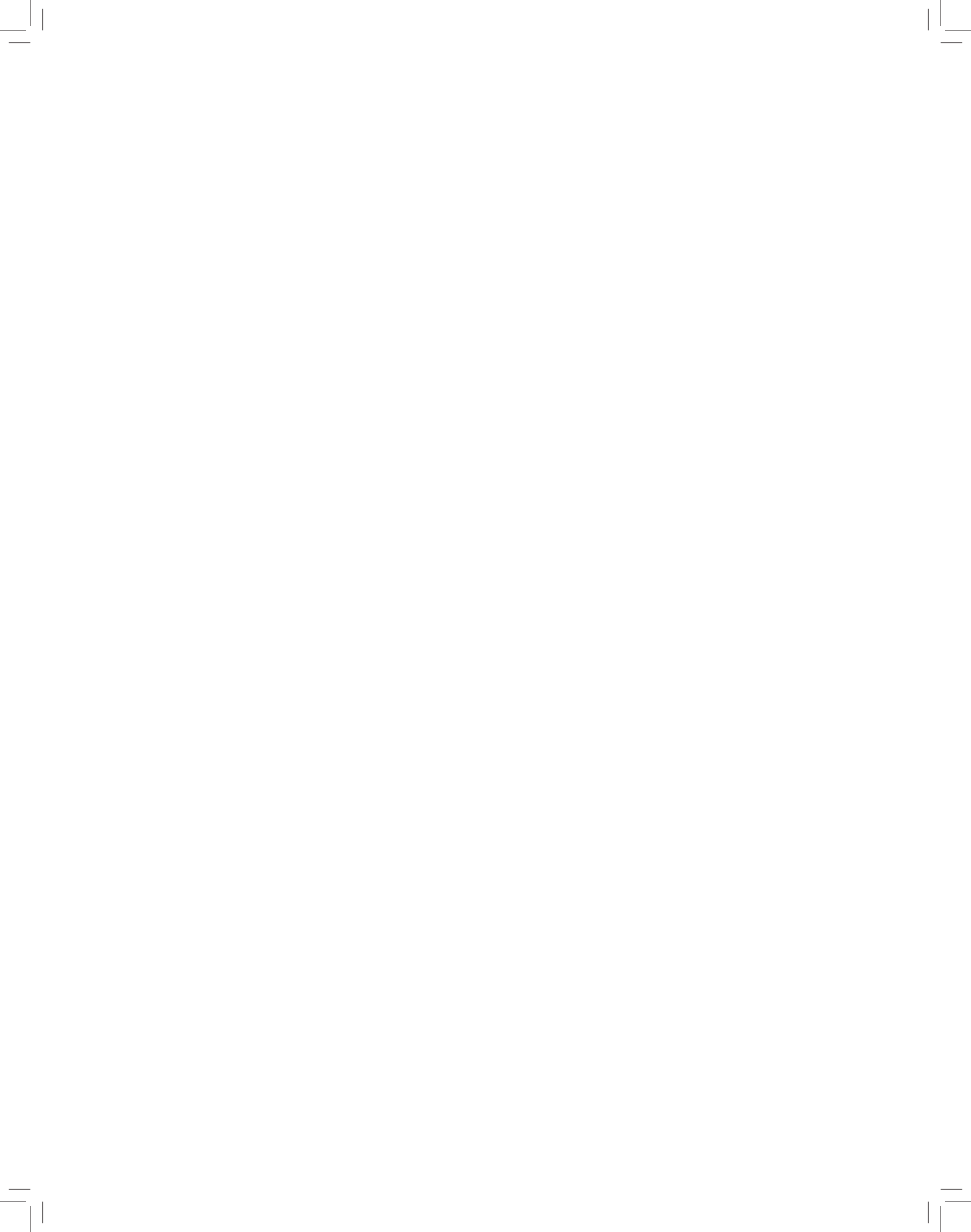
20.7 Strengthening of IT Apparatus in Agriculture and Cooperation in the States and Union Territories (AGRISNET): Under this Scheme, funds are provided to State/UTs for computerization down to Block level. Funds to 26 states have been released under AGRISNET to achieve the objective of providing computers up to Block level. State specific software packages have been developed to disseminate information to the farmers. Availability of requisite hardware and locally suitable software packages has resulted in quick retrieval of data, dissemination of information to farmers and provision of farmer centric services to farmers. The States/UT's which have availed assistance under the Scheme are Andhra Pradesh, Madhya Pradesh, Tamil Nadu, West Bengal, Uttar Pradesh, Gujarat, Karnataka, Assam, Uttarakhand, Himachal Pradesh, Meghalaya, Nagaland, Sikkim, Maharashtra, Punjab, Odisha, Mizoram, Kerala, Haryana, Rajasthan, Chhattisgarh, Puducherry, Arunachal Pradesh, Goa, Bihar, and Manipur.

20.8 Kisan Call Centers: The Kisan Call Centre (KCC) initiative aims to provide information to the farming community through toll-free telephone lines (telephone No. 18001801551). Under this project, call centre facilities have been extended to the farmers through 25 call centres located in different states so that farmers can get the information in their own language. During 4 years of Xth plan (January 2004 to March 2007), 20.63 lakh calls had been received by the Kisan Call Centres. The calls have doubled during the first 4 years of XIth plan (2007 to 2011). More than 41.85 lakh calls have been received during XIth plan so far. The Kisan Call Centres have become very popular as indicated by the tremendous increase in calls during 2010-

11 (20.44 lakh calls) which marks more than 3 times increase since 2008-09. Call Centre escalation matrix has been recently revised and States have been involved in a big way. A Kisan Knowledge Management System has been developed and the KCC agents are making use of this user friendly search engine to give instantaneous and appropriate information to farmers. Unattended queries automatically get escalated to the next higher level after some time.

20.9 Activities in the North-Eastern Region: Under the IT apparatus at the Field Offices and Directorates of DAC (DACNET), the following offices in the North-Eastern region have been covered:

- Directorate of Marketing and Inspection at Guwahati and Shillong;
- Central Integrated Pest Management Centres at Guwahati, Aizawl, Dimapur and Gangtok;
- Regional Bio-fertilizer Development Centre at Imphal; and
- North-Eastern Regional Farm Machinery, Testing and Training Institute, Sonitpur, Assam.
- Support under AGRISNET is extended to various North Eastern states. During 2010-11 funds were released to Mizoram and Manipur



CHAPTER-21

Agricultural Census







21

Agricultural Census

21.1 Agriculture Census in India forms part of a broader system of collection of agricultural statistics. It is a large-scale statistical operation for collecting and deriving quantitative information about various important facets of agricultural operational holdings in the country. As operational holding is the ultimate unit for taking decisions at micro-level, it has been taken as the Statistical Unit for data collection in Agriculture Census.

21.2 Periodic Agriculture Censuses are the main source of information on basic characteristics of operational holdings such as land-use, cropping pattern, irrigation status, tenancy, terms of leasing and dispersal of holdings etc. This information is tabulated by different size classes and social groups to serve as an input for development planning, socio-economic policy formulation, and establishment of national priorities. The census also provides basis for development of a comprehensive integrated national system of agricultural statistics.

21.3 Agriculture Census is implemented in three distinct phases which are statistically linked together but the focus is on different aspects of agricultural statistics. In Phase-I, data on number and area of operational

holdings are collected according to various size-classes, gender, type of holdings and social group of holders. In Phase-II, detailed data on agricultural characteristics of holdings are collected from selected villages and estimates are generated at various administrative levels. In Phase-III, data on input use patterns are collected from selected holdings of selected villages and values of different parameters are estimated at District/State level.

21.4 Agriculture Census Scheme was converted from a Centrally Sponsored Scheme to a Central Sector Scheme in 2007-08. Accordingly, 100 per cent financial assistance is provided to States/ UTs for payment of salaries, office expenses, honoraria, tabulation costs and printing of schedules, etc.

21.5 Agriculture Census in India is conducted following broad guidelines of decennial World Census of Agriculture (WCA) evolved by Food and Agriculture Organization (FAO) of United Nations. India is one of the participants of World Agricultural Census Programme. Eight Agriculture Censuses since 1970-71 and seven Input Surveys since 1976-77 have been conducted in the country and the ninth Agriculture Census with reference

year 2010-11 has already been launched. Preparatory activities for Input Survey with reference year 2011-12 have been initiated. Data collection schedules and Manual of instructions have been made available to States/UTs. The fieldwork will commence in July, 2012.

Achievements during 2011-12

21.6 Agriculture Census 2005-06:

Data of Agriculture Census 2005-06 (Phase-II) have been finalized and all India results generated (Phase-II of Agriculture Census could not be conducted in Bihar, Jharkhand and Maharashtra). Results have been placed on the website of the Department at <http://agcensus.nic.in> for public use. Salient features of results of Agriculture Census 2005-06 (Phase-II) are as follows:-

- The **operated area** of owned and self-operated holdings increased from 96.97 percent in 2000-01 to 97.43 percent in 2005-06.
- In terms of **numbers**, about 97 per cent of operational holdings were estimated as wholly owned and self-operated during both Census periods 2000-01 and 2005-06.
- In the country, tenant holdings were about 3 percent. However, in Odisha and West Bengal, which are non-land record States, number of tenant holders were higher.
- The net irrigated area in 2005-06 increased by about 5 percent over previous census 2000-01.
- Tube-wells emerged as main source of irrigation (43.57 percent) followed by canals (27.35 percent), wells (16.84 percent), and tanks (3.86 percent). Other sources accounted for 8.38 percent.
- The cropping intensity as per Agriculture Census 2005-06 worked out to 132 percent.

21.7 Input Survey 2006-07: Data of Input Survey 2006-07 was finalized and all India results generated (Input Survey could not be conducted in States of Bihar, Jharkhand and Maharashtra). Results of Input Survey 2006-07 were hosted on the website of the Department. Highlights of results of Input Survey 2006-07 are as follows:-

- For Input Survey, Institutional holdings, whose input use pattern is widely different from other holdings, are excluded from the scope of the study. Also, Input Survey 2006-07 was not conducted in the States of Bihar, Jharkhand and Maharashtra. After exclusion of institutional holdings and holdings from the above mentioned three States, total number of holdings covered for Input Survey 2006-07 were estimated at 100.65 million with operated area of 130.88 million hectares.
- Number of parcels per holding in 2006-07 declined to 2.22 as against 2.43 for Input survey 2001-02.
- The average area per parcel was 0.59 hectare in 2006-07 as compared to 0.57 hectare in 2001-02.
- About 97 percent parcels were located within the village of residence of operational holders.
- About 47 percent of net sown area received irrigation during 2006-07. About 47 percent of irrigated area was cropped only once and about 51 percent of irrigated area was cropped twice. Only about 2 percent irrigated area was found cropped more than twice.
- About 98 percent holdings grew one or more crops while remaining 2 percent kept their land fallow during the entire Reference Year 2006-07. About 7 percent operated area was estimated as current fallow during the Reference Year 2006-07.

- About 91 percent of un-irrigated area was used for growing only one crop while remaining 9 percent was utilized for raising more than one crop.
- About 48 percent gross cropped area received irrigation during 2006-07.
- About 73 percent of gross-cropped area was treated with fertilizers in 2006-07 as against 70 percent in 2001-02.
- About 40 percent of gross cropped area was treated with chemical pesticides in 2006-07 against corresponding figure of 32.2 percent in 2000-01.
- About 25 percent operational holders were reported availing institutional agriculture credit during 2006-07 as against 20 percent during 2001-02.
- Primary Agricultural Credit Societies were found to be the most dominant source of credit catering to about 49 percent of holdings availing credit.
- The average age of the head of the farm household was estimated at 48 years. About 3 percent holders were found aged 65 years and above.
- The literacy rate for head of farm household was estimated to be 68 percent. The educational qualification of about 1.6 percent of holders was graduate and above.
- The average size of household of a holder was 5.5 persons. About 0.5 percent farm households had more than 15 persons.

21.8 All India Report on Agriculture Census 2005-06 has been finalized and placed on website for public use. Drafting of All India Report on Input Survey 2006-07 is in progress.

21.9 For Agriculture Census 2010-11, preparatory activities in various States/UTs have been completed and fieldwork for Phase-I is in progress.

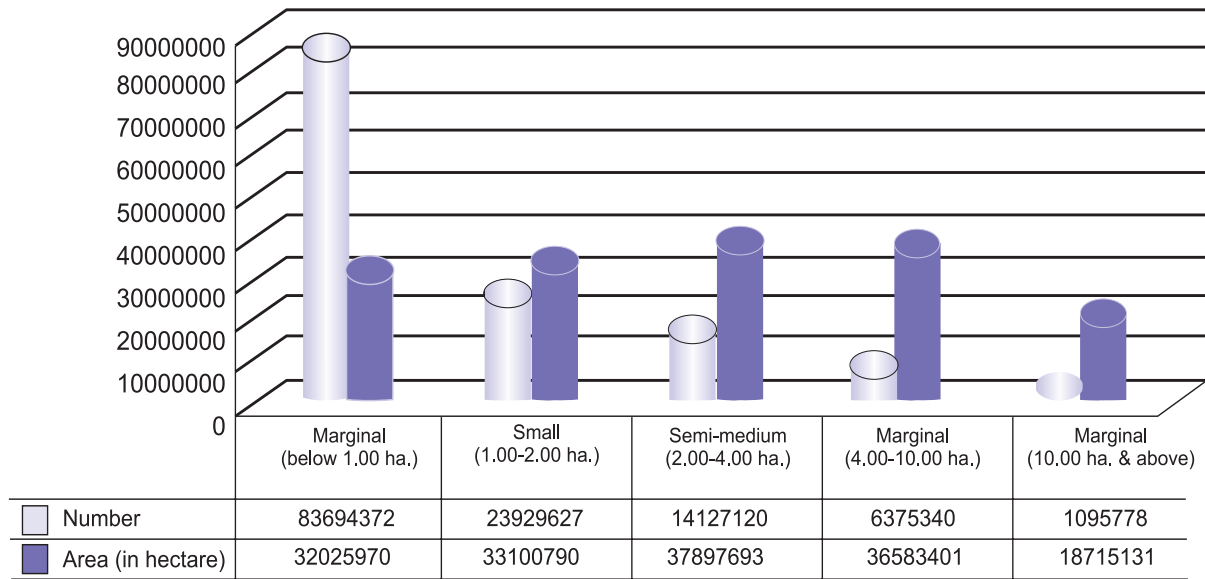
Gender Perspectives in Agriculture Census

21.10 On the recommendation of Central Statistical Organization (CSO), Ministry of Statistics and Programme Implementation, New Delhi, collection of gender based data was introduced for the first time in Agriculture Census 1995-96. Since then, data on this aspect has been collected in successive Censuses, viz. 2000-01 and 2005-06. The scope of collection of data has been restricted to number of operational holdings and corresponding operated area by different size classes of holdings, social group (SC, ST and others), gender (male and female) and types of holdings (individual, joint and institutional). The collected information indicates participation of more and more women in operation and management of agricultural holdings in the country.

