



ANNUAL REPORT 2010-2011

**Department of Agriculture and Cooperation
Ministry of Agriculture
Government of India
March, 2011**

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Chapter - 1

Overview





1 Overview

1.1 Agriculture sector is vital for the food and nutritional security of the nation. The sector remains the principal source of livelihood for more than 58% of the population though its contribution to the national GDP has declined to 14.2% due to high growth experienced in industries and services sectors. Compared to other countries, India faces a greater challenge, since with only 2.3% share in world's total land area, it has to ensure food security of its population which is about 17.5% of world population. This leads to excessive pressure on land and fragmentation of land holdings. Against the backdrop of the burgeoning population's demands for foodgrains, degrading natural resource base, emerging concerns of climate change and other challenges, the Department of Agriculture and Cooperation (DAC) has focused on mobilizing higher investment in agriculture, bridging yield gaps that exist across the states/ regions, timely and adequate supply of quality inputs, and providing adequate support services to the farmers to make agriculture a remunerative vocation on a sustainable basis. Increasing agricultural production with limited natural resources in a sustainable manner for

ensuring food and nutritional security and providing income security to farmers are the major challenges before the Government.

1.2 Agriculture sector has touched a growth rate of 4.4% in the second quarter of 2010-11 thereby achieving an overall growth rate of 3.8% during the first half of 2010-11. The sector witnessed a growth of 5.1 per cent in 2005-06, 4.2 per cent in 2006-07, 5.8 per cent in 2007-08, (-) 0.1 percent in 2008-09 at 2004-05 prices. The low growth rate of 0.4 percent recorded by this sector in 2009-10 was mainly due to poor rainfall in 2009. As per the Advance Estimates (AE) of Central Statistical Organization for the year 2010-11, the agricultural sector contributed about 14.2 per cent to the GDP, at 2004-05 prices. There has been a continuous decline in the share of agriculture in the GDP from 17.4 percent in 2006-07 to 14.2 percent in 2010-11 as per Advance Estimates at 2004-05 prices. Falling share of agriculture in GDP is an expected outcome in a fast growing and structurally changing economy.

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. During 2004-05 to 2009-10, the total investment in agriculture increased in the range of 7.5% to 7.7% per annum. This trend continued in subsequent years. The Plan outlay on various schemes of the DAC has increased substantially from Rs. 9865.58 crore in 2008-09 (RE) to Rs.17254 crore in 2010-11 (BE). The increase is mainly due to substantially higher allocation under Rashtriya Krishi Vikas Yojana (RKVY), which was launched in 2007-08 with the aim to boost agricultural growth rate and incentivize the states to increase public investment in agriculture and allied

sectors. Actual expenditure during 10th Five Year Plan was Rs.14952.36 crore against an approved outlay of Rs.16093.32 crore. Out of total outlay of Rs.66577.00 crore for the Eleventh Plan, the anticipated expenditure upto 2010-11 would be Rs.44413.01 crores.

1.4 Agriculture GDP: As one of the world's largest agrarian economies, the agriculture sector contributed approximately 14.6% of India's GDP (at 2004-05 prices) during 2009-10. Gross Domestic Product (GDP) of Agriculture and Allied Sectors and their share in total GDP of the country during the last 3 years including the current year, at 2004-05 prices is as follows:

(Rs. Crore)

Year	2006-07	2007-08	2008-09	2009-10	2010-11
GDP of Agriculture and Allied Sectors	619190	655080	654118	656975	692499
Per cent to total GDP	17.4	16.8	15.7	14.6	14.2

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

1.5 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:

Period	Total	Agriculture & Allied Sector
2005-06	9.5	5.1
2006-07	9.6	4.2
2007-08	9.3	5.8
2008-09	6.8	(-) 0.1
2009-10	8.0	0.4
2010-11	8.6	5.4

Source: Central Statistical Organisation

1.6 The year 2010-11 experienced normal South West monsoon rainfall (June-September). At met sub-division level, 31 out of 36 met sub-divisions received excess/normal rainfall and 5 met subdivisions namely, Assam & Meghalaya (-23%), Gangetic West

Bengal (-31%), Jharkhand (-41%), Bihar (-22%) and East Uttar Pradesh (-23%) received deficit rainfall during this period. The country as a whole received 912.8 mm of rainfall against the normal rainfall of 893.2 mm which represents a deviation of 2 percent

higher than the Long Period Average (LPA). Out of 597 districts for which rainfall data were available, 173 districts (29%) received excess rainfall, 240 districts (40%) normal rainfall, 173 districts (29%) deficit rainfall and the remaining 11 districts (2%) received scanty rainfall.

1.7 Area sown in Kharif, 2010: Table

below reveals that there is an increase in the area sown in the case of rice by 7.0%, maize 6.9%, bajra 1.4%, tur 23.0%, urad 12.8%, moong 20.3%, groundnut 11.6%, Niger 15.8%, castor 18.5%, cotton 8.4%, sugarcane 20.4%, and Jute 9.7%. However, area sown under soyabean is lower by 2.6%, sunflower 50.3%, sesamum 3.2% and jowar 1.2% as compared to last year.

Crop-wise area sown-kharif

(Area in lakh hectares)

S No.	Crop	Normal Area	Area Sown		Increase/decrease over last year (+/-)	Percentage change in 2010-11 as compared to 2009-10
			2010-11	2009-10		
Major cereal crops						
1.	Paddy	395.10	358.64	335.33	23.3	7.0
2.	Jowar	35.98	30.55	30.93	-0.4	-1.2
3.	Bajra	93.29	86.38	85.18	1.2	1.4
4.	Maize	68.65	75.84	70.97	4.9	6.9
Oilseeds						
5.	Groundnut	53.81	49.84	44.65	5.2	11.6
6.	Soyabean	84.00	93.35	95.82	-2.5	-2.6
7.	Sunflower	8.15	2.91	5.85	-2.9	-50.3
8.	Sesamum	17.76	17.06	17.62	-0.6	-3.2
9.	Nigerseed	4.23	3.30	2.85	0.4	15.8
10.	Casterseed	7.78	9.05	7.64	1.4	18.5
Pulses						
11.	Arhar	35.53	44.86	36.48	8.4	23.0
12.	Urad	22.82	26.19	23.22	3.0	12.8
13.	Moong	26.14	29.88	24.83	5.0	20.3
14.	Others	23.46	25.12	20.78	4.3	20.9
Other Crops						
15.	Cotton	90.86	108.47	100.09	8.4	8.4
16.	Sugarcane	44.97	50.60	42.02	8.6	20.4
17.	Jute	7.85	7.59	6.92	0.7	9.7

Source: Department of Agriculture & Cooperation (DAC)

1.8 Agricultural Production: As per the fourth advance estimates 2009-10, food grains production is estimated at 218.20 million tonnes comprising 103.84 million tonnes of kharif foodgrains and 114.36 million tonnes of rabi foodgrains. Further, production

of all cereals was placed at 203.61 million tonnes as against 219.90 million tonnes in 2008-09 (final estimates). The production of wheat and rice in 2009-10 is estimated at 80.71 million tonnes and 89.13 million tonnes respectively. However, production

of oilseeds decreased from 27.72 million tonnes in 2008-09 to 24.93 million tonnes in

2009-10. This was due to decrease in production of groundnut and castor seed.

All India Area, Production and Yield of Major Crops

Crops	(Area (lakh hectare))			(Production (million tonnes))			(Yield (kg/hectare))		
	2007-08	2008-09	2009-10*	2007-08	2008-09	2009-10*	2007-08	2008-09	2009-10*
Foodgrains	1240.68	1228.32	1213.66	230.78	234.47	218.20	1860	1909	1798
Oilseeds	266.93	275.58	261.08	29.76	27.72	24.93	1115	1006	955
Sugarcane	50.55	44.15	42.02	348.19	285.03	277.75	68877	64553	66099
Cotton @	94.14	94.07	103.10	25.88	22.28	23.94	467	403	395

*4th Advance Estimates

@- Production in million bales of 170 kg each

Source – DAC

1.9 As per the first advance estimates of kharif production for 2010-11 released by Ministry of Agriculture on September 23, 2010, production of foodgrains is estimated at 114.63 million tonnes, oilseeds at 17.27 million tonnes, sugarcane at 324.91 million tonnes and cotton at 33.50 million bales of 170 kg each. The first advance estimates

indicates that as compared to the fourth advance estimates for 2009-10 kharif, a growth in production of 10.79 million tonnes in foodgrains, 1.61 million tonnes in oilseeds, 47.16 million tonnes in sugarcane and 9.56 million bales in cotton is expected during kharif 2010-11.

Kharif production in 2009-10 and 2010-11

(million tonnes)

Crops	2009-10 (4th Advance Estimates)	2010-11 (1st Advance Estimates)	Absolute difference (Col 3-2)	Percentage change in 2010-11 over 2009-10
1	2	3	4	5
Foodgrains	103.84	114.63	10.79	10.39
Oilseeds	15.66	17.27	1.61	10.28
Sugarcane	277.75	324.91	47.16	16.98
Cotton @	23.94	33.50	9.56	39.93

@Production in million bales of 170 kg each

1.10 **Outlook Rabi 2010-11:** Good rainfall, especially during the later part of the monsoon, has resulted in increase in soil moisture. This, together with increased water availability in reservoirs across the country (113% of average of last 10 years), augur well for substantial expansion in area and increase in productivity during the ensuing Rabi.

1.11 **Capital Formation in Agriculture:** 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 in private sector including improvement/ reclamation of land, construction of non-residential buildings, farm houses, wells and other irrigation works etc. The machinery component includes tractors, transport equipment, agriculture

machinery / equipment. It also includes livestock development.

1.12 Productivity increase in agriculture is largely dependent on capital formation.

Gross capital formation GCF (investment) in agriculture sector relative to GDP in this sector has shown a steadily increasing trend from 15.8 per cent in 2005-06 to 20.3 per cent in 2009-10.

Gross Capital Formation (GCF) in agriculture at 2004-05 prices

(Rs in Crore)

Year	Gross Capital Formation(GCF) in Agriculture	Agriculture & Allied activities		GCF/GDP in Agriculture & allied activities (in percentage)
		Gross Capital Formation(GCF)	Gross Domestic Product(GDP)	
1	2	3	4	5
2004-05	69148	76096	565426	13.5
2005-06	78794	86611	594487	14.6
2006-07	82099	90710	619190	14.6
2007-08	96030	105034	655080	16.0
2008-09	118949	128659	654118	19.7
2009-10	122995	133377	656975	20.3

Source: Quick Estimates released by Central Statistical Organisation on 31.01.2011

Flagship and Major Programmes of Department of Agriculture

1.13 **Rashtriya Krishi Vikas Yojana (RKVY):** This scheme was launched in 2007-08 with the aim to boost agricultural growth rate and to incentivize the states to increase public investment in agriculture and allied sectors. RKVY has become exceedingly popular with the States on account of the flexibility and autonomy provided in the process of planning and execution of agriculture and allied sector schemes. Funds utilisation under the Scheme by states has improved remarkably. The outlays under RKVY for year 2010-11 have been substantially increased to Rs. 6722 crore, and Rs. 10350.00 crore is proposed for 2011-12.

1.14 RKVY has succeeded in its objective of acting as catalyst for pulling in more public investments for agriculture and allied sectors. Expenditure on agriculture and allied sectors in States/UTs' plans was only Rs. 6997 crore

in 2005-06 (4.86%). This has gone up to Rs. 20478 crore (6.29%) in 2009-10, signifying an increase of 193% in a matter of four years as against increase in overall plan outlay of 126%. Some States increased agriculture outlay spectacularly -Chhattisgarh by 892.22 %, Orissa by 729.62%, Maharashtra by 604.78%, Tripura by 424.70 % and Bihar by 422.96%.

1.15 **Extending Green Revolution to the Eastern States:** This new initiative has been announced in the Budget 2010-11 with an allocation of Rs 400 crores under RKVY. This programme envisages adoption of new seed varieties, farm machinery, integrated nutrient & pest management, and knowledge based interventions developed for different agro climatic zones. The programme is under implementation in Bihar, Chhattisgarh, Jharkhand, Eastern Uttar Pradesh, West Bengal & Orissa. Recently, the state of Assam has also been included under this initiative.

1.16 Pulses and Oilseeds villages: Another initiative with allocation of Rs. 300 crore under RKVY has been announced for increasing production of oil seeds and pulses in 60000 'Pulses and Oilseeds villages' in rainfed areas to provide an integrated intervention of water harvesting, watershed management and soil health, to enhance the productivity of the dry land farming areas.

1.17 Saffron Mission in J&K: Recently, this sub-scheme has been launched during the current year under the aegis of RKVY. National Mission on Saffron has been sanctioned for implementation in Jammu & Kashmir during the period 2010-11 to 2013-14.

1.18 National Food Security Mission (NFSM): Presently NFSM-Rice covers 138 districts, NFSM-Wheat 141 districts and NFSM-Pulses 467 districts. On the whole 476 districts in 17 States are covered under NFSM.

From Kharif 2010, pulses components of Integrated Scheme of Oilseeds Pulses Oilpalm and Maize (ISOPOM) have been merged under NFSM Pulses to intensify efforts for production of pulses.

1.19 Accelerated Pulses Production Programme: A new initiative 'Accelerated Pulses Production Programme (A3P)' has been launched as part of NFSM Pulses from 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 technologies in compact blocks. Nearly 4.0 lakh hectare area was covered during Kharif 2010 under the programme for 400 A3 P units at a cost of Rs. 308.28 crores.

1.20 Initiation of MIS: Management Information System (MIS) for online submission of progress reports at state, district levels has been initiated to capture real time data. Regular updating of state and

district level data is under progress.

1.21 National Horticulture Mission: Horticulture is being promoted by DAC in mission mode for improving farm income and livelihood security and 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, 371 districts in 18 States and 3 Union Territories have been covered under NHM.

1.22 Horticulture Mission for North East and Himalayan States (HMNEH): The 'Technology Mission for North Eastern States, including Sikkim' aimed at the holistic development of all the horticulture crops has now been renamed as Horticulture Mission for North East and Himalayan States (HMNEH). Cost norms under the scheme have been revised with effect from 2010-11. The major thrust areas under the Mission are setting up nurseries for production and distribution of quality planting materials, area expansion, rejuvenation of old / unproductive orchards, precision farming, organic farming, creation of water resources, promotion of INM and IPM, cold storage units and market infrastructure development.