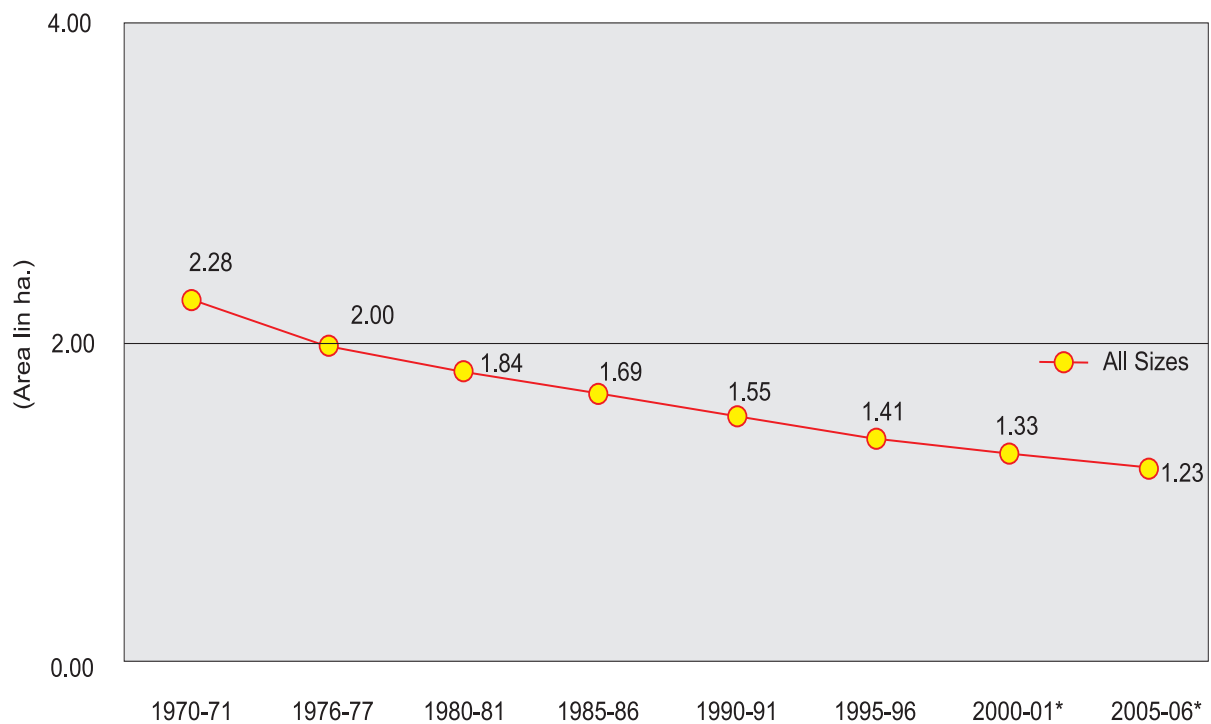
21.11 The number and percentage of female operational holdings as per Agriculture Census 2005-06 (excluding Jharkhand) is given in the following table:

Sr. No.	Size Group	Operational holders		percent of female operational holders
		Total	Female	
1	Marginal (below 1.00 ha.)	8,36,94,372	1,05,41,361	12.60
2	Small (1.00-1.99 ha.)	2,39,29,627	26,55,263	11.10
3	Semi-medium (2.00-3.99ha.)	1,41,27,120	13,57,681	9.61
4	Medium (4.00-9.99 ha.)	63,75,340	4,95,187	7.77
5	Large (10.00 ha. & above)	10,95,778	65,725	6.00
	All Size Groups	12,92,22,237	1,51,15,217	11.70

Size-groupwise Number and Area of Operational Holdings as per Agriculture Census 2005-06



Average Size of Land Holding in India for All Social Groups, 1970-71 to 2005-06 (in ha.)

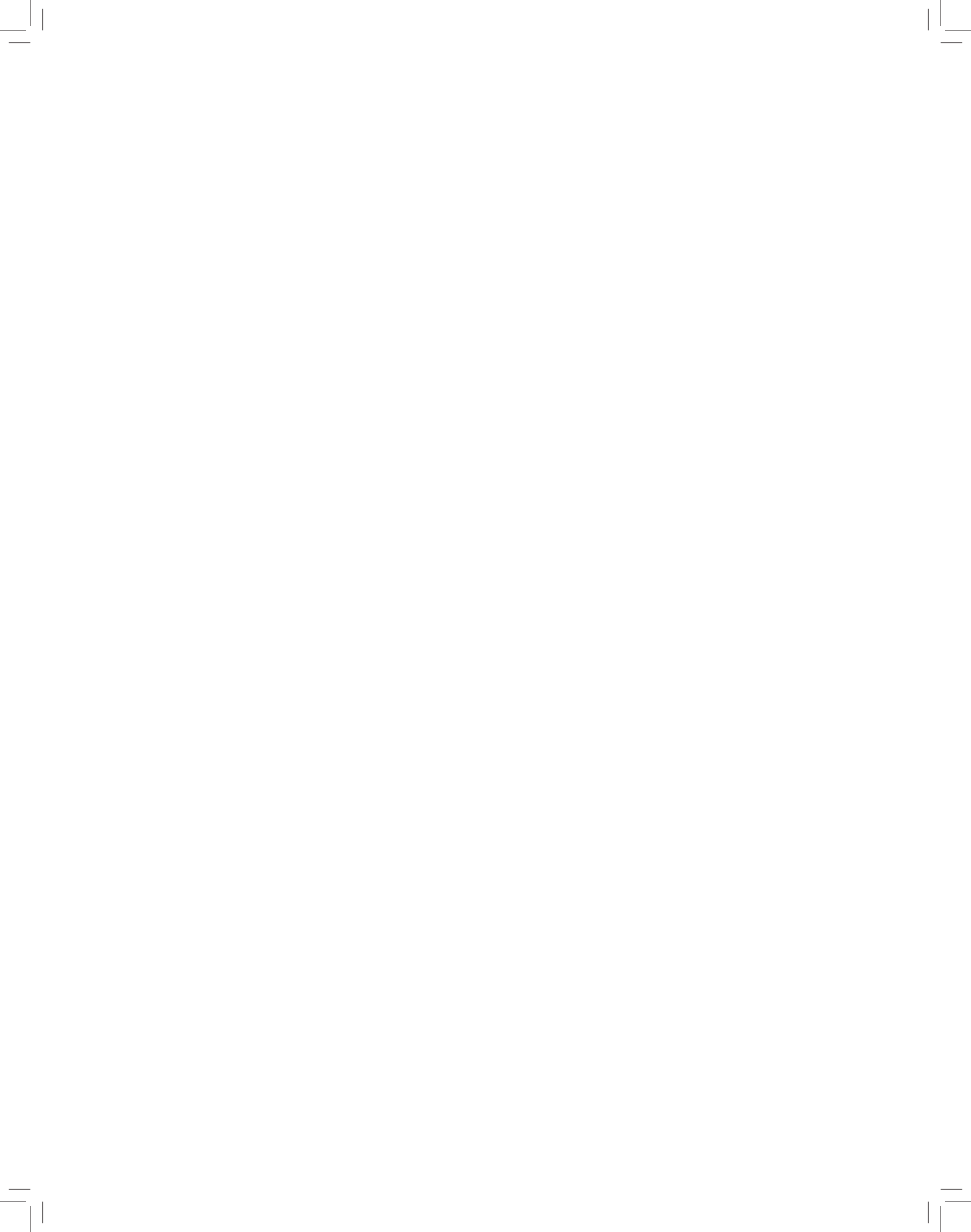


*Excluding Jharkhand

CHAPTER-22

Other Special Policy Initiatives







22

Other Special Policy Initiatives

22.1 National Policy for Farmers, 2007

(NPF): Government of India approved the National Policy for Farmers in 2007. 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 centres, 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 and setting up of farmers' schools to revitalize agricultural extension; effective implementation of MSP across the country, development of agricultural market infrastructure, and rural non-farm employment initiatives for farm households; integrated approach for rural energy, etc. Many of the provisions of the NPF are being operationalised through various schemes and programmes which are being implemented by different Central Government Departments and Ministries. For the operationalisation of the remaining provisions of the Policy, an Action plan

has been finalised 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 has also been constituted to monitor the progress of the Plan of Action for the operationalisation of the NPF.

22.2 Other Special Policy Initiatives:

The Agricultural Debt Waiver and Debt Relief Scheme, 2008, announced by the Government in the Union Budget 2008-09 has been successfully implemented. The main objective of the Debt Waiver and Debt Relief Scheme, 2008 was to de-clog the lines of credit that were clogged due to debt burden on the farmers. In respect of Public Sector Banks, Private Sector Banks and Local Areas Banks, 104 lakh farm loan accounts have been benefited under the scheme. In respect of Regional Rural Banks (RRBs) and Cooperative banks, 186.92 lakh farm loan accounts have been benefited under ADWDRS, 2008. The Government of India has so far released an amount of Rs. 52419.88 crore to the lending institutions as reimbursement under the scheme.

22.3 From Kharif 2006-07, farmers are receiving crop loans upto a principal amount of Rs. 3 lakh at 7% rate of interest.

During 2011-12, Government provided an additional 3% interest subvention as incentive to those farmers who repay short term crop loans as per schedule. Thus the effective rate of interest for such farmers will be 4% p.a.

22.4 The limit of collateral free farm loan has been increased from Rs. 50,000 to Rs. 1,00,000.

22.5 The Government is implementing revival package for Short-term Rural Cooperative Credit Structure involving financial outlay of Rs. 13,596 crore. Twenty-five State Governments have signed the MoU with Gol and NABARD.

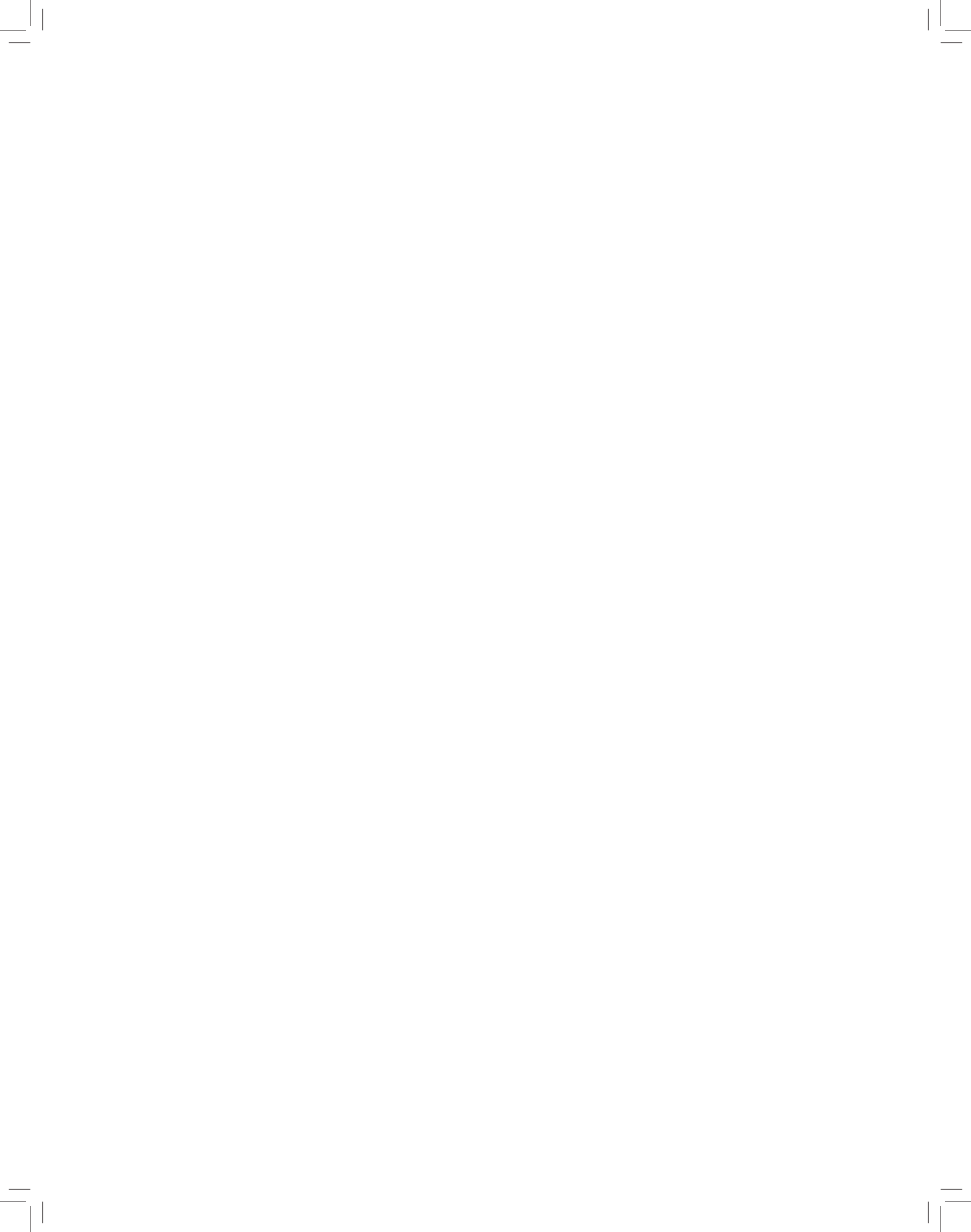
As on November, 2011 an amount of Rs. 9002.28 crore has been released by NABARD as Gol share for recapitalization of 53,205 PACS.

22.6 The Government has also constituted a task force to look into the issue of farmers' indebtedness to moneylenders, as a large number of farmers have taken loans from private moneylenders in the country. The task force has submitted its report on 30.6.2010. Recommendations of the Committee including those relating to Kisan Credit Card have been accepted and concerned agencies have been advised accordingly.

CHAPTER-23

Rashtriya Krishi Vikas Yojana







23

Rashtriya Krishi Vikas Yojana

23.1 Introduction and Salient Features

of RKVY: The Cabinet Committee on Economic Affairs (CCEA), in its meeting held on 16 August, 2007 approved Additional Central Assistance Scheme (ACA) for Agriculture & Allied Sectors, namely, Rashtriya Krishi Vikas Yojana (RKVY) with an envisaged outlay of Rs.25,000 crores during the XIth Five Year Plan. For the year 2007-08, 2008-09, 2009-10 & 2010-11 outlays of Rs.1263 crores, Rs.2891.70 crores, Rs.3777.07 crores, and Rs.6722 crores were approved at RE stage and for the current year, an amount of Rs.7810.87 crores has been allocated under this scheme. RKVY aims at achieving 4% annual growth in agriculture sector during the XIth Plan period, by ensuring holistic development of agriculture and allied sectors.

23.2 Objectives: Broad objectives of RKVY are as under:

- To incentivize States so as to increase public investment in agriculture and allied sectors;
- To provide flexibility and autonomy to States in the process of planning and executing agriculture and allied sector schemes;

- To ensure preparation of Agriculture Plans for districts and States based on agro-climatic conditions, availability of technology and natural resources;
- To achieve the goal of reducing yield gaps in important crops through focused interventions;
- To maximize returns to farmers in agriculture and allied sectors;
- To ensure that local needs/crops/priorities are better reflected in agricultural plans of States; and
- To bring about quantifiable changes in production and productivity of various components of agriculture and allied sectors by addressing them in a holistic manner.

23.3 Primary Strategic Relevance of the Scheme:

RKVY is a State Plan scheme administered by Union Ministry of Agriculture in addition to existing Centrally Sponsored Schemes. RKVY has been formulated with two strategic objectives in mind – first, to incentivize States to allocate more funds for agriculture and allied sectors and second, to facilitate the States to generate additional growth in agriculture and allied sectors by better

planning and undertaking appropriate growth oriented projects to achieve this goal. This is to be done by making the states to draw up plans for their agriculture and allied sectors more comprehensively, by integrating agriculture livestock, poultry and fisheries reflecting the local specific needs/crops/priorities taking agro-climatic conditions, natural resource issues and technology into account. Funds under the scheme are provided to States as 100% grant by Central Government.

23.4 Allocation of funds to States is dependent on additional resources committed by States for agriculture and allied sectors in their state plans and the growth projected and generated. There are no prescriptions about projects, schemes and other programmes to be undertaken by States under RKVY. The Scheme provides complete flexibility to States to choose what is best suited in their conditions to generate growth so as to enable the country to achieve 4% growth in agriculture and allied sectors during the Eleventh Plan.

23.5 Eligibility Criteria for Access to RKVY funds: The following are the two eligibility conditions for States to become and remain eligible for receiving assistance under RKVY (para 1 of Annexure 1 of guidelines):

- a. Base line share of agriculture and allied sectors in their total State Plan (excluding RKVY funds) is atleast

maintained. The base line is the moving average of the share of expenditure in agriculture and allied sectors in the States Plan during previous three years.

- b. District Agriculture Plans (DAPs) and State Agriculture Plans (SAPs) have been formulated.

Both these criteria were relaxed after the scheme came into operation. The condition of completion of SAP/DAP was relaxed as States required some time to prepare SAPs, after completion of massive exercise of preparing Comprehensive District Agriculture Plans, in accordance with Planning Commission guidelines, which could be issued only in 2008. The criterion of maintaining base line expenditure was also relaxed to make it higher than minimum of last three years' expenditure on agriculture & allied sectors. However, this does not take away the incentive of higher allocation to States, as state-wise allocations are still dependent on additional funds actually allocated/spent by states on agriculture and allied sectors.

23.6 Criteria for Allocation of Funds to States: Allocation by Central Government under the scheme to each of the eligible States is based on three parameters of un-irrigated area, growth potential and additional allocation to agriculture and allied sectors out of state plan funds with respective weights of 20%, 30% and 50%. Allocation formula is as under:

Sl. No.	Parameter	Weightage
1.	The percentage share of net un-irrigated area in a State to net un-irrigated area of eligible states. Eligible States are those States that become eligible to avail of RKVY funds based on their baseline level of expenditure under State Plan and preparation of District and State Agriculture Plans.	20%

2.	The projected growth rates to a base year Gross State Domestic Production (GSDP) for agriculture and allied sectors (say, 2005-06) will be applied to the GSDP to be attained by the end of 11 th Plan by States. The parameter will be set in terms of inter-state proportion of these GSDPs projected to be reached by States by end of 11 th Plan.	30%
3.	Increase in the total Plan expenditure in agriculture and allied sectors in the previous year over the year prior to that year.	50%

23.7 Streams of Funding in RKVY: RKVY is primarily a project oriented scheme. However, it provides for additional outlays on existing State and Central Schemes in non-projectised mode. Accordingly, RKVY funds can be utilized by the States in two streams, subject to the condition of minimum allocation of 75% for Stream I projects:

- **Stream-I:** A minimum of 75% of RKVY fund is to be used for specific projects/schemes/programmes which have been approved as part of State and District Plans.
- **Stream-II:** A maximum of 25% of total RKVY funds can be used in a year for strengthening existing State sector schemes.

23.8 State Level Sanctioning Committee (SLSC): Under the Scheme, State Level Sanctioning Committees (SLSCs) have been constituted under the Chairmanship of Chief Secretary with Secretary (Agriculture) as Member Secretary of concerned State/UT along with other members from allied departments & State Agriculture Universities, Department of Agriculture & Cooperation (GOI), Department of Animal Husbandry, Dairying & Fisheries (GOI), and Planning Commission (GOI). The SLSC appraises and approves projects under Stream-I. The State Agriculture Department is the nodal Department for implementation of the scheme.

23.9 District and State Agricultural Plans: The RKVY guidelines recognize and build on the need for convergence and integration of various programmes implemented at district / State level into DAPs and SAP. Each District is required to formulate a District Agriculture Plan (DAP) by including resources available from other existing schemes, District, State or Central schemes such as Backward Region Grant Fund (BRGF), Swarnajayanti Gram Swarozgar Yojana (SGSY), National Rural Employment Guarantee Scheme (NREGS) and Bharat Nirman, tied and untied grants from Central and State Finance Commissions, etc.

23.10 The District Agriculture Plans reflect financial requirements and sources of financing agriculture development plans in a comprehensive way, as DAPs include animal husbandry and fishery, minor irrigation projects, rural development works, agricultural marketing schemes and schemes for water harvesting and conservation, keeping in view the natural resources and technological possibilities in each District. The DAPs are thereafter integrated to formulate State Agriculture Plans (SAPs).

23.11 Status of Preparation of District Agriculture Plans: Preparation of District Agriculture Plans (DAPs) and State Agriculture Plan (SAP) is the cornerstone of the strategy of implementation of RKVY. An amount of Rs.54.30 crores was released

to States @ Rs.10 lakh per District for preparation of DAPs under RKVY. Most of the State Governments have already prepared DAPs (602 districts out of 615 districts in the country). 26 States have completed SAPs till date. Status of SAPs/ DAPs is at **Annexure 23.1**.

23.12 Projects taken up under RKVY:

As stated above, RKVY does not prescribe any particular strategy, programme or project to be implemented by States. RKVY is designed to focus on funds allocation and States' attention to selection of strategy and projects which will best help generate growth in agriculture and allied sectors. State Governments, keeping in view their priorities, have approved project proposals for implementation under RKVY in wide ranging sectors which include crops, horticulture, organic farming, agriculture/ farm mechanization, micro/minor irrigation, watershed development, agriculture marketing and storage, seed farms and soil/fertilizer testing laboratories, animal husbandry, dairy development, fisheries, extension and research, etc. Critical infrastructure such as State Seed farms, Soil and Fertilizer testing laboratories, starved over the years due to paucity of funds, got a much needed dose of assistance across the States. Aggregate sector-wise cost of projects approved by States during 2007-08 to 2011-12 is given in **Annexure 23.2**.

23.13 While, growth in agriculture and allied sectors in the States is not attributable entirely to RKVY projects as there are many other programmes and policies contributing for it, RKVY has emerged as a principal instrument of development of agriculture and allied sectors in the States and has indeed accelerated revival of agriculture.

23.14 Substantial Step-Up in Allocation to Agriculture by States: There is now good evidence to show that States have indeed stepped up allocation to agriculture

and allied sectors. Allocation to agriculture and allied sectors was 4.88% of total State Plan Expenditure in 2006-07. This has gone up to 6.04% in 2010-11 (RE/ Approved).

New Sub-Schemes launched under RKVY during 2011-12:

23.15 RKVY format has enabled launch of new schemes/ programmes keeping the States' flexibility and authority intact. Finance Minister in the Budget Speech 2011-12 announced taking up five new special initiatives as part of RKVY, continued sub-scheme of Bringing Green Revolution to Eastern India and modified 60,000 Pulses & oilseeds Villages scheme to limit it to pulses. Additionally, RADP and Saffron Mission will also be implemented during 2011-12 as part of RKVY, providing for nine special Programme/schemes in all for implementation as sub-schemes of RKVY. These sub-schemes and their allocations for 2011-12 are:-

- 1. Bringing Green Revolution to Eastern Region:** Last year's initiative is continued in 2011-12 with a further allocation of Rs. 400 crores. The programme would target improvement in rice based cropping system of Assam, West Bengal, Odisha, Bihar, Jharkhand, Eastern Uttar Pradesh and Chhattisgarh.
- 2. Integrated Development of 60,000 Pulses Villages in Rainfed Areas:** For attaining self-sufficiency in production of pulses within the next three years, an amount of Rs. 300 crores has been allocated to promote 60,000 pulses villages in rainfed areas for increasing crop productivity and strengthening market linkages.
- 3. Promotion of Oil Palm:** to achieve a major breakthrough, special attention will be paid to oil palm as it is one of the most efficient oil crops. Accordingly, an amount of Rs. 300 crores to

bring 60,000 hectares of additional area under oil palm plantation, by integrating farmers with markets has been provided.

4. **Initiative on Vegetable Clusters:** Growing demand for vegetables will be met by a robust increase in productivity and market linkage. For this purpose, an efficient supply chain will be established, to provide quality vegetables at competitive prices. For this purpose, an amount of Rs. 300 crores has been provided.
5. **Nutri-cereals:** To promote balanced nutrition, higher production of bajra, jowar, ragi and other millets would be taken up in 1000 compact blocks covering about 25,000 villages. Additionally, projects will be taken up to upgrade their processing technologies and create awareness regarding their health benefits. This initiative would provide market linked production support to ten lakh millet farmers in arid and semi-arid regions of the country. Outlay for this programme for 2011-12 is Rs. 300 crores.
6. **National Mission for Protein Supplements:** National Mission for Protein Supplements is being launched with an allocation of Rs. 300 crores to take up activities to promote animal based protein production through livestock development, dairy farming, piggery, goat rearing and fisheries in selected blocks.
7. **Accelerated Fodder Development Programme:** To accelerate the production of fodder through intensive promotion of technologies to ensure its availability throughout the year, Rs. 300 crores have been provided for this programme, which will benefit farmers in 25,000 villages.
8. **Rainfed Area Development Programme** will be implemented with

an allocation of Rs. 250 crores.

9. **Saffron Mission** for revival of Saffron cultivation in Jammu & Kashmir will be continued with an allocation of Rs. 50 crores during 2011-12.

23.16 Monitoring of RKVY: DAC has put in place a web-based Management Information System for RKVY, called RKVY Database and Management Information System (RDMIS), in order to collect and disseminate relevant information and data related to each RKVY project and also to collect progress and completion details of each project over its life cycle. The States are entering data on approval & implementation of projects under RKVY online in RKVY website (<http://www.rkvy.nic.in>). It is expected that this system will provide all stakeholders with current and authenticated data on outputs, outcomes and growth impact of projects taken up under RKVY.

23.17 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. A list of such projects is at **Annexure 23.3**.

23.18 States have been reasonably prompt in approving projects & incurring expenditure under RKVY. Status of year-wise funds released to the States & their expenditure & utilization status as on 31.12.2011 is presented in the following table:-

(Rs. In crore)

Year	RE	Fund Released	Expenditure Reported	UCs Submitted
2007-08	1263.00	1246.89	1239.75	1238.70
2008-09	2891.70	2886.80	2877.84	2859.59
2009-10	3707.07	3760.93	3666.08	3621.47
2010-11	6722.00	6720.08	6408.53	6392.52
2011-12	7810.87	5422.29	2422.12	2422.12

23.19 State-wise status of funds released for the years upto 2010-11 and expenditure/ UC status as on 31.12.2011 is given in **Annexure 23.4**

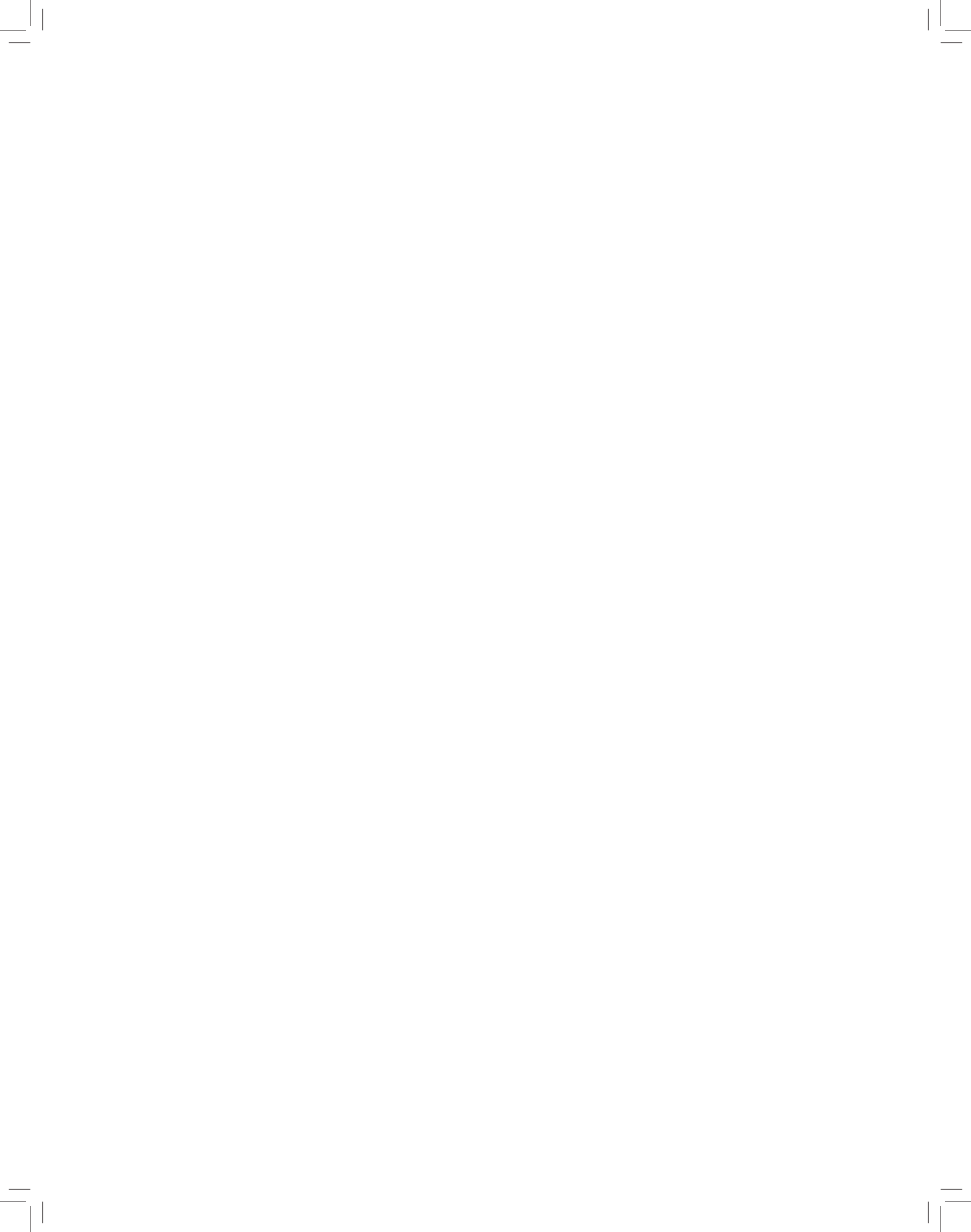
23.20 Conclusion: RKVY is a transformational jump in evolution of agricultural development schemes from variegated schematic approach followed so far through diverse but strait-jacketed schemes to a completely new approach in agriculture planning by allowing States to plan their strategy and design appropriate schemes to implement that strategy with complete flexibility in scheme designs and autonomy in its implementation.

23.21 RKVY has imparted definite momentum to agriculture sector. Regular activities starved of resources, promising strategies languishing for lack of support, and limited opportunities for experimentation and innovation, have found a new hope in RKVY. States are allocating more funds to agriculture to take up schemes of agriculture development. This is reflected in additional plan allocation to agriculture sector. There is a sense of hope and optimism. Agriculture, which had slid back, is making a comeback. RKVY- has accelerated revival of agriculture and put it on growth path.