1.23 During 2009-10, a budget allocation of Rs. 359.00 crores was made, out of which Rs. 325.72 crores have been utilized. The final allocation for 2010-11 is Rs. 432.40 crores, which includes Rs. 312.40 crores for North Eastern States and Rs. 120.00 crores for Himalayan States. So far, an amount of Rs. 268.98 crores has been released. The outlay approved for 2011-12 is Rs. 500.00 crores.



1.24 National Mission on Micro Irrigation (NMMI): The Scheme aims to improve water use efficiency which also leads to reduced requirement of fertilizers due to improvement in fertilizer use efficiency on account of fertigation. The savings in water can be used to augment area under irrigation and thereby increase productivity. Assistance is provided @ 60% of total cost of the system to small and marginal farmers and @ 50% to general farmers. Since 2009-10, an area of 8.22 lakh ha. has been covered - 4.00 lakh ha. under Drip system and 4.22 lakh ha. under Sprinkler system. While the outlay for 2010-11 has been Rs.1000.00 crores, an amount of Rs.1150.00 crores has been allocated as outlay for 2011-12.

1.25 Integrated Scheme of Oilseeds, Pulses, Oil Palm and Maize (ISOPOM): This scheme is being implemented in 14 major states for oilseeds and pulses, in 15 states for maize and in 9 states for the

Oilpalm. A pilot project “Participatory Seed Production Programme” in 20 villages of Anantapur district of Andhra Pradesh was launched in Kharif, 2010 for replacement of old groundnut varieties with new varieties K-6 and K-9. An additional area of 24618 hectares has been brought under fresh oil palm plantation in 2009-10 and 2010-11 (till August, 2010) through oil palm development programme. As mentioned earlier, the pulses component of ISOPOM has been merged with NFSM-Pulses w.e.f 1.4.2010 to provide a focused approach to pulses production programme.

1.26 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. 598 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.

1.27 Revised Macro Management of Agriculture: The role of the scheme has been redefined in 2008-09 to avoid overlapping and duplication of efforts and to make it more relevant to the present agricultural scenario in States. It comprises 10 sub-schemes relating to crop production and natural resource management. The salient features of the Revised MMA Scheme include new allocation criteria, rationalization of subsidy and cost norms, and formulation of Work Plans based on DAPs with active participation of Panchayati Raj Institutions (PRIs). With introduction of Rashtriya Krishi Vikas Yojna (RKVY), which covers entire field of MM and which provides additional flexibility to States, MMA is likely to be phased out in XIIth Plan. It was emphasized during the year to use MMA subsidy for completing ongoing natural resource management works and concentrate on farm equipment components.

1.28 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 the quality of farm-saved seeds through the Seed Village Programme, to enhance the Seed Replacement Rate, boost seed production in the 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 the Seed Village Programme to improve the quality of farm saved seeds has been increased to 46,065 seed villages.
- Availability of quality seeds has increased from 140.50 lakh quintals in 2005-06 to about 321.36 lakh quintals in 2010-11. The SRR of major crops has also increased significantly.
- 48 seed processing plants have been sanctioned for an amount of Rs. 5.19 crores for the small entrepreneurs with 9.10 lakh quintals seed processing capacity and storage capacity of 4.85 lakh quintals. Seed storage capacity of 2.96 lakh quintals has been sanctioned during 2010-11 in the public sector.
- 19 training programmes and one National Seed Congress programme have been organized to take care of Seed quality control aspects.

Other Major Initiatives

1.29 National e-Governance Plan (NeGP-A): The initial phase of NeGP-A has been completed with identification of prioritised list of services to be provided. The next phase is focused on detailed strategy, roadmap and guidelines for implementation of e- Governance in Agriculture at both central and State levels. The project has been sanctioned for a sum of Rs.227.79 crores for implementation in 7 States, in Phase I.

1.30 Terminal Market Complex Scheme: The scheme has been modified in 2009-10 changing it from equity based scheme to subsidy based scheme. The Scheme is to be implemented in PPP mode. Two such projects in Patna and Perundurai (Tamil Nadu) have already been approved. For another project in Babangaon (Maharashtra) the bidding

process has been completed.

1.31 Modified National Agricultural Insurance Scheme (MNAIS) :

Due to some limitations/shortcomings in the existing National Agricultural Insurance scheme (NAIS), Modified NAIS has been approved for implementation on pilot basis in 50 districts from Rabi 2010-11 season in the country. Administrative Approval and Operational Guidelines for the scheme have already been issued on 17.9.2010 and 28.9.2010 respectively. The major improvements made in MNAIS. The actuarial premium with subsidy in premium at different rates i.e. 40% to 75% depending upon the slab is provided to farmers. All claims liability would be on the insurer, Unit area of insurance has been reduced to village panchayat level for major crops. Indemnity has been provided for prevented/sowing/planting risk & for post harvest losses due to cyclone. On account payment up to 25% advance of likely claims can be made as immediate relief. More proficient basis for calculation of threshold yield, minimum indemnity level of 70% instead of 60% and private sector insurers with adequate infrastructure have been allowed (at present, ICICI-Lombard, IFFCO-Tokio and Cholamandalam-MS have been allowed). Only upfront premium subsidy is shared by the Central and State Governments on 50 : 50 basis and the claims are the liability of the insurance companies. Till date, 22 States have notified the Pilot MNAIS in 34 districts for Rabi 2010-11 season.

New Schemes / Initiatives

1.32 National Seed Mission: In order to boost overall quality seed production in the country to meet objectives of making available quality seeds for ensuring food security, DAC has drafted a 'National Mission on Seeds' with the proposed outlay of Rs. 3773.40 crores for a period of 5 years starting from 2011-12.

Planning Commission has granted 'in principle' approval. The Mission will comprise some of the components of the existing scheme and will also include new components aimed at promoting production of Seeds, technological upgradation of seed infrastructure, acquisition of new varietal portfolio of public sector seed companies, etc.

1.33 National Mission for Sustainable Agriculture:

This is one of the eight Missions under the National Action Plan on Climate Change (NAPCC) and aims to achieve resilience of Indian agriculture against climate change by devising appropriate adaptation and mitigation strategies for ensuring food security and enhancing livelihood opportunities. The Mission document has been approved in principle by the Prime Minister's Council on Climate Change (PMCCC) for implementation of various interventions.

1.34 Rehabilitation & Reconstruction of Potentially Viable Sick Cooperatives:

Under the Scheme, it is proposed to constitute a Cooperative Rehabilitation and Reconstruction Fund (CRRF) for channelizing assistance to potentially viable sick cooperative societies or societies in the incipient sickness with an initial contribution of Rs.100 crores from Government of India during the 11th Plan. The scheme has been approved by EFC in its meeting held on 21.7.2010 and Ministry of Finance has been requested to approve the same.

1.35 Interest Subvention on Loans Provided by NCDL to Cooperatives:

This new scheme is proposed to be implemented during the remaining two years of 11th Five Year Plan. The need for formulating a new scheme has arisen on account of withdrawal of priority sector lending by RBI in respect of NCDL w.e.f. 1.4.2010. As a result, NCDL has to borrow funds from commercial/scheduled banks at market rates of interest, which will

make a dent in the cooperative movement.

1.36 Minimum Support Price: In order to achieve a balance between the production of cereals and non-cereals, the Government offers Minimum Support Price (MSP) to farmers so that they get remunerative prices and are not put to loss because of higher production of foodgrains.

1.37 The MSPs of kharif crops of 2010-11 were announced on 10th June 2010. The MSPs of paddy and ragi have been raised by Rs.50 per quintal, while that of jowar, bajra and maize by Rs. 40 per quintal. The Minimum Support Prices of arhar (tur) moong and urad have been increased by Rs.700, Rs. 410 and Rs. 380 per quintal, respectively. An additional incentive at the rate of Rs.5 kg for tur, urad and moong sold to the procurement agencies during the harvest /arrival period of two months has also been provided. The MSPs for groundnut-in-shell and sunflower seed have been increased by Rs.200 and 135 per quintal, respectively. The MSPs of soyabean and sesamum have been increased by Rs. 50 per quintal and that of

niger seed by Rs. 45 per quintal. The MSP of cotton has been retained at last year's level.

1.38 The MSPs of Rabi crops of 2010-11 season to be marketed in 2011-12, were announced in October 2010. The MSP for wheat has been fixed at Rs.1120 per quintal from Rs. 1100 per quintal during the previous year. The MSP for barley has been increased by Rs.30 per quintal. The MSPs for gram and safflower have been increased by Rs.340 and Rs. 120 per quintal, respectively.

1.39 Allocation of Funds: For the Eleventh Plan the Department of Agriculture and Cooperation proposed an outlay of Rs. 51,052.12 crores while the allocation for the Plan has been indicated as Rs.41, 337 crores. This includes the amount for the NFSM but not for RKVY which is a State Plan scheme. Inclusive of the State Plan Schemes, the outlay for the DAC is Rs. 66,577 crores for the 11th Five Year Plan. For the financial year 2010-11 RE is Rs. 17254.00 crores against the BE of 15042.00 crores. Actual expenditure during 2009-10 was Rs. 10870.15 crores. Position relating to 2009-10 is as given below:

(Rs. in crore)

Year	BE	RE	Expenditure/ Release till 31.03.2010	% age Expend. w.r.t. BE	% age Expend. w.r.t. RE
2009-10	11307.07	10965.23	10870.15	96.14	99.13

1.40 For the year 2010-11, a plan outlay of Rs. 9030.30 crore was projected by the DAC. Inclusive of State Plan Schemes, the outlay projected was Rs. 17080.30 crore. Revised plan outlay projected was 7100.02 crores and inclusive of State Plan Schemes it was

Rs. 12239.02 crores. The approved Plan outlay for 2010-11 is Rs. 8280 crores. Inclusive of State Plan Schemes, allocation for 2010-11 for DAC is Rs. 15042 crores. Status of releases against the BE of 2010-11 is as under:

(Rs. in crore)

Year	BE	RE	Expenditure/ Release till 30.11.2010	% age Expenditure w.r.t. BE	% age Expenditure w.r.t. RE
2010-11	15042.00	17254.00*	10792.12	71.75	62.55

*provisional

Important Policy Initiatives under Consideration:

1.41 Constitution One Hundred and Eleventh Amendment Bill, 2009: Since most farmers in India belong to the category of small and marginal farmers, the strengthening of cooperatives is seen as a measure to empower them. An amendment to the Constitution, for the purpose of empowering cooperatives through voluntary formation, autonomous functioning, democratic control and professional management, has been mooted. After the approval of the Government, the Constitution (106th Amendment) Bill, 2006 was introduced in the Lok Sabha on 22nd May, 2006. The Lok Sabha referred this Bill to the standing committee on Agriculture for its examination and report. The Standing Committee's Report was submitted in Lok Sabha on 20.08.2007. This report was considered by the Government and it was decided to move official amendments to the Bill. Accordingly, official amendments to the Bill were moved in the Lok Sabha. However, the Bill could not be discussed in the Lok Sabha for passing. The Bill lapsed on dissolution of 14th Lok Sabha on 18.05.2009. It was decided to reintroduce the Bill for amendment to the Constitution. Accordingly, the Constitution (Hundred and Eleventh) Amendment Bill was introduced in the Lok Sabha on 30.09.2009. The Bill was referred to Standing Committee of Parliament on Agriculture which considered the Bill and submitted its report to the Lok Sabha on 03.09.2010. The suggestions made by the Standing Committee have been considered by the Government and it has been decided with the approval of the Cabinet to move official amendments to the Constitution (One Hundred and Eleventh Amendment) Bill, 2009. Accordingly, notices have been sent for moving the official amendments in the forthcoming budget session of Parliament.

1.42 Amendment of Seeds Act, 1966: In response to the changes that have taken place in the seeds sector, the existing Seeds Act, 1966 is proposed to be replaced by a

suitable legislation to, inter alia, i) create an enabling climate for growth of the seed industry, ii) enhance the seed replacement rates for various crops, iii) boost the export of seeds and encourage the import of useful germplasm, iv) create a conducive atmosphere for the application of frontier sciences in varietal development and for enhanced investment in research and development. The Government introduced the Seeds Bill in the Rajya Sabha in December 2004. The Bill was referred to the Parliamentary Standing Committee on Agriculture, which recommended several modifications in the Bill. Based on the recommendation of the committee and the comments of the Ministries/ Departments concerned, the Cabinet approved the official amendments in its meeting held in June, 2008. The official Amendments to the Seeds Bill were moved in the Rajya Sabha on 3rd December, 2008 and 6th February, 2009. It remained pending in Rajya Sabha. Due to formation of new government, the Cabinet had again approved the official amendments to the Seeds Bill, 2004 in its meeting held on 4th March, 2010. The official amendments were again moved on 16th March, 2010. Meanwhile, the Department received suggestions / amendments from several MPs and VIPs particularly after the issue of Notice for consideration and passing of the Bill and moving the Official amendments in March, 2010. The Department has accepted some of the suggestions and incorporated the same in the Seed Bill, 2004. The Cabinet again approved the additional official amendments to the Seeds Bill, 2004 in its meeting held on 20th October, 2010. Notice has been sent to Rajya Sabha for moving official amendments/ consideration and passing of the Bill in the budget session of the parliament.

1.43 The Pesticides Management Bill, 2008: The new Pesticides Management Bill, which is intended to replace the Insecticides Act, 1968 to provide for a more effective

regulatory framework for the introduction and use of pesticides in the country, was introduced in the Parliament (Rajya Sabha) on 21 October, 2008. The Parliamentary Standing Committee on Agriculture placed its report on the Bill in the Parliament on 18 February, 2009. The recommendations of the Standing

Committee have been examined, and taking these into account, the official amendments to the Pesticides Management Bill have been finalized for consideration and passing in Rajya Sabha. Accordingly, notice to Rajya Sabha Secretariat has been issued.