CHAPTER-24

Gender Perspectives in Agriculture







24

Gender Perspectives in Agriculture

24.1 Policy level initiatives for gender mainstreaming are being promoted in the Department of Agriculture & Cooperation (DAC), Ministry of Agriculture in line with the National Agriculture Policy 2000. National Gender Resource Centre in Agriculture (NGRCA) was set up under DAC during 2004-05 as one of the components under the scheme of Extension Support to Central Institutes to serve as a focal point of convergence for all issues related to gender in agriculture and to ensure that policies in agriculture reflect national commitment to women's empowerment.

24.2 Acting as a focal point for convergence of gender related activities and issues in agriculture and allied sectors, Department of Agriculture & Cooperation, adds gender dimension to agriculture policies and programmes, renders advocacy and advisory services to the States and UTs to internalize gender specific interventions for bringing farm women into mainstream of agriculture development.

24.3 In order to bring gender concerns on to the centre stage in all aspects of public expenditure and policy, a Gender Budgeting Cell (GBC) has been constituted in Department of Agriculture & Cooperation, to look into budgetary commitments of various schemes of DAC

and ensure proportionate flow of public expenditure to women farmers. It has been mandated that a minimum of 30% funds would be utilized for women farmers under all the beneficiary oriented programmes / schemes. Division wise identified nodal officers/ gender coordinators have been sensitized about concept of gender budgeting.

24.4 Besides promoting mainstreaming of Gender issues, the NGRCA has also taken other initiatives, which include:

- Undertaking macro/micro level and action research studies in critical thrust areas including assessment of gender content and impact of various on-going programmes of the DAC and giving recommendations, if required, on appropriate improvements in strategy and design of schemes to incorporate gender perspective.
- Collecting, analyzing and documenting success stories of Women farmers.
- Assessing gender contents and generating 'gender disaggregated data' in respect of various schemes & programmes of different divisions of DAC.
- Gender Sensitization Modules (GSM) for programme implementers at three

different levels, namely senior, middle and cutting-edge level developed by NGRCA through MANAGE, are being utilized to sensitize extension functionaries at different levels.

- Revising reporting and monitoring formats to generate gender disaggregated data.
- As part of its networking strategies, the NGRCA is committed to initiate appropriate action on the (i) National Plan of Action on the National Policy for Empowerment of Women (NPEW) formulated by Ministry of Women & Child Development (MW&CD) related to Agriculture, (ii) Committee for Elimination of Discrimination Against Women (CEDAW) (iii) National Mission for Empowerment of Women (NMEW) – Convergence and Co-ordination of Government Programmes / Schemes for gender equality and fighting social evils; (iv) India’s Nutrition Challenges.

The important mainstreaming efforts within various subject matter divisions are briefly given hereinafter.

24.5 Horticulture

(a) Under the Scheme ‘Horticulture Mission for North East and Himalayan States (HMNEH)’ earlier known as “Technology Mission for Integrated Development of Horticulture in the North Eastern States including Sikkim, J&K, Himachal Pradesh and Uttrakhand (TMNE)” as per the directives issued by the Planning Commission/ Ministry of Finance, the Women Component Plan (WCP), now known as Gender Responsive Budgeting, 30% of the allocation has been earmarked for women beneficiaries/ farmers. During the period 2006-07 to 2009-10, women were trained on different aspects of horticulture and a number of women SHGs have been formed. Funds were also allocated for base line survey, curriculum development as well as assistance for women SHGs. However, from 2010-11 onwards this component has been deleted from the HMNEH Scheme and assistance is now being provided under HRD component of the Mission.

The cost norms and pattern of permissible assistance under HRD component is as under:

S.No.	Item	Maximum permissible cost	Pattern of Assistance
	Human Resource Development (HRD)		
(i)	Training of Farmers including women		
a)	Within the district	Rs.400/day per farmer excluding transport	100% of cost
b)	Within the State	Rs.750/day per farmer excluding transport	100% of cost
c)	Outside the State	Rs.1000/day per farmer excluding transport	100% of cost
(ii)	Exposure visit of farmers including women		
a)	Within the district	Rs.250/day per farmer excluding transport	100% of cost
b)	Within the State	Rs.300/day per farmer excluding transport	100% of cost
c)	Outside the State	Rs.600/ day per farmer excluding transport	100% of cost
d)	Outside India	Rs.3 lakh/participant	Project based. 100% of air /rail travel cost
iii)	Training /study tour of Technical officers / field functionaries involved in implementation of the scheme at central / state level including women		
a)	Within the State	Rs.200/day per participant plus TA/DA, as admissible	100% of cost
b)	Study tour / training in progressive states / units (group of minimum 5 participants) including women	Rs.650/day per participant plus TA/DA, as admissible	100% of cost
c)	Outside India	Rs.5 lakh/participant	100% of cost on actual basis

(b) National Bamboo Mission: In the operational guidelines of this Centrally Sponsored Scheme, activities are not defined based on gender. Under the Mission, both men and women benefit from activities like establishment of private nurseries, plantation in non forest areas and training. However, directions have been issued to state implementing agencies to ensure that at least 30 percent of budget allocation is earmarked for women beneficiaries/ farmers.

24.6 Macro Management: Macro Management of Agriculture, a Centrally Sponsored scheme of Department of Agriculture & Cooperation, was revised to supplement the efforts of the State Governments for enhancing agriculture production and productivity in the country. The scheme provides sufficient flexibility to the States to develop and pursue the programmes on the basis of their regional priorities. Thus, States have been given a free hand to finalize their sector-wise allocation as per requirement of their developmental priorities. Under the revised MMA scheme, the practice of allocating funds to States/UTs on historical basis has been replaced by new allocation criteria based on cropped area and area under small and marginal holdings.

The States have been instructed to allocate at least 33% of funds to small, marginal and women farmers and SC/ST women farmers proportionate to their population. States have also been directed to utilize 10%-20% provided under “New Initiatives” for implementing activities for gender empowerment, development of risk prone/backward/tribal areas and to include Schemes which encourage group formation among Women/SC/ST farmers in the Work Plan.

24.7 Agriculture Extension

(a) “Support to States’ Extension Programme for Extension Reforms” (ATMA programme) was launched in 2005-06

and it is now operational in 604 districts of 28 states and 3 UTs of the country. The scheme was modified in 2010 and provisions of the Operational guidelines of modified Agriculture Technology Management Agency (ATMA) scheme 2010 are as under:-

- at least 30% of the beneficiaries should be women farmers/ farm women;
- earmarking of minimum of resources meant for the programmes and activities to women farmers and women extension functionaries with specific documentation and maintenance of expenditure and performance;
- women farmers are to be involved in different decision making bodies at district and block level such as ATMA Governing Board and ATMA Management Committee;
- women are to be represented in Farmers Advisory Committees set up at block/district and state level;
- under the newly introduced mechanism for extension delivery the below block level through a ‘Farmer Friend’, greater involvement of women as ‘Farmer Friends’;
- reduced beneficiary contribution for women to an extent of 5% for four beneficiary oriented activities listed in the cafeteria viz. Farmers’ Training, Demonstrations, Exposure Visits and Capacity Building of farmers groups against normal beneficiary contribution.

Since inception of the scheme in 2005-06, a total of 40,48,794 farm women (23.5% of total benefited farmers) have participated in farmer oriented activities like exposure visits, trainings, demonstrations & Kisan melas. 130113 women farmers have been benefited during 2011-12 (up to 4th November, 2011) viz. 32264 through Exposure Visits, 37812 through trainings, 4155 through Demonstrations and 55882

through Kisan Melas.

(b) The Central Sector Scheme “Establishment of Agri-Clinic & Agri-Business” (ACABC) is open to graduates in agriculture and allied subjects/biological science graduates with post graduation in Agriculture and allied subjects from State Agriculture Universities (SAU)/ Central Agricultural Universities recognized by ICAR/UGC/Diploma/Post Graduate Diploma holders in agriculture and allied subjects from SAUs and also agriculture courses at intermediate (i.e., plus two) level. During 2011-12, 150 women agriculture graduates (up to 31.10.2011) have been trained; 55 of them have established their agri-ventures. The credit linked back-ended subsidy @ of 36% of capital cost of project funded through back loan is eligible under the scheme. Subsidy is 44% in respect of candidates belonging to SC/ST, Women and other disadvantaged sections and those from North-Eastern and Hill areas.

(c) The Central Sector Scheme “Mass Media Support to Agricultural Extension” was launched during the Xth Plan period with a view to contributing to revamping of extension services in the country by using electronic media for transfer of technology / information to farmers. Under the Scheme the existing infrastructure of Doordarshan and All India Radio (AIR) is being utilized to produce and transmit programmes covering a wide spectrum of topics in agriculture and allied sectors for bringing latest information and knowledge to the farming community. In order to cater to the needs of women farmers, special programmes are being produced and broadcast by DD & AIR in areas in which women are pre-dominantly involved such as Honey-bee keeping, Seed treatment, Mushroom cultivation, kitchen-gardening, post-harvest management of fruits and vegetables, cultivation of aromatic and medicinal plants, gender friendly tools, etc.

(d) National Gender Resource Centre in Agriculture (NGRCA)

(1) The progress of macro/ micro level and action research studies undertaken by the Centre is as under:

- ‘Mainstreaming and Gender Concerns in Agriculture’ was outsourced to Centre For Management Development, Thycaud, Thiruvananthapuram, Kerala. The study has been completed and the final report has been received
- Analytical Study on Existing State Policies, Programmes, Interventions, Processes and their impact on Women’s access to Land was outsourced to CESS, Hyderabad through MANAGE, Hyderabad. This Study has also been completed.

(1) Coordination with various divisions of Ministry from time to time to collate gender disaggregated data on flow of benefits (physical as well as financial) to women farmers, especially SC/ST farm women under various schemes and strategies being adopted by the divisions for empowerment of women.

(2) Being a Nodal agency for women in agriculture of DAC, the following activities have been taken up:

- Preparation of material in respect of Department of Agriculture & Cooperation for inclusion in 4th & 5th Periodic Country Report on the Convention for Elimination of Discrimination Against Women (CEDAW)
- Preparation of Comments of DAC for All India Conference to identify challenges faced by under privileged women and children on issues related to women & children belonging to SC/ST and Backward classes organized by Ministry of

- Women & Child Development.
- The information with regard to the present status in terms of benefits reached to and availed by SC and ST women & children, legislations and policies in existence/ modifications or revision of schemes in favour of women in agriculture sector is provided to Ministry of Women & Child Development.
 - Examining draft Cabinet Notes for various new schemes proposed by Ministry of RD, Women and Children from the perspective of women in agriculture.
 - Examination of Schemes/Proposal of various Departments/Ministries regarding issues related to women from gender perspective in agriculture.
- (4) Collecting 'gender disaggregated data' in respect of female cultivators/ female agricultural labourers / women engaged in agro related business or activities in the country/farm women trained/ empowered/ benefited under various schemes & programmes of DAC from time to time for the parliament questions.
 - (5) Preparation of separate chapter on 'Gender Perspective in Agriculture' for the Annual Report of DAC, Ministry of Agriculture.
 - (6) Preparation of Gender Related Write-up for the Outcome Budget of DAC, Ministry of Agriculture.
 - (7) The Reporting Formats of Extension Division have been revised to include and reflect benefits accrued to women in agriculture under different schemes/ programmes. These formats have been shared with all the Divisions of the Department for revising the formats of beneficiary oriented schemes of the respective divisions.

24.8 Watershed Development: National Watershed Development Project for Rainfed Areas (NWDPR), does not have a gender – specific component. However, all communities living in watershed areas are benefited through Natural resource management. Under the scheme women are benefited through formation of Self Help Groups and Users Groups.

Guidelines of scheme have been revised in favour of women. Under new Common guidelines for Watershed Development issued by National Rainfed Area Authority (NRAA), it has been envisaged that at least one member of the WDT should be a woman. The guidelines focus on mobilizing women to ensure that interests of women are adequately reflected in watershed action plan. Watershed Committees that are formed to implement NWDPR would comprise of at least 10 members, half of whom shall be representatives of SHGs and User groups, SC/ST community, women and landless persons in village. Besides, it has been found that a large number of SHGs from watershed areas comprise of women members.

24.9 Crops: The scheme 'National Food Security Mission (NFSM)', was launched in October 2007-08, targeting three important food grain crops-rice, wheat and pulses. Beneficiaries of the Mission include small and marginal farmers, including women farmers. States have been advised to set aside at least 33% of total allocation for small and marginal farmers, including women farmers. To create more visible impact of these technologies, progressive small and marginal farmers are given preference for seed mini-kits and demonstrations.

24.10 Technology Mission on Oilseeds and Pulses: Under the 'Integrated Scheme of Oilseeds, Pulses, Oil palm and Maize (ISOPOM)', in view of the directions issued by Government of India, 30% of allocation should flow to women farmers. Therefore, in components like distribution of agricultural inputs, training

demonstration, etc. preference would be given to women farmers who head the house-hold. In the North Eastern Region, Oil Palm Development Programme is being implemented in Mizoram.

24.11 Post Harvest Technology: The scheme 'Post Harvest Technology and Management' was launched during the XIth Five Year Plan with a view to creating adequate infrastructure in the production catchments / rural areas for primary processing and value addition so as to reduce post harvest losses on the farm.

Under the scheme funds are provided for the establishment of Units for transfer of primary processing technology, value addition, low cost scientific storage, packaging units and technologies for bi-product management in the production catchments. It is mandatory for State Governments/other Implementing Agencies to release 30% of funds to women beneficiaries.

24.12 Gramin Bhandaran Yojana: A Capital Investment Subsidy Scheme for Construction/Renovation of Rural Godowns was introduced in 2001-02 to create scientific storage capacity with allied facilities in rural areas to meet requirements of farmers for storing farm produce, processed farm produce and agricultural inputs, for promotion of grading, standardization and quality control of agricultural produce to improve their marketability and to prevent distress sale by providing the facility of pledge financing and marketing credit. Under the scheme of Rural Godowns as on 30.9.2011, 1869 projects belonging to women entrepreneurs with a total capacity of 27.73 lakh MTs involving subsidy of Rs. 74.50 crores have been sanctioned.

Under the scheme the rate of subsidy for projects located in North-Eastern States, hilly areas and those catering to Women Farmers / their self help groups / co-operatives and SC/ST entrepreneurs & their self-help groups / Co-operatives is

33.33% of the capital cost of the project subject to a maximum ceiling on subsidy of Rs.62.50 lakhs. However, for all categories of farmers (Other than Women Farmers), agriculture graduates, cooperatives and State/Central Warehousing Corporations the subsidy is 25% of the capital cost of the project subject to a maximum ceiling on subsidy of Rs.46.87 lakhs.

Under institutional lending a back-ended subsidy as term loan is provided by banks up to a minimum of 50% of project cost (46.67% in case of NE States, hilly areas, Women Farmers / their self help groups / co-operatives and SC/ST entrepreneurs & their self-help groups / Co-operatives). The repayment schedule is drawn on the total loan amount (including subsidy) and adjusted after liquidation of bank loan (net of subsidy) but not before 5 years from the date of disbursement of first installment of term loan. Pattern of funding is different for projects in which subsidy is routed through NCDC and NABARD. However, in both the cases projects belonging to women farmers, SC/ST entrepreneurs and self help groups, cooperatives located in the NE states/hilly areas (i) the owner's minimum contribution is 20%, whereas, for others categories it is 25%, (ii) Subsidy from Government is 33.33% compared to 15% for other categories and (iii) the minimum Term loans from eligible Financing Institutions is 46.67% for women farmers, SC/ST entrepreneurs, self help groups and cooperatives located in the NE states/hilly areas and 50% for all other categories.

24.13 Integrated Nutrient Management (INM): Under the 'National Programme for Organic Farming' (NPOF), 25 percent seats have been reserved for training of women farmers in organic farming.

24.14 Pest Management Approach in India: Under the scheme "Strengthening and Modernization of Pest Management Approach in India" assistance is provided to private entrepreneurs, NGOs, Cooperatives, SHGs and women

organizations for opening mass production units of bio-control agents/bio-pesticides, for improving availability of bio-control agents and bio-pesticides to farmers and for purchasing laboratory equipments to set up bio-control laboratories. The subsidy on total cost of equipments is provided at 35% for general category & 50% for SC/ST/Women's Organizations subject to a maximum of Rs.5.00 lakhs per unit.

24.15 Cooperation: The Cooperation Division is implementing two Central Sector Schemes viz. (i) Central Sector Scheme for Cooperative Education & Training and (ii) Assistance to NCDC for Development of Cooperative Programmes, wherein, due focus is given to women for their economic and social upliftment.

With the overall objective of bringing women in cooperative fold, develop participation in group activities and to improve the socio-economic conditions of women farmers of selected blocks, NCUI is now running four exclusive women's development projects located at Shimoga (Karnataka), Berhampur (Odisha), Imphal (Manipur) and Bhopal (MP), under the Special Scheme of Intensification of Cooperative Education in the cooperatively under developed states. Besides, each field project has got a special women development component. Under this, women are organized into self-help groups to help them to develop thrift habits. Women are also provided training to equip them to undertake income-generating activities with the help of their own resources or by borrowing from cooperatives. The project personnel help the women in marketing their produce in the local market and by organizing fair/ exhibitions. One educational and development project for women is being operated in the North Eastern region at East Imphal in Manipur state. During the year 2011-12 (upto September, 2011) a total of 82254 persons were imparted education and training under these projects.

The National Cooperative Development

Corporation (NCDC) encourages women's cooperatives to avail assistance under its various schemes. A large number of women members are engaged/ involved in cooperatives dealing with fruits and vegetables, Integrated Cooperative Development Project (ICDP), sugarcane processing, consumer stores, handloom, power loom, spinning, services etc. Till 31.3.2011 the NCDC has cumulatively sanctioned and released financial assistance of Rs. 140.51 crores and Rs. 87.00crores respectively for the development of cooperative societies exclusively organized by women. This included food grain processing, plantation crops, oil seed processing, fisheries, service cooperatives and integrated cooperative development projects, spinning mills, handloom and power loom weaving sugar mills etc.

24.16 Seeds: The objective of the scheme 'Development & Strengthening of Infrastructure,, Facilities for Production and Distribution of Quality Seeds' is to develop and strengthen the existing infrastructure for the production and distribution of certified seeds to farmers. The Seed Village Programme was launched with a view to upgrade the quality of farmer saved seed which is about 80-85% of the total seed used for crop production programme. Under the programme 25% quota has been reserved for training of women and instructions have also been issued to SAUs/SSCs, etc. which are releasing funds to the beneficiaries to ensure that assistance/ subsidy benefits are equally available to all the farmers including women farmers.

24.17 Policy: The "National Policy for Farmers 2007" announced by the Government envisages the following measures aimed at women's empowerment.

- (i) Asset reforms under land, water, and livestock for an equitable share to women farmers.
- (ii) Better access to inputs and services,

science and technology, implements, credit and support services, like creches, child care centres, nutrition, health and training.

- (iii) Encouragement to women for participating in group activities aimed at achieving economies of scale through farming groups.
- (iv) Involvement of women in conservation and development of bio-resources.

24.18 Agriculture Census: On the recommendation of Central Statistical Organization (CSO), Ministry of Statistics & Programme Implementation, New Delhi, collection of gender-based data was introduced for the first time in the Agriculture Census 1995-96. Since then, the data on this aspect has been collected in the successive Censuses, viz., 2000-01 and 2005-06. The scope of collection of data has been restricted to number of operational holdings and corresponding operated area by different size classes of holdings, social groups (SC, ST, Others), gender (male and female) and types of holdings (individual, joint and institutional). The information collected indicates the participation of women population in the operation and management of the agricultural holdings in the country.

The number and percentage of female operational holders as per the Agriculture Census 2005-06 is given in table:

Further details indicating the involvement of women in agriculture are given in **Annexure 24.1**.

24.19 Current Initiatives

- Gender sensitization of extension functionaries at senior, middle and functionaries at the cutting edge level to ensure the inclusion of gender dimensions in policy and programmes for bringing women into the mainstream of agriculture development.
- Review of the guidelines of all beneficiary oriented schemes of DAC,

and their revision, if required, to ensure flow of benefits to women farmers.

- Reporting and MIS formats of all Beneficiary-Oriented Schemes (BOS) of the DAC have been revised to generate gender disaggregated data.

24.20 The Way Forward

The foremost mandate of the DAC, Ministry of Agriculture is to improve agricultural production and productivity. Within its overall mandate, goals and objectives, the effort is to ensure that women also contribute effectively to agricultural productivity and production. The appropriate structural, functional & institutional measures are being promoted by the DAC to empower women, build up their capacities and improve their access to inputs, technology, marketing and other farming resources. The mainstreaming of gender concerns is being addressed by allocating and ensuring a flow of 30% of funds for women farmers under all the beneficiary-oriented schemes and programmes of the Ministry. Efforts are also being made for achieving convergence of different schemes/programmes being implemented by various Ministries/ Departments for the benefit of women.

24.21 Mechanization & Technology

Under the Central Sector Scheme 'Promotion and Strengthening of Agricultural Mechanization through Training Testing and Demonstration', for the component of outsourcing and demonstration of newly developed agricultural equipments at farmers' fields, 30% of funds have been allocated for women farmers and separate physical targets have also been fixed. State Governments have been directed to earmark 10% of the total funds allocated for training to women farmers. During 2010-11, a total of 733 women farmers and during 2011-12 (upto October, 2011) a total of 318 women farmers have been imparted training at the Farm Machinery Training and Testing Institutes (FMT&TIs).

Female Operational holders in the country as per Agriculture Census 2005-06*

S. No.	Size Group	Operational holders		% of female operational holders
		Total	Female	
1.	Marginal (below 1.00 ha.)	8,36,94,372	1,05,41,361	12.60
2.	Small (1.00 – 1.99 ha.)	2,39,29,627	26,55,263	11.10
3.	Semi-medium(2.00-3.99 ha.)	1,41,27,120	13,57,681	9.61
4.	Medium (4.00 – 9.99 ha.)	63,75,340	4,95,187	7.77
5.	Large (10.00 ha. & above)	10,95,778	65,725	6.00
	All Size Groups	12,92,22,237	1,51,15,217	11.70

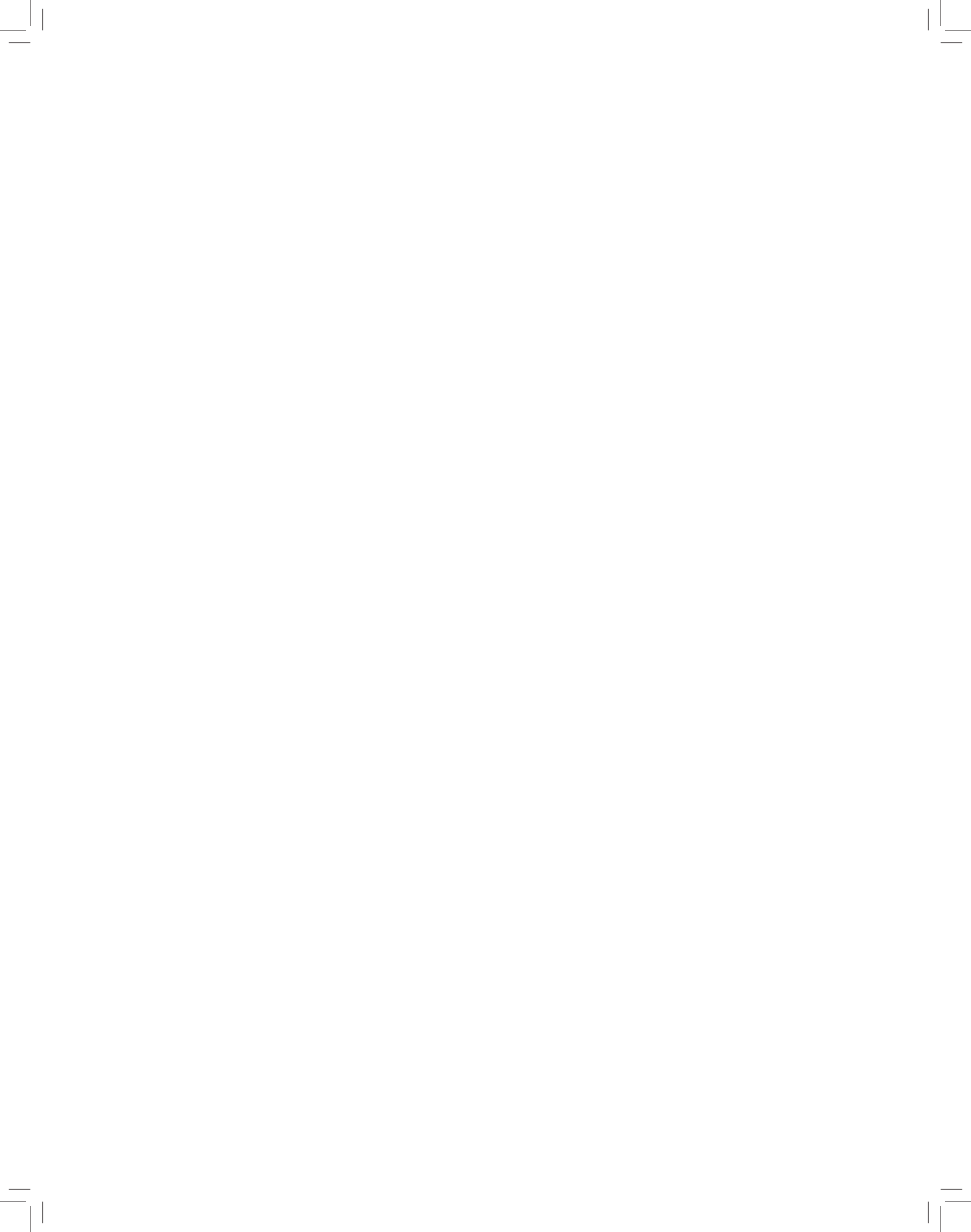
*Excluding Jharkhand

24.22 Under the scheme Post Harvest Technology and Management implemented by M&T Division through demonstration, distribution and outsourcing of training, the states have been directed to ensure release of 30% funds to women beneficiaries. Under the scheme 7647 demonstrations have been conducted out of which 229 were exclusively for women farmers. The flow of funds to women farmers during 2011-12 (upto October, 2011) has been to the tune of Rs.277.10 lakhs. A number

of agricultural implements and hand tools suitable for farm women have been developed by R&D organizations under ICAR. Besides other equipments, these gender friendly equipments are also being promoted through Macro Management Scheme. A list of gender friendly equipments used by women workers for different farm operations has been sent to all States & UTs for promoting them on priority basis through Macro Management Scheme by earmarking adequate funds for this purpose.



Annexures



CHAPTER – 2
LIST OF FUNCTIONAL DIVISIONS IN
DEPARTMENT OF AGRICULTURE AND COOPERATION

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. Hindi
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. Rainfed Farming System & Watershed Development
23. Seeds
24. Technology Mission on Oilseeds, Pulses & Maize
25. Trade
26. Vigilance

CHAPTER - 2
FUNCTIONS AND ORGANIZATIONAL STRUCTURE
INVENTORY OF FIELD FORMATIONS

I. ATTACHED OFFICES

1. Directorate of Economics & Statistics, Shastri Bhavan, 'B' Wing, New Delhi.
2. Commission for Agricultural Costs and Prices, Shastri Bhavan, 'F' Wing, Second Floor, New Delhi.
3. Directorate of Plant Protection, Quarantine and Storage, N.H.IV, Faridabad (Haryana).
4. Directorate of Marketing & Inspection, N.H.IV, Faridabad (Haryana).
9. Directorate of Sugarcane Development, 8th Floor, Hall No.3, Kendriya Bhavan, Aliganj, Lucknow - 226024 (U.P).
10. Directorate of Rice Development, 191, Patliputra Colony, Patna-800013 (Bihar).
11. Directorate of Wheat Development, CGO Building, Hapur Road Chauraha, Kamla Nehru Nagar, Ghaziabad (U.P).
12. Directorate of Extension, Krishi Vistar Bhavan, Dr. K.S. Krishna Marg, IARI Campus, Pusa, New Delhi-110 012.

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, 14, Ramjibhai Kamani Marg, Ballard Estate, P.B.No. 1002, Mumbai-400030, (Maharashtra).
6. Directorate of Jute Development, 234/4, Acharya Jagdish Bose Road, Nizam Palace Campus, Kolkata-700020 (West Bengal).
7. Directorate of Millets Development, Mini Secretariat Building, Room No. 710, 6th Floor, Bani Park, Jaipur (Rajasthan).
8. Directorate of Tobacco Development, 26 Haddows Road, 3rd Floor, Shastri Bhawan Annexe, Chennai-600006 (Tamil Nadu).
13. Directorate of Oilseeds Development, Telhan Bhavan, Himayat Nagar, Hyderabad-500029 (A.P).
14. Directorate of Pulses Development, 8th Floor, Vindhyachal Bhavan, Bhopal-462004 (M.P).
15. Central Fertiliser Quality Control & Training Institute, N.H.IV, Faridabad (Haryana).
16. National Centre of Organic Farming, C.G.O. Complex, Kamla Nehru Nagar, Hapur Road Chungi, Ghaziabad (U.P).
17. Directorate of Cashewnut and Cocoa Development, M.G. Road, Kochi-682011 (Kerala).
18. Directorate of Arecanut and Spices Development, Cannanore Road, Kozhikode-673005 (Kerala).
19. Office of the Minister (Agriculture), Embassy of India, ROME (ITALY).
20. All India Soil and Land Use Survey, IARI Campus, Pusa, New Delhi-110 012.
21. National Seed Research & Training Centre (NSRTC) VARANASI (U.P.).

CHAPTER - 2

FUNCTIONS AND ORGANIZATIONAL STRUCTURE

I. PUBLIC SECTOR UNDERTAKINGS

1. National Seeds Corporation, New Delhi.
2. State Farms Corporation of India, New Delhi.

II. AUTONOMOUS BODIES

1. Coconut Development Board, Kochi (Kerala).
2. National Horticulture Board, Gurgaon (Haryana).
3. National Cooperative Development Corporation, New Delhi.
4. National Oilseeds and Vegetable Oils Development Board, Gurgaon (Haryana).
5. Small Farmers' Agri Business Consortium, New Delhi.
6. National Institute for Agricultural Extension Management, Hyderabad (A.P).
7. National Institute of Agricultural Marketing, Jaipur (Rajasthan).
8. National Institute of Plant Health Management, Hyderabad (A.P.)