Chapter -2

Functions and Organisational Structure



Functions and Organisational Structure



2.1 Structure: The Department of Agriculture and Cooperation (DAC) is one of the three constituent Departments of the Ministry of Agriculture, the other two being the Department of Animal Husbandry, Dairying & Fisheries (DAHD&F) and the Department of Agricultural Research and Education (DARE). This Department is headed by the Agriculture Minister and is assisted by a Minister of State. The Secretary (Agriculture & Cooperation) is the administrative head of the Department. The Secretary is assisted by one Special Secretary & Financial Adviser, four Additional Secretaries, a Senior Adviser, Agriculture Commissioner, twelve Joint Secretaries including Agricultural Marketing Adviser, Horticulture Commissioner, Horticulture Advisor and two Deputy Director Generals. In addition, the Chairman of the Commission for Agriculture Costs and Prices (CACP) advises the 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 working 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 (CVO), 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, the identification of sensitive posts in the DAC is also undertaken as per the 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 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 for the Department but also as nodal officer for monitoring the redressal of public grievances received in the Department at Headquarters. Director (O&M) has been nominated as Staff Grievance Officer to deal with the grievances of the employees working in the Department of Agriculture & Cooperation for this purpose. On every Wednesday between 10.00 A.M. to 1.00 P.M., the public can meet the Director of Grievances with regard to their grievances and complaints. Similar arrangements have been made at the level of all the Attached and Subordinate Offices and all the organizations under the administrative control of this Department in order to ensure expeditious redressal of grievances.

2.5 A SEVOTTAM Compliant “Citizens’ Charter” was prepared as per the latest instructions/guidelines issued by the Cabinet Secretariat and Department of Administrative Reform and Public Grievances. This new Charter (**Annexure-2.4**) is available on the website of the Department (www.agricoop.nic.in).

2.6 **Implementation of the Right to Information Act, 2005:** During the year 2010-11 (up to 31st January, 2011) 545 applications seeking information under the 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 2010-11 (up to 31st January, 2011), 218 persons from NGOs as well as general public visited the counter to obtain information.

2.8 **Progressive use of Hindi:** The Department has an Official Language Implementation Committee (OLIC), chaired by

the Joint Secretary (Administration), to monitor the implementation of the Official Language Policy of the Union and the progressive use of Hindi in the official work of the Department. During the year under review, quarterly meetings of the OLIC were held regularly. In accordance with the guidelines issued by the Department of Official Language and in consultation with the same Department, a Joint Hindi Salahkar Samiti for all the three departments of the Ministry of Agriculture has been reconstituted under the chairmanship of Hon’ble Agriculture Minister. One meeting of Hindi Salahkar Samiti was held on 18th November, 2010 under the Chairmanship of Minister of State (Agriculture).

2.9 The Hindi Division continued to review the position of the progressive use of Hindi in the Department and subordinate offices regularly, through quarterly progress reports. Besides, officers of the Hindi Division also participated in the meetings of the Official Language Implementation Committees of the Attached and Subordinate offices, Corporations, etc., and extended necessary guidance to them in implementation of the Official Language Act and Rules. In addition to this, one regional office under the control of this Department, viz. Central Integrated Pest Management Center, Dehradun, wherein 80 per cent of the officers and employees have acquired working knowledge of Hindi, was notified in the Gazette of India under Rule 10 (4) of the Official Language Rules, 1976.

2.10 Every year, the Department nominates Lower Division Clerks and Stenographers for training in Hindi Shorthand and Typing, under the Hindi Teaching Scheme of the Department of Official Language. Employees possessing a working knowledge or proficiency in Hindi were deputed to undergo training in Hindi workshops organized by the Hindi Division from time to time during the year under report.

2.11 Five employees have been given 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 creating awareness regarding the use of Hindi in the official work of the Department, a 'Hindi Fortnight' was organised from 1 to 14 September 2010. On this occasion, the Hon'ble Minister for Agriculture issued an appeal to all officers and staff of the Department of Agriculture and Cooperation urging them to do more of their official work in Hindi. During the 'Hindi Fortnight', various Hindi competitions, such as essay and paragraph writing, noting and drafting, translation and vocabulary, poetry recitation, and debate, were organized. A large number of officers and employees participated in these competitions. A dictation Competition was organized separately for Group D employees. 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 inspections of Department of Agriculture and Cooperation including its field offices and reviewed the

position regarding the progressive use of Hindi in official work during the year. The officers of this Department were also present at these inspection meetings.

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

2.15 Prevention of Harassment of Women Employees: A complaints committee regarding prevention of sexual harassment of women at their work place has been reconstituted by the Department during the year. This committee is chaired by a senior lady officer of the Department. The committee is represented by four women members out of which one member belongs to Mahila Dakshta Samiti (an NGO) and one male member is acting as Grievance officer of the Department. Five meetings of the Committee were held during the year. Two complaints, received from the women employees, alleging harassment have been redressed.

Chapter - 3

Economics and Statistics



Directorate of Economics and Statistics



3.1 The Directorate of Economics and Statistics (DES), an attached office of the Department of Agriculture and Cooperation (DAC), is entrusted with the responsibility of collection, collation, dissemination and publication of statistical data on diverse facets of agriculture and allied sectors required for planning and policy formulation by the Government. The Directorate is also the nodal organization to examine as well as determine the price policy for principal crops and other aspects of agriculture, based on the reports of the Commission for Agricultural Costs and Prices (CACP).

Major Programmes and Activities of DES

3.2 Minimum Support Prices: Government's price policy for agricultural produce seeks to ensure remunerative prices to the growers for their produce with a view to encourage higher investment and production, and to safeguard the interest of consumers by making available supplies at reasonable prices. The price policy also seeks to evolve a balanced and integrated price structure in the perspective of the overall needs of the economy. Towards this end, the government

announces each season the Minimum Support Prices (MSPs) for major agricultural commodities and organizes purchase operations through public, cooperative and other agencies designated by the state governments.

3.3 Coverage of Crops: Presently, the following crops are covered under the mechanism of MSPs:-

Cereals - Paddy, Wheat, Jowar, Bajra, Maize, *Ragi* and Barley

Pulses - Moong, *Urad*, *Arhar*, Gram, Lentil and Peas

Oilseeds- Groundnut, Rapeseed & Mustard, Niger seed, Soybean, Sunflower, Sesamum and Safflower.

Fibre Crops - Cotton and Jute

Others - Sugarcane, VFC Tobacco, Onion, Potato and Coconut

3.4 Support Price for Agricultural Commodities: 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 the Directorate and furnished to the Commission for Agricultural Costs and Prices (CACP) which recommends the MSPs to the government. The Directorate examines the reports submitted by the CACP on price policy on principal agricultural crops and other aspects of agriculture. Price policy for agricultural commodities reflects an important element of overall agricultural policy.

3.5 The Government decides on the support price for various agricultural commodities taking into account the recommendations of the CACP, the views of state governments and central ministries as well as such other relevant factors which, in the opinion of the government, are important for fixation of support prices.

3.6 Minimum Support Prices (MSPs) for the year 2010-11: The MSPs of Kharif crops of 2010-11 were announced on 10th June 2010. The MSP of paddy has been raised by Rs.50 per quintal. The MSPs of jowar, bajra and maize have been raised by Rs. 40 per quintal and an increase of Rs.50 per quintal has been made for *ragi*. The MSP of *arhar (tur)* has been increased by Rs.700 per quintal followed by an increase of Rs. 410 per quintal for *moong* and Rs. 380 per quintal for *urad*. An additional incentive at the rate of Rs.5 per kg for *tur, urad and moong* sold to the procurement agencies during the harvest /arrival period of two months has also been provided. The MSP for groundnut-in-shell has been increased by Rs.200 per quintal followed by an increase of Rs.135 per quintal for sunflower seed. The MSP of soybean and sesamum have been increased by Rs. 50 per quintal followed by an increase of Rs. 45 per quintal for niger seed. The MSP of cotton has been retained at last year's level.

3.7 The MSPs of Rabi crops of 2010-11 season, to be marketed in 2011-12, were announced in October 2010. The MSP for

wheat has been fixed at Rs.1120 per quintal from Rs. 1100 per quintal during the previous year that is a gain of Rs. 20 per quintal. The MSP for barley has been increased by Rs.30 per quintal. The MSPs of gram, lentil and safflower have been increased by Rs.340, Rs.380 and Rs.120 per quintal, respectively. Recent trends in the MSPs of different crops may be seen from the statement given at **Annexure 3.1.**

3.8 Market Intelligence & Price Analysis: DES collects retail prices of agricultural commodities from 87 designated centers which are then compiled and disseminated in the form of 'Weekly Bulletin of Retail Prices' to various ministries and departments. The wholesale prices, 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 233 quotations on wholesale prices are disseminated to the Office of Economic Adviser, Ministry of Industry and Commerce for construction of Wholesale Price Index on a weekly basis. International prices of selected agricultural commodities are regularly collected from 'Public Ledger' published from United Kingdom.

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

3.10 Publications: In order to disseminate various agricultural statistics the Directorate of Economics and Statistics brings out

a number of publications. Apart from the annual publication 'Agricultural Statistics at a glance', some of the important publications of the Directorate are 'Agricultural Situation in India' – a research based monthly publication, "Agricultural Prices in India", "Agricultural Wages in India", "Land Use Statistics at a Glance" and "Cost of Cultivation of Principal Crops, and Farm Harvest Prices of Principal Crops in India".

3.11 **Plan Schemes of the Directorate:**

The Plan Schemes of DES seek to serve the purpose of creating reliable database on different facets of agriculture. The three Plan Schemes implemented by the Directorate for this purpose (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).

3.12 **Improvement of Agricultural Statistics:**

The Directorate is implementing the central sector plan scheme 'Improvement of Agricultural Statistics' which is fully funded by the Government of India for taking initiatives to improve the agricultural statistics system in the States. Based on the estimates provided by various State Governments through designated State Agricultural Statistics Authorities (SASAs) comprising of State Directorate of Economics & Statistics and Departments of Agriculture and 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.

3.13 The basic objective of the scheme is to collect and improve the quality of agricultural statistics of principal agricultural and horticultural crops. The scheme has four components, which are as under:

3.14 **Timely Reporting Scheme (TRS):**

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 two Union Territories namely Delhi and Puducherry. Implementing states provide break-up of area under irrigated/un-irrigated and high yielding varieties.

3.15 **Improvement of Crop Statistics (ICS):**

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

3.16 **Establishment of an Agency for Reporting of Agricultural Statistics:**

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

3.17 **Crop Estimation Survey on Fruits & Vegetables:**

Under the component, 11 States namely Andhra Pradesh, Gujarat, Haryana,

Himachal Pradesh, Karnataka, Maharashtra, Orissa, Punjab, Rajasthan, Tamil Nadu 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 rate for the 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.

3.18 The National Statistical Commission had recommended that the present methodology being followed for the crop estimation survey of fruits and vegetables should be replaced by an alternative cost effective methodology. On the basis of a study conducted in two states, Maharashtra and Himachal Pradesh, Indian Agricultural Statistics Research Institute (IASRI) has developed an alternative methodology, which aims at covering all important fruit and vegetable crops in all the major States in order to have reliable estimates of area and production, The new methodology is to be tested in 5 or 6 more States before implementing it.

3.19 Studies on Inputs for Agricultural Economic Policy & Development: During the 10th Five Year Plan the following components, which provide basic data support and other inputs for formulation of effective policies, were clubbed under this umbrella scheme with effect from 2005-06:

- Comprehensive Scheme for Studying the Cost of Cultivation of Principal Crops in India,
- Agro-Economic Research Centers,
- Planning and Management of Agriculture,

- Strengthening of Agricultural Statistics and Policy Formulation
- Drought Management (merged during 2007-08).

The Component-wise details are as under:

3.20 Comprehensive Scheme for Studying the Cost of Cultivation of Principal Crops in India: The Scheme is being implemented since 1971 as a 100% Central Sector Plan Scheme and the main objectives of the 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).

3.21 The estimates of CoC of principal crops are used by the CACP for recommending Minimum Support Prices (MSPs). DES gets this study conducted through 16 Agricultural/ General Universities/Colleges and the Directorate of Tobacco Development. Under the scheme, field data pertaining to the CoC and CoP are collected, compiled and processed to generate cost of cultivation/ production estimates.

3.22 The scheme is implemented in 19 states namely Andhra Pradesh, Assam, Bihar, Chhattisgarh, Gujarat, Haryana, Himachal Pradesh, Jharkhand, Karnataka, Kerala, Madhya Pradesh, Maharashtra, Orissa, Punjab, Rajasthan, Tamil Nadu, Uttar Pradesh, Uttarakhand and West Bengal. The scheme presently covers 27 crops viz. paddy, wheat, jowar, bajra, maize, *ragi*, barley, *moong*, *urad*, *arhar*, gram, lentil, peas, groundnut, rapeseed and mustard, niger seed, soybean, sunflower, safflower, sesamum, cotton, jute, sugarcane, VFC tobacco, onion, potato, and coconut. On an average about 150 cost estimates are generated annually.

3.23 Field data are collected on Cost Accounting Method under which daily entries of debit/credit for the expenditure/income are made in order to assess the total cost incurred/benefit accrued by/to each farmer covered under the scheme. The detailed questionnaires are filled up on monthly/annual basis after making enquiries on a daily basis from farm holdings.

3.24 Agro Economic Research (AER) Scheme: This 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 3 Agro-Economic Research (AER) Units and 12 AER Centers including the Centre at Jorhat set up in 1960 for conducting studies in the North-Eastern region. It is a Central Sector Plan Scheme fully funded by the Department of Agriculture & Cooperation. These Centres were established for carrying out continuous studies of the rural economy to ascertain progress, analyze problems, and carry out agricultural economic analysis.

3.25 At present, the AER Units and Centres conduct agro-economic research studies focusing on regional and national problems. This network of research centres provides crucial grass root level feedback for suggesting appropriate policy interventions for the development of agricultural and allied sectors to ensure effective implementation and monitoring of the Central Sector and Centrally Sponsored Schemes of the Ministry of Agriculture. Whereas, the AER Units are concerned with the studies with national scope, the Centres take up studies focusing on regional issues.

3.26 In the last Coordination Committee for Organizing Studies (CCOS) on Agro-economic issues, fifteen coordinated studies were awarded to the AERCs/Units. Most of these studies have state/regional aspects. Out of a total of 64 studies, 24 studies have been

completed. The completed studies comprise of organic input production efficiency, impact of macro management scheme in North Eastern States, determinants of crop productivity in Karnataka, Maharashtra, West Bengal etc.

3.27 Planning and Management of Agriculture: In order to assess the impact of changes in the farm economy with focus on the state of Indian farmers, a Central Sector Scheme – Planning and Management of Agriculture was formulated during 1998-99 with a view to organize conferences and seminars involving eminent persons/experts, to conduct short term studies, engage consultancy services for preparation of new decentralized strategies for development of agriculture and to bring out papers and reports based on the recommendations of these events. They are also very useful in getting inputs required for formulation of National Agricultural Policy, sub-sectoral policies, monitoring and implementation of programmes etc.

3.28 Drought Management (DM): The Drought Management Programme, an independent Central Sector Plan Scheme, was discontinued in the Tenth Plan and the scheme was subsumed under the aforesaid umbrella scheme during 2007-08.

3.29 Strengthening of Agricultural Statistics and Policy Formulation (SAS&PF): Under this component, a National Workshop on Improvement of Agricultural Statistics is held every year with participation from various State Departments and Central Ministries/Organizations to discuss the ways and means of bringing about improvement in the collection and compilation of agricultural statistics. Methodological issues relating to preparation of advance estimates of area and production of crops, reconciliation of 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 release of its reports, improving collection of wholesale and retail prices, etc. are also discussed.

3.30 Forecasting Agricultural Output using Space, Agro-meteorology and Land based observation (FASAL): To strengthen the current capabilities of in season multiple crop estimation through combination of Remote Sensing, Econometric, Agro-met and Land based observations, this plan scheme was launched in August, 2006. The 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 few selected crops. Development of methodology for other specified crops is in progress. India Meteorological Department (IMD) has also commenced work on agro met component during 2010-11.

3.31 To further expand the scope of Remote Sensing technology for more accurate and detailed assessment of the crop situation in the country at national and district level, the need for establishing adequate infrastructure in the ministry itself was considered necessary. Accordingly, a proposal from SAC, Ahmadabad to develop a National Centre for

Crop Forecasting is under consideration of the Ministry.

3.32 Development and Application of Extended Range Forecast System for Climate Risk Management in Agriculture (ERFS): Keeping in mind the immense importance of extended range forecasting in agriculture applications, the DES has sponsored this project in collaboration with other partner organizations viz. Indian Institute of Technology (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.

3.33 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 the farmers to plan their cropping activities and also help the policy makers to take necessary corrective measures arising out of any contingency that might arise. Under the ERFS, forecast for each month at regional/district level is the ultimate goal. Experimental monthly rainfall forecast for the monsoon, 2010 was generated on meteorological sub-division scale and in respect of 13 identified districts and disseminated to the identified farmers/users for risk management purposes in the field.

Chapter -4

Crops





4 Crops

4.1 Crop Prospects for 2010-11: As per 1st Advance Estimates, the production of foodgrains during kharif 2010-11 is estimated at 114.63 million tonnes compared to 103.34 million tonnes achieved during 2009-10. The production of rice is estimated at 80.41 million tonnes which is about 4.50 million tonnes higher compared to 75.91 million tonnes achieved during the previous year. The production of coarse cereals during 2010-11 is estimated at 28.23 million tonnes compared to the previous year's production of 23.62 million tonnes which is about 4.60 million tonnes higher.

4.2 The production of sugarcane during

2010-11 is estimated at 324.91 million tonnes (1st Advance Estimates) against 277.75 million tonnes achieved during 2009-10. Cotton production is estimated at 335.00 lakh bales during 2010-11 (1st Advance Estimates) against 239.35 lakh bales during 2009-10. The production of jute and *mesta* during the year 2010-11 is estimated at 102.82 lakh bales (1st Advance Estimates) as against 112.91 lakh bales during 2009-10.

4.3 The National Target for Foodgrains production for the year 2010-11 has been fixed at 244.50 Million Tonnes. The crop-wise target of production is given as under:

(Million Tonnes)

S. No.		Kharif	Rabi	Total
1.	Rice	87.00	15.00	102.00
2.	Wheat	-	82.00	82.00
3.	Jowar	4.10	3.90	8.00
4.	Bajra	10.00	-	10.00
5.	Maize	15.50	5.90	21.40
6.	<i>Ragi</i>	2.50	-	2.50
7.	Barley	-	1.60	1.60
8.	Small Millets	0.50	-	0.50
9.	Total Coarse Cereals	32.60	11.40	44.00
10.	Total Pulses	5.71	10.79	16.50
	Total Foodgrains	125.31	119.19	244.50

4.4 Integrated Cereal Development Programme in Rice/Wheat/Coarse Cereals Based Cropping System Areas (ICDP- Rice/Wheat/Coarse Cereals) and Sustainable Development of Sugarcane Based Cropping System (SUBACS): To increase the productivity and production of Rice, Wheat, Coarse Cereals (except Maize) and Sugarcane, ICDP-Rice/Wheat/Coarse Cereals and SUBACS 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:** In order to increase production and productivity of Cotton, a Centrally Sponsored Scheme of Mini Mission-II of Technology Mission on Cotton is under implementation in 13 States viz., Andhra Pradesh, Gujarat, Haryana, Karnataka, Madhya Pradesh, Maharashtra, Orissa, Punjab, Rajasthan, Tamil Nadu, Uttar Pradesh, West Bengal and Tripura. 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 103.10 lakh hectares during 2009-10 as compared to 94.06 lakh ha. in 2008-09. During the current year i.e. 2010-11, it is estimated that area coverage under cotton may reach to about

110.00 lakh hectares with a production of 335.00 lakh bales (1st Advance Estimates).

4.7 The main components of the Scheme during 2010-11 include supply of certified seeds of varieties / hybrids released during the last fifteen years, transfer of technologies through demonstrations, TOF and FFS, plant protection measures like Integrated Pest Management (IPM), surveillance of pest and water savings devices like sprinkler & drip irrigation, sprayers bio-agents etc.

4.8 **Mini-Mission-II of Jute Technology Mission:** Jute and allied fibers are important crops of Eastern and North-Eastern States of the country. Mini Mission-II of Jute Technology Mission is under implementation in the States of Andhra Pradesh, Arunachal Pradesh, Assam, Bihar, Meghalaya, Nagaland, Orissa, Tripura, Uttar Pradesh and West Bengal for increasing production and productivity of raw jute. The funding pattern under the scheme is mostly on 90:10 sharing basis between the Government of India and the States.

4.9 The main components of Mini Mission-II include transfer of technologies through field demonstrations and training of farmers & extension workers; establishment of retting tanks; supply of seeds, fungal culture, farm implements, and soil ameliorants; popularization of IPM practices etc.

4.10 **National Food Security Mission (NFSM):** The Mission aims to produce additional 10, 8 and 2 million tonnes of rice, wheat and pulses respectively, thereby 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 area, 20 million hectares of rice area and 98% of pulses area. Mission also aims at 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 476 districts of 17 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 incentivising collaborative working, mission aims to harness the capacities of the participating institutions and meet the challenge of administering its programs in the targeted relatively backward districts.

4.11 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 ensuring timely and complete reach of the proven technology and associated knowledge inputs 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.

4.12 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 17 NFSM States. Monitoring committees have also been constituted at state level and district level for monitoring the implementation of the Mission.

4.13 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 to the states.

4.14 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.

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

4.16 The mid-term evaluation of the scheme by an external independent agency is due in the current year i.e. 2010-11.

National Productivity Council has prepared a compendium of guidelines for midterm evaluation including Terms of Reference, expression of Interest, technical & financial bidding etc. Process for calling expression of interests from independent agencies has been initiated.

4.17 Achievements of the Mission: As per the progress reports received from the States, significant achievements under NFSM have been recorded during last three years i.e. during 2007-08, 2008-09 and 2009-10. New farm practices have been encouraged through 3.00 lakh demonstrations of improved package of practices. As many as 53,438 demonstrations of System of Rice Intensification (SRI) as well as 24,189 demonstrations of hybrid rice have been conducted. Nearly, 85.79 lakh qtls of seeds of high yielding varieties of Rice, Wheat and Pulses and hybrid rice have been distributed. About 65.88 lakh hectares have been treated with soil ameliorants (gypsum/lime/micro nutrients) to restore soil fertility. An area of about 25.77 lakh hectares has been treated under Integrated Pest Management (IPM). Further, nearly 15.31 lakh improved farm machineries including water saving devices have been distributed. Capacity building of farmers has been encouraged through arranging 28,821 Farmers' Field Schools (FFS).

4.18 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, Pulses from 2007-08 to 2009-10 which indicates the awareness generated at the district level towards use of quality seeds, nutrients, plant protection chemicals and farm machinery.

4.19 Impact on productivity: During 2008-09, nearly 50% of the rice districts (70 out of 143), 33% of the wheat districts (41 out of 138) and nearly 50% of pulses districts (74 out of 159) have recorded more than 10-20 % enhancement in productivity compared to the base year of 06-07.

4.20 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 the 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 districts. Capacity building exercises for farmers through Farmers Field Schools were found to be helpful in orienting the farmers towards adoption of new agriculture technologies.

Chapter -5

Seeds



5 Seeds



5.1 Seeds are the basic and critical input for agricultural production. The Indian Seeds programme recognizes three generations of seeds, namely, breeder, foundation and certified seeds. The details of production

of breeder and foundation seeds as well as production of certified seeds from 2005-06 to 2009–2010 and anticipated for 2010-11 are shown in Table below:

Production of breeder, foundation and certified/quality seeds

(Figures in Metric Tons)

Type of Seeds	2005-06	2006-07	2007-08	2008-09	2009-10	2010- 11 (Anticipated)
Breeder Seed production	6865	7382	9196	9441	10604	11,000*
Foundation Seed production	74000	79654	85254	96274	180817*	185000*
Certified / Quality seed Production	1405000	1481800	1943100	2503500	2797200	3213592

5.2 **Seed Policy Reforms - The Seeds Bill, 2004:** In response to the changes that have taken place in the seed sector, the existing Seeds Act, 1966 is proposed to be replaced by a suitable legislation to, inter alia, (i) create a facilitative climate for growth of the seed industry; (ii) enhance seed replacement rates for various crops; (iii) boost the export of seeds and encourage import of useful germplasm; and (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 the Rajya Sabha in December, 2004. The Bill was referred to the Parliamentary Standing Committee on Agriculture, which recommended several modifications in the Bill. Based on the recommendations of the Committee and the comments of the Ministries/ Departments concerned, the Cabinet approved the official amendments in its meeting held in June, 2008. The official Amendments to the Seeds Bill were moved in

the Rajya Sabha on 3rd December, 2008 and 6th February, 2009 which remained pending in Rajya Sabha. Due to formation of new government, the Cabinet had again approved the official amendments to the Seeds Bill, 2004 in its meeting held on 4th March, 2010. Meanwhile, the Department received suggestions/ amendments from several MPs and VIPs particularly after the issue of Notice for consideration and passing of the Bill and moving the Official amendments in March, 2010. The Department has accepted some of the suggestions and incorporated these in the Seed Bill, 2004. The Cabinet had again approved the additional official amendments to the Seeds Bill, 2004 in its meeting held on 20th October, 2010. Notice has been sent to Rajya Sabha for moving official amendments and its passing/ consideration in the budget session of the parliament.

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

5.4 Policy on Export/Import of Seeds and Planting Materials: The export/import of seeds has increased with rationalization and

simplification of the export/ import regime. This has benefited Indian farmers, the seed industry and entrepreneurs. 146 cases were recommended for issue of export and import permits from 1st April to 31st January, 2011 for the year 2010-11.

5.5 Implementation of Protection of Plant Varieties and Farmers' Rights Legislation:

The Protection of Plant Varieties & Farmers' Rights (PPV&FR) Authority was established in November, 2005. The Authority has the mandate to implement the PPV&FR Act, 2001, with a view to establish an effective system for protection of plant varieties, rights of farmers' and plant breeders and encourage development of new varieties of plants. The Authority is accordingly, taking steps for putting in place an Intellectual Property Rights regime in agriculture for development of new varieties of plants and protection of rights of farmers' and breeders in the country.

- In the above direction, the following developments are noteworthy to mention:
- Registration is open for 39 notified crops namely, Rice, Bread Wheat, Maize, Sorghum, Pearl Millet, Chickpea, Pigeon Pea, Green Gram, Black Gram, Lentil, Field Pea, Kidney Bean, Cotton, Jute, Sugarcane, Ginger, Turmeric, Black Pepper, Small Cardamom, Indian Mustard, Rapeseed, Sunflower, Safflower, Castor, Sesame, Linseed, Groundnut, Soybean, Potato, Garlic, Tomato, Onion, Brinjal, Cabbage, Cauliflower, lady's finger, Rose, Mango and Chrysanthemum under the Act.
- Sites for two branch offices of the Authority have been finalized at Birsa Agricultural University, Ranchi, Jharkhand and Assam Agricultural University, Guwahati, Assam.

Other significant achievements during the year are:

- Rules for the PVP Appellate Tribunal were notified in September, 2010.
- Rule for onsite inspection of varieties of trees and vines was framed by amendment of Rule 29(1) (c) of PPV&FR Rules, 2003;
- The Authority has issued 49 certificates of registration under the Act during 2010-2011 so far.

5.6 National Seed Research and Training Centre (NSRTC) at Varanasi:

The National Seed Research and Training Centre (NSRTC) Varanasi (Uttar Pradesh) has been notified as Central Seed Testing and Referral Laboratory (CSTL) with effect from 01.04.2007. The primary objective for establishing the NSRTC is to have a separate National Seed Quality Control Laboratory to serve as a referral laboratory for courts in India and also to act as a human resource development centre in the field of seed quality. The CSTL of NSRTC has become member laboratory of International Seed Testing Association (ISTA), Zurich, Switzerland with effect from 2007.

5.7 NSRTC has organized seven national training programmes during 2010-2011 on Seed Testing, Seed quality Regulation, Seed Law Enforcement, Seed Quality Assurance, Varietal Purity - Testing of Specified Traits, Pre & Post Harvest Seed Management Techniques for Seed Quality Assurance and Seed Health for updating the knowledge and skills of the officials engaged in seed testing, seed quality control, seed certification, seed production and stakeholders of seed industry. NSRTC has also organized one national workshop on seed testing for the seed analyst/ seed testing officers of Seed Testing Laboratories and two short

courses on Integrated Seed Improvement and Molecular Characterization of GMOs' and its purity testing. It organized National seed Congress in collaboration with the College of Agriculture, Mahatma Phule Krishi Vidyapeeth, Pune during 29th -31st January, 2011.