III. 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).

IV. AUHTORITIES

1. Protection of Plant Varieties and Farmers' Rights Authority, New Delhi.

CHAPTER - 3
DIRECTORATE OF ECONOMICS & STATISTICS
Minimum Support Prices
(According to Crop Year)

(As on 25.10.2011)

Sl. No.	Commodity	Variety	2007-08	2008-09	2009-10	2010-11	(#) increase in MSP 2010-11 over 2009-10	2011-12	(#) increase in MSP 2011-12 over 2010-11
KHARIF CROPS									
1	PADDY	Common	645\$\$/850~	850\$	950\$	1000	50(5.3)	1080	80(8.0)
		Grade 'A'	675\$\$/880~	880\$	980\$	1030	50(5.1)	1110	80(7.8)
2	JOWAR	Hybrid	600	840	840	880	40(4.8)	980	100(11.4)
		Maldandi	620	860	860	900	40(4.7)	1000	100(11.1)
3	BAJRA		600	840	840	880	40(4.8)	980	100(11.4)
4	MAIZE		620	840	840	880	40(4.8)	980	100(11.4)
5	RAGI		600	915	915	965	50(5.5)	1050	85(8.8)
6	ARHAR(Tur)		1550 ^{^^}	2000	2300	3000 ^{¶¶}	700(30.4)	3200 ^{¶¶}	200(6.7)
7	MOONG		1700 ^{^^}	2520	2760	3170 ^{¶¶}	410(14.9)	3500 ^{¶¶}	330(10.4)
8	URAD		1700 ^{^^}	2520	2520	2900 ^{¶¶}	380(15.1)	3300 ^{¶¶}	400(13.8)
9	COTTON	Medium Staple	1800	2500 ^a	2500 ^a	2500 ^a	0(0.0)	2800 ^a	300(12.0)
		Long Staple	2030	3000 ^{aa}	3000 ^{aa}	3000 ^{aa}	0(0.0)	3300 ^{aa}	300(10.0)
10	GROUNDNUT IN SHELL		1550	2100	2100	2300	200(9.5)	2700	400(17.4)
11	SUNFLOWER SEED		1510	2215	2215	2350	135(6.1)	2800	450(19.1)
12	SOYABEEN	Black	910	1350	1350	1400	50(3.7)	1650	250(17.8)
		Yellow	1050	1390	1390	1440	50(3.6)	1690	250(17.4)
13	SESAMUM		1580	2750	2850	2900	50(1.8)	3400	500(17.2)
14	NIGERSEED		1240	2405	2405	2450	45(1.9)	2900	450(18.4)
RABI CROPS									
15	WHEAT		1000	1080	1100	1120&	20(1.8)	1285	165(14.7)
16	BARLEY		650	680	750	780	30(4.0)	980	200(25.6)
17	GRAM		1600	1730	1760	2100	340(19.3)	2800	700(33.3)
18	MASUR (LENTIL)		1700	1870	1870	2250	380(20.3)	2800	550(24.4)
19	RAPSEED/MUSTARD		1800	1830	1830	1850	20(1.1)	2500	650(35.1)
20	SAFFLOWER		1650	1650	1680	1800	120(7.1)	2500	700(38.9)
21	TORIA		1735	1735	1735	1780	45(2.6)	2425	645(36.2)
OTHER CROPS									
22	COPRA	Milling	3620	3660	4450	4450	0(0.0)	4525	75(1.7)
	(Calender Year)	Ball	3870	3910	4700	4700	0(0.0)	4775	75(1.6)
23	DE-HUSKED COCONUT (Calender Year)		-	988	1200	1200	0(0.0)	1200	0(0.0)
24	JUTE		1055	1250	1375	1575	200(14.5)	1675	100(6.3)
25	SUGARCANE		81.18	81.18	129.84 [□]	139.12 [□]	9.28(7.1)	145.00 ^{□*}	5.88(4.2)
26	TOBACCO(VFC)	Black Soil(F2Gr)	32.00						
	(Rs. per kg.)	Light Soil (L2 Gr)	34.00						

- # Figures in brackets indicate percentage increase.
- \$ An additional incentive bonus of Rs. 50 per quintal was payable over the Minimum Support Price(MSP).
- \$\$ An additional incentive bonus of Rs. 100 per quintal was payable over the Minimum Support Price(MSP).
- ^^ A bonus of Rs. 40 per quintal was payable over & above the MSP.
- ~ From 12.06.2008
- ^a Staple length (mm) of 24.5 - 25.5 and Micronaire value of 4.3 - 5.1
- ^{aa} Staple length (mm) of 29.5 - 30.5 and Micronaire value of 3.5 - 4.3
- & An additional incentive bonus of Rs. 50 per quintal is payable over the Minimum Support Price (MSP)
- ¤ Fair and remunerative price.
- * At 9.5 percent recovery, subject to a premium of Rs.1.53 for every 0.1 percent increase in the recovery above 9.5 percent.
- ¶ Additional incentive at the rate of Rs. 500 per quintal of tur, urad and moong sold to procurement agencies is payable during the harvest/arrival period of two months.

CHAPTER - 5

Seeds Programmes in North-Eastern States

S. No.	Schemes/ Programmes Activities Approved	Details of Schemes/ Programmes/ Activities taken	Target for 2010-11	Achievement 2010-11	Target for 2011-12
1.	Establishment and Maintenance of Seed Bank.	The basic objective of this component is to keep seed available for meeting requirement during natural calamities.	38,550 quintals	27,200 quintalsw	47770 quintals.
2.	Transport Subsidy on Movement of Seeds to North-Eastern States including Sikkim, Himachal Pradesh, J&K, Uttarakhand and hill areas of West Bengal.	<p>The topographical situation and climatic condition being not conducive for the production of seeds in the North-Eastern States.</p> <p>(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's capital/district headquarter.</p> <p>(b) The actual cost, restricted to maximum limit of Rs. 60/- 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.</p>	It is a reimbursement programme. Therefore, targets can not be pre-fixed as transportation of seeds depends on demand which varies from year to year.	<p>For NE States, a quantity of 84,800 quintals transported exclusively to NE States in 2010-12.</p> <p>(All the States including NE States is 200,321 quintals</p>	As mentioned in Col. 4 targets cannot be pre-fixed.

CHAPTER - 9

Programmes in North-Eastern States

Name of Division:- EXTENSION						
Sl.	Schemes/ Programme/ Activities Approved	Details of Schemes/ Programmes/ Activities	Targets		Budget Allocation	Utilization/ Release (upto Dec. 2011)
1.	Support to State Extension Programmes for Extension Reforms	Establishment of Agricultural Technology Management Agencies (ATMAs)	64	64	Rs.50.00 crore	Rs.25.10 crore have been released
2	Mass Media Support to Agricultural Extension	Number of Narrowcasting centres Number of Kisan Vani Station	22 8	22 (NC) +1 (RK) 8	Rs.11.00 crore	Rs.13.96 crore have been released to Prasar Bharti centrally.
3	Establishment of Agri-Clinics and Agri-Business Centres	Training of unemployed candidates and establishment of agri-venture .	Graduates diploma holders in agri & allied areas.	Ar. Pradesh-11* Assam-387* Manipur -327* Meghalaya-5* Mizoram-34* Nagaland -147* Sikkim- 0* Tripura-1* (*trained)	Rs. 2.50 crore	Rs. 0.75 MANAGE
4	Kisan Call Centres	Receipt of calls from farmers	All farmers have free access to KCCs through toll free telephone lines.	Number of calls received during the year Arunachal Pradesh (604) Assam (10326), Manipur (58), Meghalaya (521), Mizoram (51), Nagaland (4), Sikkim (524), and Tripura (236).	The funds are released to TCIL centrally.	
5	Extension Education Institutes (EElS), Jorhat	Training of middle level functionaries	18 courses	17 courses (506-participants)	Total of an amount of Rs. 1.00 crore allocated to EEI Jorhat	Rs. 55.62 lakhs

CHAPTER - 12
MECHANIZATION AND TECHNOLOGY
PROGRAMMES OF NORTH-EASTERN STATES DURING 2011-12
 (Up to 31st December, 2011)

(Rs. in crore)

Sl. No	Activity/ Programme/ Schemes Approved	Details of Activities/Programmes/ Schemes taken up	Targets	Achievements (upto 31.12. 2011)	Budget Allocation	Amount utilized (Upto 31.12. 2011)
1.	2.	3.	4.	5.	6.	7.
	Promotion and Strengthening of Agricultural Mechanization through Training, Testing and Demonstration	Farm Machinery Training & Testing Institute, Bishwanath Chariali (Assam) : Imparting training to the farmers and other beneficiary groups on the selection, operation, maintenance, energy conservation and management of agricultural equipment.	Training-800 personnel Testing-18 machines	Training:671 Testing: 16	2.90	—
		Outsourcing of training & Demonstration of Newly Developed Agricultural Equipment including Horticultural Equipment at Farmers' Field (Implemented on all India basis including NER): (a) Demonstration of Newly Developed Agricultural Equipment Including Horticultural Equipment at Farmers' Field (b) Training of farmers through outsourcing by identified institutions of the State Governments.	Manipur-3266 Sikkim Mizoram	Manipur-3737	1.00	3.86
2	Post Harvest Technology (PHT) and Management.	Demonstration of PHT Equipment. (ii)Distribution of PHT equipment through subsidies. (iii) Outsourcing of training	Manipur-5590 Mizoram – 49 Sikkim -300 Arunachal-110 Nagaland-70	Manipur-833	5.00	5.00

CHAPTER - 14

Schemes/Programmes of Natural Resource Management Division being implemented in North Eastern States

(Rs. in crore and area in lakh hectare)

S. No	Schemes/ Programmes	Details of activities/components	Target	Achiv (upto January, 2012)	Budget allocation	Utilization (upto January, 2012)
1	Special Central Assistance to State Plan Scheme on Watershed Development Project in Shifting Cultivation Areas (WDPSCA);	Drainage line treatment, water harvesting structures, farm ponds, horticulture, afforestation, silvi-pasture, crop demonstration, etc. are taken up. Rehabilitation Components (RC) include improvement of land based and landless/assetless household production systems like piggery, poultry, fishery, sericulture, basket/rope making, tailoring, carpentry, etc. depending on choice of farmers.	0.42	0.38	50.00	41.00
2	Centrally Sponsored Programme of Soil Conservation in the Catchments of River Valley Project and Flood Prone River (RVP&FPR);	Contour vegetative hedges, contour/graded bunding, horticulture plantation, contour/staggered trenching, sowing and plantation, silvi-pasture development, pasture development, afforestation, farm ponds, percolation tanks, drainage line treatment (earthen loose boulders, water harvesting structure, check bund, drop spill-way, sediment detention structure, etc.).	0.19	0.16	21.80	18.32
3	Centrally Sponsored Programme of Reclamation and Development of Alkali and Acid Soils (RADAS).	Identification of areas affected by alkali and acid soils, leveling/terracing and contour bunding/field bunding, application of soil amendments i.e. Gypsum/ Pyrite/ Lime followed by crop production and green manuring, capacity building and training of farmers/beneficiaries.	0.02	0.01	2.14	1.85
		Total	0.63	0.55	73.94	61.17

CHAPTER - 15
**Rainfed Farming System Programmes in North Eastern States
 (2011-12)**

(As on December, 2011)

S. No.	Schemes	Details of Schemes/Activities/Programme Taken up	Physical Targets (area in ha)	Achievement (area in ha)	Budget Allocation (Rs in lakhs)	Amount Utilized (Rs in lakhs)
1	National Watershed Development Project for Rainfed Areas	All the components of National Watershed Development Project for Rainfed Areas	42,355	25,413	4688.37	2812.80

CHAPTER - 19

State-wise Allocation and Release of funds under revised
Macro Management of Agriculture (MMA) Scheme during 2011-12

(Rs. in lakhs)

S. No.	State/Uts	Amount of Work Plan Approved *	Unpent Balance as on 01.04.2011	BE 2011-12**	Release as on 31.12.2011
1	2	3	4	5	6
1	ANDHRA PRADESH	8075.02	1967.510	5335.59	5335.591
2	ARUNACHAL PRADESH	1942.77	220.27	1722.50	2022.500
3	ASSAM	1347.87	2184.03	1332.50	
4	BIHAR	4008.61	344.500	3263.25	3263.25
5	CHHATTISGARH	2037.86	73.060	1761.03	1761.030
6	GOA	42.78	0.000	38.50	38.500
7	GUJARAT	3612.01	165.980	3094.12	4188.120
8	HARYANA	1571.97	55.050	1360.33	1360.33
9	HIMACHAL PRADESH	2003.1	97.53	1705.26	1705.260
10	JAMMU & KASHMIR	3492.9	850.95	3143.61	1571.805
11	JHARKHAND	1143.84	124.525	910.63	897.933
12	KARNATAKA	4583.05	73.000	4051.75	4051.75
13	KERELA	1128.71	14.360	1001.48	1001.480
14	MADYA PRADESH	6027.05	208.710	5215.64	5515.640
15	MAHARASHTRA	8561.34	207.450	7537.59	7537.59
16	MANIPUR	1722.5	0.000	1722.50	2072.500
17	MIZORAM	1202.5	0.000	1202.50	1617.500
18	MEGHALAYA	2898.1	0.770	1950.00	1950.000
19	NAGALAND	1950	0.000	1950.00	2200.000
20	ODISHA	3232	0.120	2706.58	2706.580
21	PUNJAB	1571.3	37.580	1376.59	688.295
22	RAJASTHAN	5608.39	322.790	4724.77	4724.77
23	SIKKIM	1852.25	375.190	1560.00	1577.05
24	TAMILNADU	3134.92	44.160	2777.27	3777.27
25	TRIPURA	1666.81	106.810	1560.00	1560.000
26	UTTAR PRADESH	10225.7	0.000	9203.14	9203.140
27	UTTRAKHAND	2433.24	225.170	1964.76	1964.760
28	WEST BENGAL	4561.84	2858.470	3628.11	1814.055
29	DELHI	27.5	0.000	25.00	12.500
30	PONDICHERRY	29.04	13.760	25.00	12.500
31	A&N ISLANDS	4		4.00	2.000
32	DADRA & NAGAR HAVELI	3		3.00	8.000
33	DAMAN & DIU	0			
34	LAKSHADWEEP	3		3.00	
	Total States/Uts	91704.97	10571.745	77860.00	76141.699
	Direct Funded Component			140.00	132.980
	Grand Total	91704.97	10571.745	78000.00	76274.679

* Including State share & unspent balance of previous year.