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 the existing infrastructure for production and distribution of certified/quality seeds, to ensure production and multiplication of high yielding certified/ quality seeds of all crops in sufficient quantities and make seed available to farmers, including those in remote areas. The following components of the scheme are being implemented:-

- i. Transport subsidy on movement of seeds
- ii. Establishment and maintenance of seed bank
- iii. Quality control arrangement for seeds
- iv. Seed Village Programme
- v. Creation/strengthening of infrastructure facilities in Public Sector.
- vi. Assistance for boosting seed production in private sector
- vii. Use of bio-technology in agriculture
- viii. Promoting hybrid seeds

5.9 **Bt. Cotton Seeds:** At present, 810 Bt Cotton hybrids inclusive of one variety BN Bt cotton developed by Central Institute for Cotton Research, Nagpur (ICAR) have been approved by the Genetic Engineering Approval Committee (GEAC) for commercial cultivation in the States of Haryana, Punjab, Rajasthan, Gujarat, Madhya Pradesh, Maharashtra, Andhra Pradesh, Karnataka

and Tamil Nadu. The area under coverage of Bt Cotton is increasing rapidly. It has increased from 85.52 lakh hectare in Kharif, 2009 to 93.36 lakh hectares (anticipated) during Kharif, 2010.

5.10 Seed Village Programme: Seed Village Programme component of the scheme 'Development and strengthening of infrastructure Facilities for Production and Distribution of Quality Seeds' is aimed at upgrading the quality of farm saved seeds. The Department has covered about 1,31,000 seed villages under this components since inception in 2005-06 up to 2009-10. It is expected to cover 50,000 villages under the programme in the current financial year. Under this programme, assistance/ benefits are open to all the farmers equally including women farmers.

5.11 Certified/Quality Seed Production: Certified/Quality Seed Production has increased from 140.51 lakh quintals during 2005-06 to 321.36 lakh quintals during 2010-11.

5.12 Boosting Seed Production in Private Sector: This is one of the components of the scheme 'Development and Strengthening of Infrastructure Facilities for Production and Distribution of Quality Seeds'. Under this component, credit linked back-ended capital subsidy is provided at the rate of 25% of the 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, 282 such plants have been sanctioned for an amount of Rs.20.88 crores for the small entrepreneurs in 16 States with 54.14 lakh quintals of seed processing capacity and storage capacity of 19.43 lakh quintals. National Seeds Corporation is the nodal agency for implementing this component.

5.13 The DAC has two Central Public Sector Undertakings namely National Seeds Corporation (NSC) and the State Farms Corporation of India (SFCI). During 2009-2010, the NSC earned profit after tax of Rs. 52.19 crores as compared to Rs. 26.54 crore during 2008-2009 and declared dividend of Rs. 2.27 crores @ 11% on the Paid up Capital of the Corporation. Sale of seeds by NSC has increased to 14.34 lakh quintal in 2009-2010 from 9.96 lakh quintal in 2008-2009. The SFCI has achieved profit after tax of Rs. 21.53 crores in 2009-2010 as compared to Rs. 9.77 crores during 2008-2009. Seed Production has increased to 7.34 lakh quintals in 2009-2010 as compared to 5.63 lakh quintals in 2008-2009.

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

Chapter -6

Integrated Nutrient Management



6

Integrated Nutrient Management



6.1 Average estimated consumption of fertilizers (N+P+K) (Nitrogen, Phosphorus and Potassium) in the country has registered an increase in 2009-10 (135.3 kg/ha) over 2008-09 (127.2 kg/ha). A wide variability has, however, been observed in fertilizer consumption among the States. While per hectare consumption of fertilizers is 237.1 kg in Punjab, 225.7 kg in Andhra Pradesh, 209.9 kg in Haryana and 205.8 kg in Tamil Nadu, the consumption is quite low in Rajasthan (48.6 kg/ha), Himachal Pradesh (54.8 kg/ha), Orissa (57.6 kg/ha), Jharkhand (70.0 kg/ha) and certain other States. The consumption is less than 5 kg/ha in some of the north-eastern States.

6.2 To ensure adequate availability of fertilizers to farmers, the Department of Agriculture and Cooperation (DAC) makes

a demand assessment well in advance through half-yearly Zonal conferences on Agricultural Inputs in consultation with the State Governments, Department of Fertilizers (DoF) and the Fertilizer Industry. Thereafter, supply plan under the Essential Commodities Act (ECA), and movement orders under Fertilizers Movement Control Order are issued to ensure timely availability of fertilizers to the farmers. The DoF also facilitates availability of decontrolled phosphatic (P) and potassic (K) fertilizers to the States / UTs.

6.3 **Consumption of Fertilizers:** The consumption of chemical fertilizers (in terms of nutrients) during 2009-10 was 264.86 lakh metric tonnes, 6.33% more than that of the previous year 2008-09. The consumption of major fertilizers and nitrogenous, phosphatic and potassic (NPK) nutrients since 2000-01 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

* Diammonium Phosphate ** Muriate of Potash

6.4 Fertilizer Policy: Urea is the only fertilizer under statutory price control. Government of India has introduced nutrient based subsidy with effect from 1st April, 2010 in respect of phosphatic and potassic fertilizers. Under the policy, subsidy is based on the nutrient (N,P,K and S) content of the decontrolled P and K fertilizers. Price of Urea has been increased by 10% while price of other subsidized fertilizers are being maintained around current levels. Additional subsidy on micronutrients has been introduced on Boron and Zinc, to begin with. In order to promote the concept of balanced use of fertilizers and to encourage use of micronutrients, several fertilizers fortified with Boron and Zinc have been incorporated in the Fertilizer (Control) Order, 1985.

6.5 Promotion of Integrated Nutrient Management (INM): The Government is promoting soil test-based, balanced and

judicious use of chemical fertilizers, bio-fertilizers, and locally available organic manures such as farmyard manure, vermi-compost, and green manure, to maintain soil health and productivity. A centrally sponsored scheme, namely, the National Project on Management of Soil Health and Fertility (NPMSHF) has been introduced during 2008-09. The components of the new scheme include the setting up of 500 new Soil Testing Laboratories (STLs), strengthening of the existing 315 STLs, setting up of 250 mobile STLs, promotion of organic manure, soil amendment, and distribution of micro nutrients, setting up of 20 new Fertilizer Quality control Laboratories (FQCLs) and strengthening of 63 existing FQCLs during the Eleventh Plan.

6.6 The main components approved under scheme are:-

Sl. No	Component/year	2008-09	2009-10	2010-11 (as on 31.01.2011)	Total
1.	New Static STLs	42	66	11	119
2.	New Mobile STLs	44	62	10	116
3.	Strengthening of existing STLs	39	107	9	155
4.	New FQCLs	2	11	1*	14
5.	Strengthening of FQCLs	19	19	1	39

* For advisory purpose on PPP Mode.

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

regulate the trade, price, quality and distribution of fertilizers in India.

6.8 The enforcement of this Order has primarily been entrusted to State Governments. The Central Government provides training

facilities and technical guidance to States and supplements their efforts through random inspection of manufacturing units and their distribution network through the Inspectors. About 20 types/grades of straight/complex fertilizers are produced/consumed in the

country. Presently there are 74 laboratories in the country including 4 Central Government Laboratories. The analytical capacity and the number of samples analyzed and found Non standard during the last 5 years is shown in Table below.

Analytical Capacity and number of samples of fertilizers analyzed and found Non standard during the 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	1,19,417	5.2

6.9 Fertilizer Control Order (FCO), 1985: In order to promote balanced use of fertilizers, this Ministry is encouraging the fortified fertilizers and so far incorporated nine such fertilizers in the FCO. Further, it has introduced a new concept of customised fertilizers with the main objective of promoting site-specific nutrient management so as to achieve maximum fertilizer use efficiency of applied nutrients in a cost effective manner. These fertilizers are soil-specific and crop-specific and are formulated on the basis of soil testing results. So far, 32 such fertilizers have been notified under clause 20B of FCO, 1985.

6.10 In order to encourage the use of organic and bio fertilizers, five bio-fertilizers namely Rhizobium, Azotobacter, Azospirillum, Phosphate Solubilizing Bacteria and mycorrhiza have been incorporated in the FCO, 1985. The specifications of organic fertilizers namely: city waste compost and vermin compost have also been specified in the FCO, 1985.

6.11 The Central Fertilizer Quality Control & Training Institute (CFQC&TI), Faridabad: The main activities of CFQC&TI and its three Regional Fertilizer 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 Fertilizer Inspectors, Analysts and other Enforcement Officers. The Institute organized one exclusive international training programme for officers from developing countries, under ITEC/SCAAP/AARDO/COLOMBO Plan. Development of methods of analysis for inclusion in FCO have been undertaken. It also acts as a Referee laboratory and Advisory Body on issues relating to Fertilizer Quality Control.

6.12 During 2009-10, CFQC&TI and RFCLs analyzed 10,832 samples against the target of 8500 samples, showing an achievement of 127% of the target, out of which 405 samples were found non-standard. During 2009-10, 1008 ships/ containers were inspected, out of which two ships/containers were found to be non standard. During random inspection of manufacturing units and dealers premises, the Central Teams collected 82 fertilizer samples during 2009-10, out of which 36 samples were found non-standard.

6.13 During 2009-10, 15 Refresher Training Programmes for Fertilizer Inspectors,

Analysts, Notified Authority, and Laboratory Incharges were organized by CFQC&TI/RFCLs. 10 Orientation Courses for State Enforcement Officers and 15 Training Programmes for Fertilizer Dealers were organized in States. Further, one exclusive training programme for Foreign Participants under ITEC/SCAAP/AARDO/COLOMBO Plan was organized at CFQC&TI, in which 16 officers from different countries participated. One Refresher Training Course of two weeks duration was organized in December, 2009 exclusively for the benefit of enforcement officers of the North Eastern States at RFCL, Kalyani. In addition one Training Programme for Fertilizer Dealers was organized in Assam.

6.14 National Project on Promotion of Organic Farming (NPOF): This is a continuing scheme from 10th Five Year Plan with an outlay of Rs. 101.00 crores in the 11th Plan. The revised mandate, effective from 2010-11, lays stress on technical capacity building, information generation and promotion of organic farming in the country. Major components include:

- a. Financial assistance for setting up of Fruits/Vegetable Market Waste compost Units and Biofertilisers /Bio-pesticides production units
- b. Technical capacity building and Human Resource development through trainings and research
- c. Development and regulation of quality control of Organic inputs
- d. Biological assessment of Soil Health

- e. Launching and operationlisation of low cost certification system known as Participatory Guarantee System (PGS).
- f. Awareness creation and publicity for increasing adoption of organic farming in the country.

6.15 Major Achievements under NPOF during the year 2009-10:

- a. To ensure quality of organic inputs, 4 biofertilizers viz. Rhizobium, Azotobacter, Azospirillum and Phosphate Solubilising micro-organism and two organic fertilizers, namely city compost and vermin-compost were notified under FCO.
- b. Standards and specifications for de-oiled castor cake and Mycorrhizal Biofertilizer have been prepared and approved for notification under FCO.
- c. Under human resource development component, 8 courses for Certification & Inspection agencies/Service Providers, 08 courses on Production and Quality control of Organic inputs and 22 courses for Field functionaries/Extension officers were organized for 811 participants from all over the country.
- d. For ensuring organic inputs quality, 1927 samples of biofertilizers and 987 samples of organic manure were analyzed.
- e. NCOF distributed 150810 copies of literature, arranged 18 exhibitions and organized 86 Radio talks and 66 Television programmes.

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 primary objective of plant quarantine is to prevent the 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 the provisions of the Destructive Insects and Pests Act, 1914 (DIP Act) regulates imports. Post entry quarantine inspection is undertaken in case of plant propagation material. Phytosanitary certificates (PSCs) are issued for exports as per the International Plant Protection Convention (IPPC), 1951 of the Food and Agriculture Organization (FAO). These functions are being discharged by 35 Plant Quarantine Stations (PQSs) functioning

under the Directorate of Plant Protection, Quarantine & Storage (DPPQ&S), Faridabad, at various international airports, seaports and land customs stations across the country to facilitate international trade in agricultural products. The plant quarantine infrastructure is created and maintained under the central sector plan scheme 'Strengthening and Modernization of Plant Quarantine Facilities'. It is proposed to establish molecular diagnostic facilities at 5 major PQSs at Amritsar, Chennai, Kolkata, Mumbai and New Delhi, open 22 new PQSs, strengthen plant quarantine facilities at existing PQSs as well as strengthen Integrated Export Certification System and Integrated Phytosanitary Border Control System during 11th Five Year Plan. The 5 major PQSs continue to provide plant quarantine services under ISO 9001:2000 certification.

7.3 During 2010-11 (upto December, 10), Pest Risk Analyses (PRAs) for import of 216 items were completed and technical information was provided for export of 21 items to concerned National Plant Protection Organizations. Screening of 65.49 lakh metric tonnes of imported agricultural commodities

was undertaken and 15,517 import permits were issued. Phytosanitary inspections for export of 186.90 lakh metric tonnes of plants and plant material were conducted and 1,06,397 PSCs issued. There were 358 pest control agencies accredited for undertaking fumigation as on 31.12.2010 including 56 new accredited agencies. There were 153 accredited agencies for Forced Hot Air Treatment (FHAT) for wood and wood packaging material including 28 new accredited agencies.

7.4 To deliver plant quarantine services with greater transparency and efficiency as well as to facilitate electronic data interface with Customs, a web based Plant Quarantine Information System (PQIS) has been launched on 24.01.2011 with help from the National Informatics Centre (NIC), New Delhi.

7.5 Integrated Pest Management: Integrated Pest Management (IPM) is an eco-friendly approach which aims at keeping pests below the economic threshold level (ETL) by employing all available pest control methods and techniques such as cultural, mechanical and biological control, with greater emphasis on the 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 the central sector plan scheme 'Strengthening and Modernization of Pest Management Approach (SMPMA)'.

7.6 IPM activities are propagated through the 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, with each FFS lasting 14 weeks. During 2010-11 (upto December, 10), 479 FFSs were conducted by CIPMCs in which 14,364 farmers and 2,365 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. A total of 121 crore bio-control agents were mass produced in the laboratories and released against insect-pests for various crops covering an area of 7.11 lakh hectares (upto December, 10).

7.8 A national plan on rodent pest management will be implemented 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 being taken up every year by the Department of Agriculture and Cooperation (DAC) during the Kharif and Rabi seasons involving the State Departments of Agriculture and the CIPMCs.