** Central Share

CHAPTER - 23

Statewise Status of District Agriculture Plans (DAPs) & State Agriculture Plans (SAPs)

Sl.	State/UT	No. of Districts	DAP prepared	SAP prepared
1	2	3	4	5
1	Andhra Pradesh	23	23	Yes
2	Arunachal Pradesh	16	16	Yes
3	Assam	27	27	Yes
4	Bihar	38	38	Yes
5	Chhattisgarh	18	16	Yes
6	Goa	2	In progress	No
7	Gujarat	26	26	Yes
8	Haryana	21	21	Yes
9	Himachal Pradesh	12	12	Yes
10	Jammu & Kashmir	22	22	Yes
11	Jharkhand	24	24	Yes
12	Karnataka	28	29	Yes
13	Kerala	14	13	No
14	Madhya Pradesh	50	50	No
15	Maharashtra	35	33	Yes
16	Manipur	9	9	Yes
17	Meghalaya	7	7	Yes
18	Mizoram	8	7	Yes
19	Nagaland	11	8	Yes
20	Odisha	30	30	No
21	Punjab	20	20	Yes
22	Rajasthan	33	33	Yes
23	Sikkim	4	4	Yes
24	Tamil Nadu	32	29	Yes
25	Tripura	4	4	Yes
26	Uttarakhand	13	13	No
27	Uttar Pradesh	70	71	Yes
28	West Bengal	18	17	Yes
	Total	615	602	25

Sector wise Approved Project Cost

Select Year 2007-08

Rs. In Crores

SNo	STATE NAME	CROP	HORT	SERI	ANHB	OTHR	FISH	COOP	IPMT	SEED	FINM	AMEC	EXTN	MIRKT	NONF	ITEC	AGRE	NRM	IRRI	ORFM	DDEV	TOTAL
1	ANDHRA PRADESH									42.90		1.86	13.00				1.08			0.24		59.08
2	BIHAR	5.80			11.17		3.07		3.64		0.29	1.35	5.59	21.10				2.72			3.01	57.74
3	CHATTISHGARH		10.07		12.25	15.15	3.19			6.01	4.04	0.65	2.46	7.85					4.89	0.50		67.06
4	GOA	0.31			0.19	0.36	0.04				0.21	0.12	0.02		0.75				0.05			2.05
5	GUJARAT	6.28			4.41									3.45				32.68				46.82
6	HARYANA	0.90	1.65		2.40		2.09			0.30	1.60	3.94								4.84		17.72
7	HIMACHAL PRADESH		2.43		1.30					1.99	0.05		0.27	0.04				4.63			0.61	11.32
8	JHARKHAND	8.31	5.92		3.58	1.12				6.36	3.47	12.63	0.97		0.66			13.70		0.75	2.29	59.76
9	KARNATAKA									20.00			8.00	20.78			37.00		25.00			110.78
10	KERALA	8.44	12.72	0.52	18.66		1.27		1.05		0.30	6.03	1.04	2.31	0.65		0.28	1.75	0.28	0.29	2.13	57.72
11	MADHYA PRADESH		2.00		5.87		2.00			11.85	4.31	2.00	6.50	0.88		0.16		38.40	4.80	0.25		79.02
12	MAHARASHTRA													15.00					114.00			129.00
13	MEGHALAYA													0.84				1.81	1.04	0.50		6.30
14	ODISHA	3.59			0.57		2.70		0.24	11.23	2.07	12.48	4.26				3.70	10.10	5.12	0.97	4.69	61.72
15	PUNJAB		0.66		5.10				6.02		2.00	5.00	5.00	20.50				10.16			3.90	58.34
16	RAJASTHAN	10.00	35.80				15.25				9.81		4.00	6.20			11.71		0.77		6.07	99.61
17	SIKKIM														2.07							2.07
18	TAMILNADU	9.96	4.70		3.08	80.58	7.65			22.25	7.17	10.06				10.22			12.08	8.71	6.67	183.13
19	TRIPURA				0.50		0.60													3.30		4.40
20	UTTAR PRADESH		4.00		4.00		4.00			14.65	6.00		2.00	5.51				1.00	58.35	10.67		110.18
21	UTTARAKHAND				8.90		4.62			3.74				1.79						1.71		20.76
22	WEST BENGAL		6.76		12.03	1.21	5.62			9.04	2.05	4.96	1.20	4.86	2.00			5.64			4.00	59.37
23	TOTAL	53.59	88.82	0.52	94.01	98.42	52.10	0.00	10.95	150.32	43.37	61.08	54.31	111.11	6.13	10.38	53.77	122.59	226.38	32.73	33.37	1303.95

Sector wise Approved Project Cost

Select Year 2008-09

Rs. In Crores

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	14.47	29.66		39.60		6.99		0.02	73.32	16.26	30.64	2.62	3.04			2.70			22.09	27.30	268.71
2	ASSAM	19.58	4.29		26.69		19.99			12.84	3.65	8.75	3.15	12.47			10.00	10.00	7.90		3.31	142.62
3	BIHAR	5.49	11.30		30.57	1.07	2.41			10.23	6.15	26.09	24.17	1.70	4.80	12.10				7.44	30.21	173.73
4	CHATTISHGARH		23.54		26.54		10.90	13.00	1.02	23.19	1.16	0.03	14.90	11.26					4.00	3.60	0.27	133.41
5	GUJARAT	3.47	0.92		60.53	30.12	26.97	9.60	6.63	37.66	9.10	5.35	10.21	62.82			12.37	66.62		2.65	7.06	352.08
6	HARYANA		5.00		20.85	2.00	6.68		16.56	0.95	8.35			6.00				2.85	10.00	0.82		80.06
7	HIMACHAL PRADESH	0.60	2.94				0.65			1.59								2.57	0.94	1.50		10.79
8	JHARKHAND	2.00	11.70	1.95	10.76	3.73	8.74			7.47	25.98	9.07	2.36						18.58	0.88	11.09	114.31
9	KARNATAKA		120.05		112.05		71.11			81.61		366.36		41.80			27.70		30.00	34.40		885.08
10	KERALA	19.28	4.21	0.43	12.25	0.05	13.00		0.12	1.77	0.20	2.65	0.15	1.93	1.05		1.65		1.04	0.37	1.54	61.69
11	MADHYA PRADESH		5.65		36.58	301.37	6.70		8.00	237.52	12.10	2.20	9.59	2.01	2.10	5.20	10.00		784.51	166.44		1589.97
12	MAHARASHTRA		0.54		219.99					20.00			25.00	20.00					143.79		21.60	450.92
13	MEGHALAYA		0.14				0.03															0.17
14	NAGALAND		3.50	1.10	1.65	1.35	1.14		0.35		0.55	0.35	0.35	1.00				2.55				13.89
15	ODISHA	14.10	6.33		28.55	0.24	3.81			14.45	1.45	24.31	30.17	4.53	0.25		15.15	50.48	11.68	1.03	29.40	235.93
16	PUNJAB	12.00	19.88		36.58		1.70		5.70	2.20	2.00		15.00				7.00	20.50	1.88		11.56	136.00
17	RAJASTHAN		109.71		36.85				3.59	38.36	9.54	5.32	3.08	14.98			16.00	8.00	168.43		46.20	460.06
18	SIKKIM	0.20	1.93			1.00				0.24									4.50		1.20	9.07
19	TAMILNADU	7.89	3.65		20.04	45.78	1.57			10.75	5.15	25.80							5.40	17.25	1.50	144.78
20	TRIPURA		5.99		9.18		0.10				1.70		3.00	5.00	0.69			0.90	5.76			32.32
21	UTTAR PRADESH	1.25	40.04	10.97	25.57	70.00	7.18		2.83	33.19	27.08	0.46	30.48			0.75	0.46	11.77	58.59	10.00	12.02	342.64
22	UTTARAKHAND		0.63	1.89	7.64								0.80	17.58								28.54
23	WEST BENGAL	0.60	5.66		25.31	0.54	9.23	4.62	0.47	15.29	4.70	6.16	3.72	20.58	4.66	0.11	0.35	7.09	10.51	0.32	4.83	124.75
24	TOTAL	100.93	417.26	16.34	787.78	457.25	198.90	27.22	45.29	622.63	135.12	513.54	163.75	241.70	13.55	18.16	103.38	183.33	1267.51	268.79	209.09	5791.52

Sector wise Approved Project Cost

Select Year 2009-10

Rs. In Crores

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	7.42	43.92		90.42		7.53		0.30	133.24		18.70	2.22	19.22			10.67			0.12	26.93	360.69
2	ARUNACHAL PRADESH	4.77	1.74	1.10	0.75		2.36						0.14	1.80						0.05		12.71
3	ASSAM	2.29	3.00		10.00		10.00			3.37	1.29	15.44	0.10	7.29			5.00		17.22		5.00	80.00
4	BIHAR	13.93	10.25		45.66	1.08	8.59	7.26				47.09	7.82	11.97	17.01	1.00	8.04	4.15			24.70	208.55
5	CHATTISHGARH		21.31		18.64	24.97	8.08		0.12	11.44		3.16	3.64	9.97			2.00		0.50	2.30		106.13
6	GOA											0.01									7.10	7.11
7	GUJARAT	2.37	7.71	0.57	19.78	32.13	4.10		1.08	6.37		4.30	4.98	24.76	21.30		2.81	186.41	2.13	1.97	7.00	329.77
8	HARYANA	2.00	1.00		22.88	2.35	1.25		2.00	18.64	8.25	17.17	0.25	2.00				2.50	39.84	1.55		121.68
9	HIMACHAL PRADESH	1.45	9.44		15.77		0.50			4.95			1.41	2.08			3.16	0.72	1.05	3.30		43.83
10	JAMMU AND KASH-MIR	0.24	12.01	0.95	6.07			0.77	0.40	0.37		0.99		4.72				2.68	2.20	0.87		32.27
11	JHARKHAND				13.46	2.48	3.04				0.55		4.70					13.10		0.42	80.23	117.98
12	KARNATAKA		46.27		81.45	7.00			3.61		3.00			7.50			4.59				5.40	158.82
13	KERALA	43.95	1.37	0.44	19.81	0.77	21.78			0.25	1.50	87.74	0.06	0.35	0.63		10.24	56.67	6.66	0.02	0.96	253.20
14	MADHYA PRADESH	1.51			7.65	15.00	6.90		1.00	278.30	401.00		22.84		3.14		27.00		12.10	101.00		877.44
15	MAHARASHTRA				162.30	1.80		20.00	14.91		0.92	17.56		41.30				7.99	256.01			522.79
16	MANIPUR	1.33	1.00		1.00	0.06	1.00															4.39
17	MEGHALAYA	10.23																2.15				12.38
18	ODISHA	0.60								3.25		39.37		0.96	1.76		4.00	3.61	2.08	4.42	1.99	58.04
19	PUNJAB	7.00	5.88		38.04					1.60				0.23							0.14	56.89
20	RAJASTHAN	113.29	20.91		31.80	7.96		4.37	0.25	120.09	45.52	14.08	83.61	17.00			3.43	14.60	325.32	22.35		824.58
21	SIKKIM		2.11		4.87	0.35				1.67			1.08	1.54						1.96		13.58
22	TAMILNADU	28.61	10.00		13.54	29.76	1.17					21.67	11.95	3.50					4.45		3.26	127.91
23	TRIPURA		3.53		6.18	4.14	2.63			1.20		1.30	1.75	3.02			2.79		1.37	0.40		28.31
24	UTTAR PRADESH	3.45	53.56	7.48	56.46	70.46	4.22		8.85	54.06	46.08	2.92	14.27			20.88	7.40	18.65	156.70	3.98	12.02	541.44
25	UTTARAKHAND	5.33			0.95					4.22			0.65							11.51		22.66
26	WEST BENGAL		9.25		24.28	0.30		10.28	0.32	13.87	2.61	6.53	1.11	9.45			4.33	10.85		0.56	6.90	100.64
27	TOTAL	249.77	264.26	10.54	691.76	200.61	83.15	42.68	32.84	651.00	516.61	298.03	162.58	168.66	43.84	21.88	95.46	324.08	827.63	156.78	181.63	5023.79

Sector wise Approved Project Cost

Select Year 2010-11

Rs. In Crores

SNo	STATE NAME	CROP	HORT	SERI	ANHB	OTHR	FISH	COOP	IPMT	SEED	FINM	AMEC	EXTN	MIRKT	NONF	ITEC	AGRE	NRM	IRRI	ORFM	DDEV	TOTAL
1	ANDHRA PRADESH	18.58	75.28		119.28	153.07	16.39			150.00		117.10		5.86			29.91			16.71	5.38	707.56
2	ARUNACHAL PRADESH	5.50	7.25	1.43	4.92	0.35	3.48			0.70		2.00	0.14	2.00					2.02			29.79
3	ASSAM	1.70	13.17		8.00		14.00			15.54	8.50		4.26	9.33			13.00		140.00	4.50	3.70	235.70
4	BIHAR	85.76	6.22		25.55	5.00	9.97	5.49	42.98	74.08		37.31	55.44				0.74		1.63	32.64	8.40	398.21
5	CHATTISHGARH	74.65	92.85		65.66	12.61	30.69	20.15	0.72	53.74	0.12	22.00	36.46				0.77		11.43	12.00	1.00	477.20
6	GOA						0.04							0.78		3.00	0.34				0.22	4.38
7	GUJARAT	24.93	33.83		15.80	64.88	8.60			13.65	11.32	66.38	3.02	39.67			0.82	95.63	27.24	2.80	59.89	468.46
8	HARYANA	13.63	10.38		47.85	1.05	1.00		6.00	32.64	6.50	13.36	0.54	7.24			9.67	0.75	79.00		4.25	233.86
9	HIMACHAL PRADESH	2.42	18.41		6.10	1.30	0.45		0.33	3.85	1.67	0.88		9.24	0.59	0.66	0.44		13.33	11.63	2.90	74.20
10	JAMMU AND KASHMIR	3.85	18.87	2.55	15.34	0.12	3.74	2.33	0.54	0.45	2.65	2.13	1.31	13.07	1.05				24.86	2.86		95.72
11	JHARKHAND	0.61	3.24		26.13	1.05	1.80	31.20	0.78	38.46	0.60	12.85	54.78	18.27			0.10	10.17		0.72		200.76
12	KARNATAKA	1.72	4.00			19.05			0.62	0.50	1.00	4.50	6.20	0.78	2.00		2.38			0.50		43.25
13	KERALA	1.08	21.30		25.35	0.30	5.09		0.71				1.04	2.86	1.00	0.32	41.00	10.13	3.07		4.13	117.38
14	MADHYA PRADESH		39.68		71.60	5.14	25.93		9.70	98.16	82.55	106.92	19.33		9.72		2.69		109.50	7.01	14.87	602.80
15	MAHARASHTRA				21.46		81.59		31.00	61.67	54.30	51.00	0.72	166.59					525.26		0.50	994.09
16	MANIPUR	5.00	4.00		4.00	0.26	4.00							1.00						0.35		18.61
17	MEGHALAYA		10.00			0.46	9.00	1.00	0.33			2.66						21.62				45.07
18	MIZORAM		1.07	0.20	0.52		0.40							0.30				3.22	0.78			6.49
19	NAGALAND	1.60	0.47		2.38	0.05	1.59						0.80	2.51					0.80	1.04		11.24
20	ODISHA	54.82	10.64		31.75			46.57	2.40	19.67	4.00	92.32	11.78	46.27			12.11	15.10	13.38	11.15	12.12	384.08
21	PUNJAB	12.50	11.00		54.36	0.10	3.90		13.25	5.00	7.10	10.60	22.00	11.00			6.77		40.00	8.50	6.35	212.43
22	RAJASTHAN	87.32	104.34		59.10	6.81	2.61	57.17	1.74	67.67	88.75	18.22	102.73	5.87		5.00	31.16	1.37	241.26	6.75	144.90	1032.77
23	SIKKIM	0.09	0.97			0.50	0.77			0.12									2.25		0.70	5.40
24	TAMILNADU	55.55	1.50		7.46	51.19	1.89		1.25	1.39		55.00	15.00	106.23	2.00		1.17		1.38		1.00	302.01
25	TRIPURA	45.61	8.83		14.99	0.05	1.72		0.37	1.09	1.75	6.03		5.13	0.16			12.60	10.91	1.15	1.00	111.39
26	UTTAR PRADESH	60.15	0.06	23.71	48.32	92.15	6.84		7.75	104.92	67.66	27.38	49.85		3.00	0.19		62.64	137.74	15.37	32.23	739.96
27	UTTARAKHAND		12.15		1.90				1.00	3.76			2.51						19.45		5.52	46.29
28	WEST BENGAL		10.31		245.92	10.20	14.58	8.86	1.46	20.81	9.59	8.27	3.53	20.68	1.14			23.81	8.08	0.51		387.75
29	TOTAL	557.07	519.82	27.89	923.74	425.69	250.07	172.77	122.93	767.87	348.06	656.91	391.44	474.68	70.01	9.17	153.07	257.04	1413.37	136.19	309.06	7986.85

CHAPTER - 23

STATE-WISE LIST OF FLAGSHIP PROJECTS

SI No	State	Flagship Interventions/Projects
1	Andhra Pradesh	<ul style="list-style-type: none"> Seed Management Intensified mechanisation Integrated vegetable programme in A.P. Induction of milch animals
2	Arunachal Pradesh	<ul style="list-style-type: none"> 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
3	Assam	<ul style="list-style-type: none"> 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
4	Bihar	<ul style="list-style-type: none"> Farm mechanisation especially Power tillers Seed production and distribution programme Dairy activities undertaken under RKVY
5	Chattisgarh	<ul style="list-style-type: none"> Establishment of model villages 'Adarsh Gram' Performance linked incentives to AI workers AI lab to produce semen
6	Goa	<ul style="list-style-type: none"> Establishing modern rice mill processing facilities Incentivizing paddy cultivation through SHGs
7	Gujarat	<ul style="list-style-type: none"> Water & Soil Conservation Projects 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.
8	Haryana	<ul style="list-style-type: none"> Providing assistance on laying underground pipeline system for water conveyance so that water losses can be avoided and additional land brought under cultivation from irrigation channels 100% treatment of certified wheat seed Cattle health management to optimise fertility
9	Himachal Pradesh	<ul style="list-style-type: none"> Construction of low cost green houses/ poly houses Organic cultivation Micro/minor irrigation and water harvesting
10	Jammu & Kashmir	<ul style="list-style-type: none"> Protected cultivation of flowers & vegetables Creation of irrigation infrastructure for Horticulture Organic farming
11	Jharkhand	<ul style="list-style-type: none"> Micro Lift Irrigation Vermi-composting Breed improvement programme by BAIF to improve milk production
12	Karnataka	<ul style="list-style-type: none"> Karnataka Seed Mission project Automated weather monitoring system Rainfed agriculture – Bhoo-chetana E-tendering project

13	Kerala	<ul style="list-style-type: none"> • Paddy cultivation in fallow lands by leasing land to Padasekaram Samities • Farm mechanisation for paddy harvesting, including custom hiring of farm machinery by KAICO, giving agricultural machinery to district Panchayats and Padasekarams for collective use. • Development of fishery seed farms, seed production and group mobilisation
14	Madhya Pradesh	<ul style="list-style-type: none"> • Micro irrigation schemes - Percolation tanks, minor irrigation tanks • Seed replacement • Development and promotion of hybrid rice varieties • Kisan Call Centers
15	Maharashtra	<ul style="list-style-type: none"> • 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
16	Manipur	<ul style="list-style-type: none"> • SRI paddy cultivation • Micro irrigation and construction of ponds for harvesting water
17	Meghalaya	<ul style="list-style-type: none"> • Water conservation structures – mini irrigation check dams • Horticulture hubs • Fisheries
18	Mizoram	
19	Nagaland	<ul style="list-style-type: none"> • Pigs and poultry development • Horticultural development
20	Odisha	<ul style="list-style-type: none"> • Development of 100 new watersheds • Acidic soil treatment • Renovation of horticulture farms
21	Punjab	<ul style="list-style-type: none"> • Animal insurance • Conservation of irrigation water • Milk units and bulk milk chiller
22	Rajasthan	<ul style="list-style-type: none"> • 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
23	Sikkim	<ul style="list-style-type: none"> • Hi-tech green houses • Integrated farming system for sustainable agriculture
24	Tamil Nadu	<ul style="list-style-type: none"> • 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
25	Tripura	<ul style="list-style-type: none"> • SRI • Pineapple cultivation • Development of demonstration unit on piggery
26	Uttar Pradesh	<ul style="list-style-type: none"> • Production of high value vegetable crops through nursery production in low tunnel Poly-houses • Land Reclamation of Katri Area • Adoption & certification of Organic Agriculture Management System • Saghan Mini Dairy Yojna
27	Uttarakhand	<ul style="list-style-type: none"> • Strengthening milk grid • Strengthening organic vision
28	West Bengal	<ul style="list-style-type: none"> • Prani Bandhu Scheme • Hybrid paddy seed production involving NGOs • Implement hub at block level • AI sexing project (– to be done by State Govt.)

Statement Showing allocation release and expenditure of the State under RKVY as on 31.12.2011. (Rs. In Crore)

Sl. No	Name of the State/ UT	2007-08				2008-09				2009-10				2010-11			
		Release	Expenditure	UC Recd	Release	Expenditure	UC Recd	Release	Expenditure	UC Recd	Release	Expenditure	UC Recd	Release*	Expenditure*	UC Recd	
1	Andhra Pradesh	61.08	61.08	61.08	297.17	296.01	296.01	410.00	410.00	410.00	432.29	432.29	432.29	432.29	432.29	432.29	
2	Arunachal Pradesh	1.90	1.90	1.90	0.00	0.00	0.00	15.98	15.98	15.98	28.95	28.95	28.95	28.95	28.95	28.95	
3	Assam	0.00			144.12	142.62	142.62	79.86	79.86	79.86	216.87	199.37	199.37	199.37	199.37	199.37	
4	Bihar	57.77	57.77	57.77	148.54	148.54	148.54	110.79	110.79	110.79	415.10	415.10	415.10	415.10	415.10	415.10	
5	Chhatisgarh	52.96	52.96	52.96	117.45	117.45	117.45	136.14	136.14	136.14	503.44	503.44	503.44	503.44	503.44	503.44	
6	Goa	1.70	1.50	1.50	0.00	0.00	0.00	0.00	0.00	0.00	7.07	4.71	4.71	4.71	4.71	4.71	
7	Gujarat	49.81	47.61	47.61	243.39	243.39	243.39	386.19	386.19	386.19	388.63	388.63	388.63	388.63	388.63	388.63	
8	Haryana	21.52	21.52	21.52	39.50	39.49	39.49	112.77	112.75	112.75	226.80	221.76	221.76	221.76	221.76	221.76	
9	Himachal Pradesh	16.17	16.17	16.17	15.11	15.11	15.11	33.03	33.03	33.03	94.85	94.85	94.85	94.85	94.85	94.85	
10	Jammu & Kashmir	0.00			1.20	1.18	1.18	42.85	41.76	41.76	96.42	52.30	52.30	52.30	52.30	52.30	
11	Jharkhand	55.68	55.68	55.68	29.31	29.28	29.28	70.13	70.13	70.13	96.90	96.08	96.08	96.08	96.08	96.08	
12	Karnataka	154.30	154.30	154.30	314.14	314.14	314.14	410.00	410.00	410.00	284.03	271.83	271.83	271.83	271.83	271.83	
13	Kerala	55.40	54.87	53.82	30.06	30.06	30.06	110.92	106.44	103.22	149.65	143.60	143.60	143.60	143.60	143.60	
14	Madhya Pradesh	101.62	101.62	101.62	146.05	144.23	144.23	247.44	221.80	221.80	559.18	438.6	438.6	438.6	438.6	438.6	
15	Maharashtra	128.20	128.20	128.20	261.77	261.77	261.77	404.39	404.39	404.39	653.00	653.00	653.00	653.00	653.00	653.00	
16	Manipur	0.00			0.90	0.90	0.90	5.86	5.86	5.86	15.50	15.50	15.50	15.50	15.50	15.50	
17	Meghalaya	6.37	6.37	6.37	6.77	6.77	6.77	24.68	24.68	24.68	46.12	27.38	27.38	27.38	27.38	27.38	
18	Mizoram	0.00			0.80	0.80	0.80	0.00	0.00	0.00	3.75	3.75	3.75	3.75	3.75	3.75	
19	Nagaland	3.19	3.19	3.19	6.95	6.95	6.95	20.38	20.38	20.38	13.25	13.25	13.25	13.25	13.25	13.25	
20	Orissa	39.30	39.30	39.30	115.44	115.44	115.44	121.49	121.49	121.49	274.40	274.40	274.40	274.40	274.40	274.40	
21	Punjab	36.05	36.05	36.05	87.52	87.52	87.52	43.23	43.23	43.23	179.12	154.11	154.11	154.11	154.11	154.11	
22	Rajasthan	55.76	55.76	55.76	233.76	233.76	233.76	186.12	186.12	186.12	628.01	628.01	628.01	628.01	628.01	628.01	
23	Sikkim	2.77	2.77	2.77	5.68	5.68	5.68	15.29	15.29	15.29	6.56	6.56	6.56	6.56	6.56	6.56	
24	Tamil Nadu	153.60	153.60	153.60	140.38	140.38	140.38	127.90	127.90	127.90	250.03	250.03	250.03	250.03	250.03	250.03	
25	Tripura	4.16	4.16	4.16	16.08	16.08	16.08	31.28	31.28	31.28	116.48	116.48	116.48	116.48	116.48	116.48	

Annual Report 2011-12

26	Uttar Pradesh	103.90	103.90	103.90	316.57	316.57	390.97	390.97	390.97	695.36	695.36	695.36
27	Uttarakhand	28.25	24.54	24.54	10.29	10.30	71.46	16.80	16.80	1.31		
28	West Bengal	54.93	54.93	54.93	147.38	147.38	147.38	142.82	105.44	335.98	278.18	278.18
29	A & N Islands				0.01	2.26	1.28			Being done by MHA		
30	Chandigarh				0.00	0.14	0.42					
31	D& N Haveli					0.00						
32	Daman & Diu					0.26						
33	Delhi	0.10				0.00	0.24					
34	Lakshadweep					6.14	1.09					
35	Pudducherry	0.40				0.00	0.00					
	Total UTs	0.50	0.00	0.00	6.05	8.80	3.03	0.00	0.00			
	District Agri Plan											
	NIRD, ISEC, IEG, IIM-CMA, & Admn Contingency					1.66	1.37			1.03	1.03	
	Grand Total	1246.89	1239.75	1238.70	2877.84	2886.80	3760.93	3666.08	3621.47	6720.08	6408.53	6392.52

CHAPTER - 24
Women in Agriculture at a Glance

Sl. No.	Division/ Subject Matter Area	Scheme/Component	Flow of benefit to women in schemes/ programmes
1.	Horticulture	National Horticulture Mission Horticulture Mission for North East and Himalayan States (HMNEH)	The State Horticulture Missions have been directed to earmark at least 30% of the budget allocation for women beneficiaries in all ongoing programmes
2.	Agricultural Extension	Support to States for Extension Reforms	Minimum 30% resources meant for programmes and activities are allocated for women farmers and extension functionaries. Since inception of the scheme in 2005-06, a total of 40, 48,794 farm women (23.5% of the total benefited farmers) have participated in farmer oriented activities like exposure visits, trainings, demonstrations & Kisan melas. 130113 women farmers have been benefited during 2011-12 (up to 4 th November, 2011) viz. 32264 through Exposure Visits, 37812 through trainings, 4155 through Demonstrations and 55882 through Kisan Melas.
		National Gender Resource Centre in Agriculture (NGRCA)	Focal point for convergence, coordination and mainstreaming gender concerns in agriculture Extension functionaries at senior and middle level are being gender sensitized by the inclusion of one 'Gender Sensitization Module' training programmes organized by MANAGE
		Mass Media Support to Agriculture Extension	Special programmes are being produced & telecast by Doordarshan & AIR in areas of pre-dominant involvement of women such as vermin-compost, nursery-raising, seed treatment, floriculture, kitchen garden, animal husbandry, dairy, poultry, drudgery reducing/gender friendly tools etc.
		Establishment of Agri-Clinics and Agri-Business Centres (ACABC)	During 2011-12, 150 women agriculture graduates (up to 31.10.2011) have been trained, of whom 55 have established up their agri-ventures. The credit linked back-ended subsidy @ of 36% of the capital cost of the project funded through bank loan is eligible under the scheme. The subsidy is 44% in respect of candidates belonging to SC/ST, Women and other disadvantaged sections and those from North-Eastern and Hill areas.

3.	Cooperation	Intensification of Cooperative Education in the cooperatively underdeveloped states	<p>National Cooperative Union of India (NCUI) is running four exclusive development projects for women viz., Shimoga (Karnataka); Herampur (Odisha), Bhopal (MP) & Imphal (Manipur). 'Special Women Development component' – a part of each Field Project caters to the training and extension and marketing needs of women. One women educational and development project is running in North Eastern Region at East imphal, Manipur. During the year 2011-12 (upto September, 2011) a total of 82254 persons were imparted education and training through these projects.</p> <p>Upto 31.3.2011 the NCDC has cumulatively sanctioned and released financial assistance of Rs. 140.51 crores and Rs. 87.00 crores respectively for the development of cooperative societies exclusively organized by women. This included food grain processing, plantation crops, oil seed processing, fisheries, service cooperatives and integrated cooperative development projects, spinning mills, handloom and power loom weaving and sugar mills etc.</p>
4.	Rainfed Farming System	National Watershed Development Project for Rainfed Areas	<p>Under the scheme women are benefited through formation of Self Help Groups and Users Groups.</p> <p>The guidelines of the scheme have been revised in favour of women. Under the new Common guidelines for Watershed Development issued by National Rainfed Area Authority (NRAA), it is envisaged that at least one member of the WDT should be a woman. The guidelines focus on mobilizing women to ensure the interests of women are adequately reflected in the watershed action plan. The Watershed Committees that are formed to implement NWDPPRA would comprise of at least 10 members, half of whom shall be representatives of SHGs and User groups, SC/ST community, women and landless persons in the village.</p>
5.	Mechanization & Technology	<p>Promotion and Strengthening of Agricultural Mechanization through Training, Testing and Demonstration</p> <p>Outsourcing of training & Demonstration of Newly Developed Agricultural Equipment including Horticultural Equipment at Farmers' Field</p>	<p>30% of funds have been allocated for women farmers and separate physical targets have also been fixed. State Governments have been directed to earmark 10 percent of the total funds allocated for training to women farmers. During 2011-12, a total of 318 women farmers have been imparted training (till October, 2011) at Farm Machinery, Training and Testing Institutes (FMTTIs).</p>

		Post Harvest Technology & Management	States have been directed to ensure release of 30% funds to women beneficiaries. Under the scheme 7647 demonstrations have been conducted out of which 229 were exclusively for women farmers. The flow of funds to women farmers during 2011-12 (October, 2011) has been to the tune of Rs. 277.10 lakhs. The gender friendly equipments used by the women workers in different farm operations are promoted under Macro Management Scheme
6.	Integrated Nutrient Management (INM)	National Programme for Organic Farming' (NPOF),	25% seats have been reserved for training of women in organic farming.
7.	Agricultural Marketing	Rural Godown Scheme	1869 projects with a capacity of 27.73 lakh MTs involving a subsidy of Rs.74.50 crores have been sanctioned for women entrepreneurs.