7.10 Implementation of the Insecticides Act: The Insecticides Act, 1968 regulates the 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 the registration of insecticides under Section 9 of the Act after verifying that it is efficacious and safe for use by farmers. During 2010-11

(upto December, 10), 1,622 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 the website of the Central Insecticides Board and Registration Committee (CIB&RC) has been fully operationalized. The system enables on-line filing of applications for registration, status of processing, reporting of deficiencies, and automated work flow of registration process.

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

7.12 The quality of pesticides is monitored by the Central and State Insecticide Inspectors who draw samples of insecticides from the market for analysis in the 68 State Pesticide Testing Laboratories (SPTLs) located in 23 States and one Union Territory. The States where SPTLs are not located can utilize the facilities available at Regional Pesticides Testing Laboratories (RPTLs), set up by the Central Government at Chandigarh and Kanpur. In case of any dispute, the samples are referred to the Central Insecticides Laboratory (CIL), Faridabad. For greater quality assurance in the pesticide analysis services, the CIL has obtained accreditation from the National Accreditation Board for Testing and Calibration Laboratories (NABL) for biological and chemical testing as per ISO/IEC 17025:2005. The RPTLs are also actively engaged in seeking accreditation. Keeping in view the growth in consumption of bio-pesticides and the need to regulate their quality, setting up of bio-pesticide testing facilities in RPTLs and SPTLs is envisaged. 13th All India Insecticide Analysts' Meet was held at DPPQ&S, Faridabad on January 20-21, 2011 which deliberated on status of pesticide analysis in the country and made recommendations for further improvements.

7.13 Establishment of a National Pesticide Reference Repository (NPRR) to address the issues of supply of reference standards and variation in analysis of pesticide samples has been approved. Further, 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) is envisaged. 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 the standard of testing of pesticides.

7.14 The Pesticides Management Bill, 2008, which is intended to replace the Insecticides Act, 1968 and 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 these into account, the official amendments to the Pesticide Management Bill have been finalized for consideration and passing in Rajya Sabha. Accordingly, notice to Rajya Sabha Secretariat has been issued.

7.15 **Monitoring of Pesticide Residue at the National Level:** The scheme 'Monitoring of Pesticide Residue at the National Level' was launched in 2005 as a central sector scheme to collect, collate and analyse data and information on a centralized basis, on the prevalence of pesticide residue at 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 2010-11 (upto December'10), 11,147 samples including

vegetables, fruits, rice, wheat, milk, butter, meat, fish and marine products, spices, tea, honey and water were analyzed.

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 at Jodhpur and its 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 2010-11 (upto December'10). 24 locust situation bulletins were issued and an area of 1.80 lakh sq. km. was surveyed during locust surveys conducted in SDA.

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. The Institutes facilities are being upgraded and faculty expanded for training in plant protection. NIPHM is being developed as the premier institution for capacity building in South Asia. During 2010-11 (upto December'10), 27 regular courses were conducted at NIPHM wherein 459 trainees from various States and organizations were trained in different aspects of plant protection.

7.18 National Agricultural Biosecurity System:

In view of the threat perception to the biosecurity of the 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, the Ministry of Agriculture has prepared a proposal for putting in place a National Agricultural Biosecurity System (NABS). The proposal is based on the recommendations of the National Commission on Farmers headed by Prof. M.S. Swaminathan and the 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



Agricultural Credit

8.1 The Government has taken many policy initiatives for strengthening 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 initiatives 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 mechanism for dispensation of agricultural credit. There are 1,06,384 Primary Agricultural Credit Societies(PACS), 370 District Central Cooperative Banks(DCCBs) with 12991 branches and 30 State Cooperative Banks(SCBs) with 962 branches providing primarily short-term and medium term agricultural credit in the country. The long term cooperative structure consists of 19 State Cooperative Agriculture and Rural Development Banks (SCARDBs). Of this, 7 are of unitary structure with 750 branches and 12 are of federal structure with 703 Primary Agricultural & Rural Development Banks with 1132 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:-

- In order to improve the flow of credit and mitigate farmers' distress due to the

problem of indebtedness, 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 the next three years.

- Banks have been advised to simplify the procedure for documentation for agricultural loans.
- 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.
- 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.
- 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 the recommendations made by the Vaidyanathan Committee Task Force, Government 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.13,597 crores 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, Orissa, Punjab, Sikkim, Tamil Nadu, Tripura, Uttarakhand, Uttar Pradesh and West Bengal have signed the Memorandum of Understanding (MoU) with Government of India (GOI) and NABARD. These states cumulatively cover 96% of the STCCS units in the country. An amount of Rs. 8009.75 crores has been released by NABARD as GOI's share for recapitalization of 49,976 PACS as on 30th November, 2010.

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 948 lakh KCC have been issued up to June, 2010. Further, under Kisan Credit Card, a farmer is sanctioned loans 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. Government has raised this subvention for timely repayment of crop loans from 1% to 2% from the year 2010-11. Thus the effective rate of interest for such farmers will be 5 % p.a.

8.7 Rehabilitation Package for Distressed Farmers: A Rehabilitation Package of Rs. 16978.69 crores for 31 suicide prone Districts in the four States, namely, Andhra Pradesh, Maharashtra, Karnataka and Kerala is under implementation. The rehabilitation package aims at establishing a sustainable and viable farming and livelihood support system through debt relief to farmers, improved supply of institutional credit, crop centric approach to agriculture, assured irrigation facilities, watershed management, better extension and farming support services and subsidiary income opportunities through horticulture, livestock, dairying, fisheries etc. So far an amount of Rs.19163.91 crores (as on Sept, 2010) has been released to these States. Government has further carried out mid-term modifications and has extended the period for implementation of the non credit components by 2 more years i.e. up to 30th September, 2011.

8.8 Government has also approved a 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 crores and Rs.764.45 crores respectively.

8.9 Flow of Agriculture Credit: The target of agriculture credit flow for the year 2009-10 was fixed at Rs. 325000 crores and the achievement as on 31st March, 2010 was Rs. 384514 crores which is 118% of the target. During this period, around 54.16 lakh new farmers have been financed by the Public Sector Commercial Banks and 5.71 new farmers by Private Sector Commercial

Banks. 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 is 77.49 lakh, against the target of 50.00 lakh for the year. In addition to this, the Cooperative Banks have financed 13.43 lakh new farmers during this period taking the total of new farmers financed by the Banking System to 90.92 lakh.

8.10 The target of agriculture credit flow for the year 2010-11 was fixed at Rs. 375000 crores and the achievement as on 31st October, 2010 was Rs. 228884.39 crores which is 60.50 % of the target. During this period, around 31.51 lakh new farmers have been financed by the Public Sector Commercial Banks and 2.75 lakh new farmers by Private Sector Commercial Banks. Further, RRBs have financed 11.84 lakh new farmers during this period. Thus the total number of new farmers financed by CBs and RRBs together is 46.10 lakh, against the target of 50.00 lakh for the year. In addition to this, the Cooperative Banks have financed 10.22 lakh new farmers during this period taking the total of new farmers financed by the Banking System to 56.32 lakh.

Agricultural Insurance

8.11 National Agricultural Insurance Scheme (NAIS): 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 crop losses suffered on account of natural calamities, such as, drought, flood, hailstorm, cyclone, pests and diseases. The scheme is being 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 farmers 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, pineapple, annual banana, tapioca, Isabgol, methi, coriander, cumin and fennel have already been covered under the scheme. All other annual commercial/horticultural crops are stipulated to be placed under insurance cover in due course of time subject to availability of past yield data. The scheme is operating on the basis of 'Area Approach' i.e. defined areas for each notified crop.

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 being charged. Under the scheme, small and marginal farmers were originally provided a subsidy of 50% of the premium charged from them. The premium subsidy has now been phased out over a period of 5 years and at present, 10% subsidy in premium is available to small and marginal farmers which is shared equally by the Central and State Governments.

8.14 The scheme is optional for States/UTs. At present, the scheme is being implemented by the following 25 States and 2 Union Territories:

1. Andhra Pradesh	2. Assam	3. Bihar
4. Chhattisgarh	5. Goa	6. Gujarat
7. Haryana	8. Himachal Pradesh	9. Jammu & Kashmir
10. Jharkhand	11. Karnataka	12. Kerala
13. Madhya Pradesh	14. Maharashtra	15. Manipur
16. Meghalaya	17. Mizoram	18. Orissa
19. Rajasthan	20. Sikkim	21. Tamil Nadu
22. Tripura	23. Uttar Pradesh	24. Uttarakhand
25. West Bengal	26. Andaman & Nicobar Island	27. Puducherry

8.15 Season-wise details of farmers and area covered, sum insured and insurance charges under NAIS during the last twenty-

two crop seasons (i.e. from Rabi 1999-2000 to Kharif 2010 are as under :-

S. No.	Seasons	Farmers covered	Area (in hect.)	Rs. In crore			
				Sum Insured	Total Premium	Of which Subsidy	Total Claims
1	Rabi 1999-2000	579940	780569	356.41	5.42	1.66	7.69
2	Kharif 2000	8409374	13219829	6903.38	206.74	47.40	1222.48
3	Rabi 2000-01	2091733	3111423	1602.68	27.79	8.23	59.49
4	Kharif 2001	8696587	12887710	7502.46	261.62	47.62	493.53
5	Rabi 2001-02	1955431	3145873	1497.51	30.15	7.78	64.66
6	Kharif 2002	9768711	15532349	9431.69	325.47	44.86	1824.31
7	Rabi 2002-03	2326811	4037824	1837.55	38.50	6.73	188.55
8	Kharif 2003	7970830	12355514	8114.13	283.33	24.44	652.68
9.	Rabi 2003-04	4421287	6468663	3049.49	64.06	6.24	497.06

10.	Kharif 2004	12687104	24273394	13170.62	458.94	20.09	1038.16
11.	Rabi 2004-05	3531045	5343244	3774.21	75.85	4.12	160.59
12.	Kharif 2005	12673833	20531038	13519.10	449.95	20.43	1059.94
13.	Rabi 2005-06	4048524	7218417	5071.66	104.82	5.23	338.30
14.	Kharif 2006	12934050	19672930	14759.25	467.29	26.55	1774.91
15.	Rabi 2006-07	4977980	7632882	6542.21	142.88	11.38	515.96
16.	Kharif 2007	13398541	20754431	17007.45	524.31	26.65	913.37
17.	Rabi 2007-08	5044016	7387156	7466.63	158.71	18.00	809.43
18.	Kharif 2008	12988804	17633181	15662.38	511.84	33.71	2374.32
19	Rabi 2008-09	6210648	8857836	11148.71	295.72	72.40	1489.11
20	Kharif 2009*	18274720	25829883	27616.72	862.85	57.15	2961.53
21	Rabi 2009-10*	5641184	7903351	10927.27	1151.28	72.79	31.67
22	Kharif 2010	11443443	17803556	20453.56	629.70	33.88	-
	Total	170074596	262381052	207365.55	6213.41	597.32	20437.21

* As on 31.01.2011.

8.16 The outlay for 11th Plan was fixed at Rs. 3500.00 crores. As against, the budget provision of Rs. 500.00 crores, Rs. 644.00 crores, Rs. 644.00 crores and Rs. 950 crores for the first, second, third and fourth financial years i.e. 2007-08, 2008-09, 2009-10 and 2010-11 the utilization has been Rs. 718.88 crores, Rs. 694.00 crores and Rs. 1419 crores and Rs 2610 crores (as on 31.01.2011) respectively. As the Scheme is demand driven, State-wise allocation is not made under the scheme.

8.17 **Redesigning of the Scheme:** Despite high claims ratio (i.e. 1: 3.13) and low premium rates especially for food and oilseeds crops, farmers (particularly non-loanee farmers) are not coming forward to avail crop insurance in a big way. To overcome some of the limitations of the scheme and to make it more farmer friendly, a Joint Group was constituted to study the existing crop insurance schemes and suggest improvements.

8.18 **Modified National Agricultural Insurance Scheme:** Based on the recommendations of the Joint Group and views/ comments of various stakeholders,

a Modified National Agricultural Insurance Scheme (MNAIS) was prepared which has been approved by the Government for implementation on pilot basis in 50 districts during the remaining period of 11th Plan. Administrative approval has been issued by this Department on 17.9.2010. Till date Pilot MNAIS has been notified in 34 districts covering 22 States during Rabi 2010-11 season.

8.19 The major improvements made in MNAIS are as under:

- Actuarial premiums would be paid for insuring the crops. However, subsidy on premium at different rates i.e. 40% to 75% depending upon the slab, would be provided to the farmers;
- All claims liability would be on the insurer;
- The unit area of insurance for major crops is village panchayat;
- Indemnity amount shall be payable for prevented sowing/planting risk and for post harvest losses due to cyclone;

- On account payment up to 25% of likely claims would be released as advance for providing 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;
- Private sector insurers with adequate infrastructure and experience would be allowed in the implementation of MNAIS, besides AIC;
- It has also been proposed to set up a catastrophe fund at the national level contributed by the central and the state governments on 50:50 basis to provide protection to the insurance companies in the event of premium to claim ratio exceeding 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.

8.20 Pilot Weather Based Crop Insurance Scheme (WBCIS): Efforts have been made to bring more farmers under the fold of Crop Insurance by introducing a Pilot Weather Based Crop Insurance Scheme (WBCIS), as announced in the Union Budget 2007, in 20 States. 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 of settling the claims within shortest possible time. The WBCIS

is based on actuarial rates of premium but to make the scheme attractive, the premiums actually charged from farmers have been restricted to and made at par with NAIS.

8.21 The scheme has been implemented in Kharif 2007 (1 State), Rabi 2007-08 (4 States), Kharif 2008 (10 States), Rabi 2008-09 (10 States), Kharif 2009 (13 States), Rabi 2009-10 (10 States), and Kharif 2010 (13 States). Administrative approval for implementation of the Scheme in Rabi 2010-11 season has been issued. During the last four years, i.e. 2007-08, 2008-09, 2009-10 and 2010-11, Rs 69.19 crores, Rs. 100.00 crores, Rs.120.00 crores and Rs. 350.00 crores, respectively have been released as Government of India share towards subsidy for premium provided to the farmers.

8.22 Coconut Palm Insurance Scheme (CPIS): The Coconut Palm Insurance Scheme (CPIS) has also been approved for implementation on pilot basis during years 2009-10 and 2010-11 in selected areas of Andhra Pradesh, Goa, Karnataka, Kerala, Maharashtra, Orissa and Tamil Nadu. 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 it is responsible for making payment of all claims within a specified period. The CPIS is being administered by the Coconut Development Board (CDB).

8.23 During the financial year of 2009-10, Rs. 10.00 lakh was released under the

scheme. During the current financial year i.e. 2010-11, Rs. 1 crore has been earmarked for the scheme and against this, Rs. 85.19 lakh

has already been released. The details of coverage under CPIS are as under:

(as on 30.06.2010)

S. No	State	No. of Palms Covered	No. of Farmers	Premium (Rs.)			
				Farmers' Share	State Govt.	GOI	Total
1	Tamil Nadu	4582	13	7084	7084	14168	28336
2	Andhra Pradesh	1200	9	2816	0	2816	5632
3	Kerela	1359407	26315	1489609	1489609	2979218	5958436
4	Karnataka	25309	129	39194	39194	78388	156776
5	Goa	22855	142	52074	52075	104149	208298
6	West Bengal	20000	415	28785	28785	57570	115140
	Total	1433353	27023	1619568	1616752	3236309	6472618

Chapter -9

Agricultural Extension





9 *Agricultural Extension*

9.1 Support to State Extension Programmes for Extension Reforms (ATMA Model): This Scheme was originally launched during 2005-06, aims at making extension system farmer driven 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/farmer groups, NGOs, Krishi Vigyan Kendras (KVKs), Panchayati Raj Institutions and other stakeholders operating at district level and below. Release of funds under the ATMA scheme is based on State Extension Work Plans (SEWPs) prepared by the State Governments.

9.2 In order to promote key reforms under the scheme, ATMA Cafeteria 2010 was approved during the year. It continues to support activities in line with the following policy parameters:

- **Multi-agency extension strategies:** At least 10% of allocation on recurring activities at district level is to be used through non-governmental sector viz. NGOs, Farmers Organization (FOs),

Panchayati Raj Institutions (PRIs), para-extension workers, agri-preneurs, input suppliers, corporate sector, etc.

- **Farming system approach:** The activities specified in the cafeteria are broad enough to promote extension delivery consistent with farming systems approach and extension needs emerging through Strategic Research and Extension Plan (SREP).
- **Farmer centric extension services:** The cafeteria provides for group-based extension and it has necessary allocation for activities related to organizing and supporting farmer groups. In order to supplement these efforts, a provision for rewards and incentives to the best organized farmer groups has also been provided.
- **Convergence:** The SREP and SEWP would also be mechanisms for ensuring convergence of all activities for extension. At present, resources for extension activities are being provided under different schemes of Centre/ State Governments. It is mandated that the SEWP to be submitted by the

State Governments for funding under the scheme shall explicitly specify the activities to be supported from the resources of other ongoing schemes as well as from this scheme.

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

9.3 The important features of the Revised cafeteria include:-

- Support for specialists and functionaries at State, District and Block Level
- Innovative support through a 'Farmer Friend' at Village Level @ 1 Farmer Friend per two villages
- Farmers Advisory Committees at State, District and Block levels
- Farm Schools in the field of outstanding farmers being promoted at Block/ Gram Panchayat level by integrating the Progressive farmers into Agricultural Extension System (AES) (3-5 Farm Schools/ block).
- Farmer-to-farmer extension support at the village level to be 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) to be

set up by KVKs being 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. At least 10 per cent of outlay of the Programme is to be utilized through non-governmental implementing agencies and agripreneurs. Non-governmental implementing agencies (excluding the corporate sector) are also eligible for service charge up to a maximum of 10 percent of the cost of the extension activities implemented through them.
- Public extension functionaries are being made more effective through trainings and exposure visits. National Institute of Agricultural Extension Management (MANAGE), Hyderabad is offering PG Diploma in Agriculture Extension Management for public extension functionaries which is fully funded under the ATMA Programme.

9.4 Implementation Status:

- 598 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) and ATMA Managing Committee in 598 districts and Block Technology Team (BTT) in 4463 Blocks and Farmer Advisory Committees (FACs) in 4359 Blocks have been operationalized.
- SEWP of 28 States/ UTs in respect of 598 ATMA districts were approved during 2010–11.
- A budgetary provision of Rs.250 crore has been made.

Since inception of the scheme in 2005-06 to January 2011:

- Over 1,40,97,347 farmers including 34,54,312 farm women (24.50%) have participated in farmer oriented activities like exposure visits, trainings, demonstrations & kisan melas.
 - Over 64,343 Commodity based Farmer Interest Groups (CIGs) have so far been mobilized under the scheme.
 - Over 20,602 Farm Schools have been set-up on the fields of outstanding farmers.
- Progress of implementation during the current financial year (up to January 2011) is as follows:
 - Over 14,61,006 farmers including 2,99,496 farm women (20.50%) have participated in farmer oriented activities like exposure visits, trainings, demonstrations & kisan melas.
 - 5,109 CIGs/ FIGs have been set up.
 - 5,413 Farm Schools have been set up.

9.5 Central Monitoring and Evaluation:

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 Monitoring and Evaluation Studies. The States of Himachal Pradesh, Rajasthan, Punjab, Orissa, Andhra Pradesh & West Bengal 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.

9.6 Mass Media Support to Agriculture:

This Scheme is focusing on the use of Doordarshan and All India Radio (AIR) infrastructure for providing agriculture related information and knowledge to the farming community. 180 Narrow casting Centres, 18 Regional Centres and 1 National Centre of Doordarshan Kendras telecast agricultural programmes for 30 minutes, five days a week. Programmes of Regional Kendras and some Narrowcasting Centres are being repeated the next day on respective Regional Satellite Channel. Audio/ Video spots on emerging issues like Rabi/Kharif campaign, Kisan Call Centre, Kisan Credit Card etc. are also publicized. Live 'Crop Seminars' on DD involving farmers and experts have also been organized.

9.7 With a view to create awareness about assistance available under various schemes, a focussed publicity campaign through print media, Doordarshan and Private TV channels has been launched during the current year with an approved amount of Rs.91 Crores.

9.8 The other component of the mass media initiative is use of 96 FM Transmitters of AIR to broadcast area specific agricultural programmes of 30 minutes duration for radio transmission in the evening six days a week.

9.9 Establishment of Agri-Clinics and Agri-Business Centres by Agriculture Graduates (ACABC):

The Agri-Clinics and Agri-Business Centres (ACABC) Scheme was launched in 2002 to strengthen the extension services and at the same time to help the unemployed Agriculture graduates to become self employed. Initially, the Scheme provided for training and handholding support to the selected agriculture graduates to

establish agri-ventures. Credit-linked back-ended subsidy component for establishing agri-ventures was introduced w.e.f. July 9, 2006. Training and handholding components are being implemented by National Institute of Agricultural Extension Management (MANAGE) through recognized Nodal Training Institutes (NTIs). National Bank for Agriculture and Rural Development (NABARD) is the agency for subsidy administration under the Scheme. Till January, 2011, 23475 candidates have been trained, out of which 8344 candidates have established agri-ventures across the country.

9.10 In order to encourage establishment of more number of agri-ventures in rural areas for supporting the State Extension System in providing advisory services to farmers, the Scheme has been revised w.e.f. August 2010. Eligibility criteria have been widened to rope-in a larger cross section of unemployed agricultural professionals, including diploma holders and those with intermediate qualification in agriculture. Incentive to the trained professionals for early establishment of ventures has been introduced for ensuring greater success rate. Provision has been made for refresher courses for successful agripreneurs, besides instituting awards for best agri-ventures and Nodal Training Institutes. The subsidy component has been simplified by changing it to composite subsidy (44% of project cost for NE & Hill States, SC/ST, Women and 36 % of project cost for others). For subsidy purposes, the ceiling on project cost has been enhanced (Rs.20 lakh for individual projects and Rs.100 lakh for group projects) to encourage agripreneurs to expand their ventures to reach large number of farmers. To energize the banking sector to play a more pro-active role in extending credit support to the agri-ventures, support has been provided to NABARD for conducting sensitization and orientation programmes to bank officials.

In order to ensure that the provisions made under the revised scheme are gainfully utilized, enough checks & balances and an effective monitoring mechanism have been put in place with active involvement of all the stakeholders including PRI Institutes, State Departments, SAUs and ICAR Institutes.

9.11 **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 upon various recommendations made by expert groups in different Subject Matter Areas. Action Taken on the recommendations of previous Interface are also reviewed. The participants in DAC-ICAR Interface are the senior officers from DAC, Department of Animal Husbandry, Dairy and Fisheries (AHD&F) and ICAR. 31st DAC-ICAR Interface in the series was organized on 10.09.2010, which mainly focused on developing the strategies to mitigate the effect of drought situation on crop production in the country. The copy of proceedings and group recommendations of the said interface were circulated to all the concerned Divisional Heads of DAC, DAHD&F, ICAR, all the states and related institutes for necessary follow-up. Next Pre-Kharif Interface is likely to be held in Feb.-March, 2011.

9.12 **Kisan Call Centers (KCCs):** The scheme was launched on 21st January 2004 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 and till December 2010, over 59.06 lakh calls have been received. During the current year, around 17 lakh calls have been received upto 31st December, 2010 as against around 9 lakh calls received during last year. In order to make farmers aware of this facility, audio and video spots on Kisan Call Centres are being 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 is being developed for each State/Union Territory.

9.13 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 Extension Education Institutes (EEIs) at the regional level and the State Agricultural Management & Extension Training Institutes (SAMETIs) at the State level.

9.14 MANAGE: This Institute 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 100 training courses planned, 64 training courses with 1,748 participants were organized by MANAGE up to November, 2010. Against the budget estimates of Rs.600.00 lakh, an amount of Rs.336.01 lakh has been released till January, 2011.

9.15 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 2010–11 at MANAGE. MANAGE has also launched the P.G. Diploma programme on Agricultural Extension Management during 2007-08 in a 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 were also enrolled for this course.

9.16 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 last years rankings of 65th, 29th and 5th under these categories.

9.17 Extension Education Institutes (EEIs): Four Extension Education Institutes located at Nilokeri (Haryana), Rajendranagar, Hyderabad (Andhra Pradesh), Anand (Gujarat) and Jorhat (Assam) are operating at the regional level. The objectives of EEIs are to improve the skills and professional competence of Extension field functionaries of Agriculture and allied departments in the fields 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.

9.18 During 2010-11, EEIs have planned 156 courses with 3120 participants. Till September, 2010, 1446 participants have undergone training through 62 courses. Out of the budget allocation of Rs. 460.50 lakh, an amount Rs.44.63 lakhs has been released to EEIs under Plan Scheme till September, 2010.

9.19 Model Training Courses (MTCs): Model Training Courses of eight days duration

on thrust areas of Agriculture, Horticulture, Animal Husbandry, and 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, 50 Model Training Courses have been planned, out of which 47 training courses have been organized till January 2011. Against the budget grant of Rs.115.00 (RE) lakh an amount of Rs.102.83 lakh has been released till January 2011.

9.20 National Gender Resource Centre in Agriculture (NGRCA): This was 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 the convergence of gender related activities and issues in agriculture and allied sectors within DAC, for adding gender dimension to agriculture policies and programmes, and for rendering advocacy/ advisory services to the States/UTs to internalize gender specific interventions for bringing the farm women in the mainstream of agriculture development.

9.21 The following are the macro/micro level and action research studies/ tasks undertaken by NGRCA:

- Analytical Study on existing State Policies, Programmes, Interventions, Processes and their impact on women's access to Land which was out sourced to MANAGE is under process.
- Mainstreaming Gender Concerns in Agriculture was outsourced to Centre for Management Development, Thycaud, Thiruvananthapuram, Kerala in the final stage.

- Three days duration Gender Sensitization Modules' (GSM) of 3 days duration for Extension Functionaries at the cutting edge level are being organized through State Agricultural Management and Extension Training Institutes (SAMETIs). Approximately 6000 blocks in the country are proposed to be covered by training a minimum 3 functionaries (1 from Agriculture, 1 from Animal Husbandry and 1 from Horticulture or allied sector). in each block. 600 Programmes are mandated to be covered by SAMETIs over a period of 4 years so as to cover 15,000 cutting edge level extension functionaries. During the year 2009-10, 79 training programmes have been conducted to train 1759 cutting edge level extension functionaries through the SAMETIs of the States of Andhra Pradesh, Uttar Pradesh, Haryana, Bihar, Gujarat, Punjab, West Bengal, Kerala and Karnataka. Funds have been released to the SAMETIs of the States of Andhra Pradesh, Chhattisgarh, Tamil Nadu and Sikkim during 2009-10 for organizing 40 training programmes of GSM so as to train 1000 extension functionaries. Since the revision of financial norms for organizing the training programmes is under consideration, funds have not been released to SAMETIs so far during the current financial year.

9.22 Exhibitions: Agricultural exhibitions are excellent means of reaching to a large number of farmers. DAC participated in India International Trade Fair (IITF) 2010 from 14th to 27th November and the theme of the pavilion was 'Progressive Farmer-Prosperous Nation'. ITPO chairman's certificate for excellence in display was awarded to Agriculture Pavilion during this

year. The Department of Agriculture & Cooperation, Ministry of Agriculture, Govt. of India participated in the Republic Day parade with the tableau depicting with the theme “State-of-the-Art Sustainable Agriculture” during the year 2011. Besides this, DAC supports five regional fairs every year. State and District level exhibitions are supported under ATMA programme. DAC had also participated in Regional Agriculture Fair for Southern Region organized at Coimbatore from 30th September to 3rd October, 2010 and Western Zone Regional Fair at Bikaner from 8-11 February 2011.

Extension Programmes in North-Eastern States

9.23 Status of implementation of ATMA scheme in the North Eastern Region: During the current year (2010-11), Rs.25.00 crore was earmarked as Budget Estimate for North Eastern States for implementing the scheme. Till September, 2010, an amount of Rs.7.97 crores has been released to Nagaland & Arunachal Pradesh. The details of implementation of the scheme in various states of the North Eastern Region are given below:

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	12	Kokrajhar, Bongaigaon, Golpara, Karimganj, Cachar, NC Hills Darrang, Lakhimpur, Sivsagar, Golaghat, Tinsukia, Morigaon
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, Rao-bhoi, Jaintia Hills, South Garo Hills, East Garo Hills, West Garo Hills.
6.	Nagaland	11	Dimapur, Kohima & Mokokchung, Tuensang, Mon, Phek, Zunheboto, Wokha, Longleng, Kiphire, Peren.
7.	Sikkim	4	South District, East District, North District, West District
8.	Tripura	4	North Tripura- Dharma Nagar, South Tripura-Udaipur, West Tripura, Dhalai.
	Total	71	

9.24 **Mass Media Support to Agricultural Extension in North Eastern Region:** A List of Narrowcasting and FM Kisan Vani Stations operating in the North Eastern Region

and producing/ broadcasting 30 minutes agricultural programmes, 5/6 days a week, 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	Agartala Kailasahr Tellamura, Amarpur Jolaibari	Kailasahr, Belonia

9.25 **Kisan Call Center in North Eastern Region:** Guwahati Call Center caters to the needs of 3 States located in the North East viz. Assam, Manipur and Nagaland. Other States in the North Eastern India have a Call Centre dedicated to these States. Queries are replied in different languages depending upon the area from where the query is received. Since the beginning of Scheme till December, 2010, the calls received from various states of North-Eastern Region are: Arunchal Pradesh (2903), Assam (42403), Manipur (24065), Meghalaya (11546), Mizoram (6799), Nagaland (1764), Sikkim (1569) and Tripura (17878). The calls received from various States during current year up to January, 2011 are Arunachal Pradesh (676), Assam (8304), Manipur (467), Meghalaya

(3806), Mizoram (227), Nagaland (165), Sikkim (669) & Tripura (921).

9.26 **Extension Education Institute in North Eastern Region:** Extension Education Institute set up in Jorhat (Assam) in 1987 has been providing training support at the regional level to the middle level functionaries of the State Government in the Eight States of NE Region and West Bengal. During the year 2010-11 (till September-2010) 12 courses have been organized and 306 officers trained. An amount of Rs. 27.78 lakhs has been released to EEI Jorhat till September, 2010 as against the budget estimate of Rs. 100.00 lakh.

9.27 Details of the extension programs 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 the 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 the Ministry of Agriculture. It was set up in the year 1935 to implement the 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 safeguarding the interests of producer-sellers as well as the consumers. It maintains a close liaison between the Central and the State Governments in the implementation of agricultural marketing policies in the country.

10.3 Organizational set up: The Directorate is headed by the Agricultural Marketing Adviser to the Government of India (AMA). The Directorate has its Head Office at Faridabad (Haryana), Branch Head Office at Nagpur (Maharashtra) 11 Regional Offices at Delhi, Mumbai, Chennai, Kolkata, Hyderabad, Chandigarh, Jaipur, Lucknow, Bhopal, Kochi and Guwahati and the Central Agmark Laboratory at Nagpur. Besides, there are 26 Sub-Offices and 11 Regional Agmark Laboratories (RALs) spread all over the country as per the 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 The main functions of the DMI are the following:-

- Promotion of Standardization and Grading of agricultural and allied produce under the Agricultural Produce (Grading & Marking) Act, 1937 as amended in 1986;
- Training of personnel in agricultural marketing;
- Advising States on regulation and management of agricultural produce markets;
- Marketing Extension;
- Agricultural Marketing Information Network;
- Construction of Rural Godowns; and
- Development/ Strengthening of Agricultural Marketing Infrastructure, Grading & Standardization;

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 the Central Government to make Rules for (a) fixing grade designation to indicate quality of any scheduled article (b) defining the quality indicated by every grade designation and (c) specifying grade designation marks to represent particular grade designations. Standards notified as per the 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 to get prices for agricultural commodities as per the quality produced by them and consumers get the desired quality. Till date, grade standards for 203 agricultural commodities have been notified. These include fruits and vegetables, cereals, pulses, oilseeds, vegetable oils, ghee, spices, honey, creamery butter, wheat atta, besan, etc. These commodities can also be certified under Agmark as per the prescribed grade standards. 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 the provisions of the Act.

10.7 The final notification of Guar Grading and Marking Rules, 2011 (containing standards of Guar Seeds, Guar Gum and Guar Gum Powder) is in the process of publication in the Gazette of India. The preliminary draft notification of Jatropha seed Grading and Marking Rules, 2010 has been published in the Gazette of India (extraordinary), Part II, Section 3, sub section (i) on 28th September, 2010 vide GSR No. 781(E) dated 28th September, 2010 and now is in the process of final notification. The preliminary draft notification of Organic Agricultural Produce Grading and Marketing (Amendment) Rules, 2011 is in the process of the publication in the Gazette of India.

10.8 Till date 107 Commodities Grading and Marking Rules covering 203 agricultural commodities have been notified under the provisions of AP (G&M) Act, 1937. All the final notifications have been uploaded on the AGMARKNET website www.agmarknet.nic.in for the benefit of its users.

10.9 Agricultural commodities valued at Rs.7865.25 crores and of Rs. 8614.58 crores

were certified under Agmark for domestic trade during the years 2008-09 and 2009-10 respectively. Agricultural commodities valued at Rs.241.08 crores and 306.65 crores were certified under Agmark for exports during the years 2008-09 and 2009-10 respectively. There were 6158 Certificate of Authorization holders for grading and marking of agricultural commodities for domestic trade and 284 Certificate of Authorization holders for exports at the end of March, 2010.

10.10 Revenue: The total revenue realized during the year 2009-10 by DMI on account of grading charges etc was Rs.12.21 crores. The revenue realized during the year 2010-11 is Rs.8.90 crores (upto December, 2010).

10.11 Training: The Directorate of Marketing and Inspection conducts a number of training courses relating to agricultural marketing for the benefit of State Governments/ Union Territories, Co-operatives, Corporations, Market Committees, Marketing Boards and other statutory bodies. Under these training programmes, 12545 Agricultural Marketing Personnel have been trained since inception upto March 2010. During the year 2010-11 (upto January, 2011), 140 personnel have been trained under different training programmes.

10.12 Regulation, Development and Management of Agricultural Produce Markets: Agricultural Markets are regulated and managed under the Agricultural Produce Marketing (Regulation) Act enacted by the respective State Governments. The Central Government provides guidance and assistance in regulation and development of agricultural produce markets. By the end of March, 2010, 7157 markets have been brought under the ambit of regulation. In the perspective of agricultural marketing reforms, this Directorate has prepared the Model APMC Act, 2003 and the Model APMC Rules, 2007 and circulated them to all the

State Governments / UT Administrations for consideration and adoption.

10.13 Marketing Extension: Quality control programmes under Agmark as well as the different plan schemes of the 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.

10.14 The Directorate participated in AAHAR International Food Fair, Chennai during 26 – 28 August, 2010 and India International Trade Fair-2010 held during 14-27 November at Pragati Maidan, New Delhi. AGMARK Exhibition is being organized at Lucknow during 22 – 24 March, 2011. These exhibitions focus on schemes relating to AGMARKNET, Marketing Infrastructure and Rural Godowns. The Directorate through its Regional/Sub-Offices is participating in as many exhibitions as possible to disseminate the messages on Agmark to the consumers/ farmers during 2010-11.

10.15 A sum of Rs. 41.07 lakhs has been released to DAVP, New Delhi for preparation of Video spot on Agmark and publicity of Agmark through Video and Audio spots in various media channels, Agmark Hoardings were placed at Bus Stations and at Metro Rail Tree Guards in Metro Rail Stations through DAVP, New Delhi during 2010-11.

10.16 Marketing Research and Information Network (AGMARKNET): A Central Sector Scheme of Marketing Research and Information Network was launched by the Ministry of Agriculture, Department of Agriculture and Cooperation in March, 2000. The market information network, AGMARKNET (agmarknet.nic.in) is being implemented jointly by DMI and NIC, using NICNET facilities available throughout

the country. The objective of the scheme is to facilitate collection and dissemination of information for better price realization by the farmers. The information covers market related, price related, infrastructure related and promotion related issues for efficient marketing. During the XIth Plan, 244 new computers have been procured and 169 old computers have been replaced till January, 2011.

10.17 The markets are reporting daily data on prices and arrivals using a comprehensive national level database at AGMARKNET Portal (<http://agmarknet.nic.in>). Information on Wholesale prices and arrivals in respect of more than 300 commodities and 2000 varieties is being disseminated through the portal on daily basis. More than 3000 markets have been linked to the Central AGMARKNET Portal and more than 1900 markets are reporting the data on daily basis. Weekly and monthly bulletins on prices and arrivals are being generated using the national database. In addition to prices and arrivals, several other market related information is also being provided on the portal. These relate to accepted standards / grades, labeling, sanitary and phyto-sanitary requirements, physical infrastructure of storage and warehousing, marketing laws, fees payable, etc. Efforts are continuing to prepare a National Atlas on agricultural markets on a GIS platform which would indicate the availability of entire marketing infrastructure in the country.

10.18 The portal has linkages with various organizations related to agricultural marketing. Besides spot prices from commodity exchange, the portal also provides access to future prices, MSP and international commodity prices. Further, it provides information about schemes of DMI, weather information, e-directory of markets, CODEX standards etc. The portal is constantly being enriched. The information on prices

and arrivals is being disseminated through eleven languages. The data base developed under AGMARKNET is also serving various Commodity Directorates of the Department of Agriculture and Cooperation by providing customized hyperlinks to data pertaining to specific commodities. An arrangement has been worked out with IFFCO for regular transmission of data on prices and arrivals from AGMARKNET to the touch screen multimedia kiosks being installed by them at the rural cooperative societies. Efforts are being made to strengthen the portal with other market related information.

10.19 **Construction of Rural Godowns:** A network of rural godowns will enable small farmers to avoid distress sale by enhancing their holding capacity and sell their produce at remunerative prices. Accordingly, Directorate has 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 of farmers for storing farm produce, processed farm produce, agricultural inputs, etc., and help them to avoid distress sale by creating the facility of pledge loan and marketing credit.

10.20 The scheme has been extended during the XIth Plan (31-03-2012) and under the revised scheme, w.e.f. 26-6-08 subsidy @ 25% is being given to all categories of farmers, agriculture graduates, cooperatives & CWC/SWCs. All other categories of individuals, companies and corporations would be given subsidy @ 15% of the project cost. In case of NE States/hilly areas, women farmers & SC/ST entrepreneurs and their cooperatives, subsidy is given at 33.33%.

10.21 The scheme has now been made more farmer friendly by allowing subsidy for smaller godowns of 50 MT size in general and of 25 MT in hill areas. Five lakh tonne capacity to be created has been reserved

for small farmers. By the end of December, 2010, 23047 godowns having a capacity of 274.13 lakh tonnes with a subsidy release of Rs.671.96 crores have been sanctioned by NABARD & NCDC all over the country. During 2010-11 (upto 31/12/2010), 1210 rural godowns with a capacity of 17.49 lakh MTs have been sanctioned by NABARD/NCDC.

10.22 In order to give wide publicity to the scheme, National Institute of Agriculture Marketing(NIAM), Jaipur has been conducting awareness and training programmes. During last nine years, 6 national seminars, 4 workshops, 30 sensitization programmes have been organized. In addition, 286 training programmes and 1259 farmer awareness programmes have been organized. These activities will be continued during the current year particularly in those states where the progress has been slow.

10.23 Development/ Strengthening of Agricultural Marketing Infrastructure, Grading & Standardization: The Scheme for Development/Strengthening of Agricultural Marketing Infrastructure, Grading and Standardization was launched w.e.f. 20.10.2004. Under this scheme, credit linked investment subsidy is being provided on the capital cost of general or commodity specific marketing infrastructure for agricultural commodities and for strengthening and modernization of existing agricultural markets, wholesale, rural or periodic or in tribal areas. The scheme covers all agricultural and allied sectors including dairy, poultry, fishery, livestock and minor forest produce. The scheme is reform linked and is being implemented in those States/U.Ts. which permit setting up of agricultural markets in private and cooperative sectors and allow direct marketing and contract farming.

10.24 During the year 2010-11, a sum of Rs.130.69 crores has been allotted in RE 2010-11 to develop 250 new Marketing

Infrastructure projects, 200 Wholesale and 70 Rural Primary Markets besides up-gradation and modernization of 6 Agmark laboratories and their accreditation with National Accreditation Board for Testing and Calibration Laboratories(NABL). An amount of Rs.75.00 crores has been released to NABARD, Rs.11.50 crores to National Cooperative Development Corporation and Rs.3.1543 crores to state agencies .

10.25 A subsidy amount of Rs.77.20 crores has been released by NABARD for 463 projects in the states of Andhra Pradesh, Madhya Pradesh, Punjab, Kerala, Tamil Nadu, Rajasthan, Maharashtra, Gujarat, Sikkim, Karanataka and Himachal Pradesh. No new project of State agencies has been approved. However final subsidy of Rs.3.1543 crores was released by DMI / Ministry, and 297 projects were approved through NCDC and subsidy of Rs. 8.46 crores has been released during 2010-11 (upto 31.12.2010).

10.26 Marketing Reforms: The State Governments have been advised suitably to modify APMC 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 the farm production and the retail chain and food processing industries. In the wake of the 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 and credit and to assured and profitable markets.

10.27 The States of Andhra Pradesh, Arunachal Pradesh, Assam, Chhattisgarh,

Goa, Gujarat, Himachal Pradesh, Jharkhand, Karnataka, Madhya Pradesh, Maharashtra, Mizoram, Nagaland, Orissa, Rajasthan, Sikkim and Tripura have amended their APMC Acts on the line of the Model Act. Bihar has repealed their APMC Act in September, 2006. Other States are in the process of amending their APMC Acts. Nine States have amended their APMC Rules so far.

10.28 To expedite the process of reforms and guide the States, the Ministry has set up a Committee of State Ministers in-charge of agricultural marketing under the Chairmanship of Minister of Marketing and Co-operation, Government of Maharashtra and various issues are being examined by the Committee. The Committee has had five meetings at New Delhi, Mussoorie, Khajuraho, Bhubaneswar and Sashangir, Gujarat and discussed various issues related to market reforms and investments in development of marketing infrastructure. The representatives of Andhra Pradesh, Assam, Bihar, Haryana, Karnataka, Madhya Pradesh, Maharashtra, Odhisha and Uttarakhand participated in the meeting.

10.29 **Modern Terminal Market Complex:** In order to harness the potential of emerging consumer demand for horticulture commodities, a professionally managed competitive alternate marketing structure which provides multiple choices to farmers for sale along with a comprehensive solution to meet key needs of the stakeholders is necessary. Such a system entails high investment cost and development of efficient skills, each of which can be infused by inviting private sector participation in the sector. Thus, the Modern Terminal Market in hub and spoke model was conceptualized to be set up on a Public Private Partnership basis with the objective of fulfilling the above goals.

10.30 The scheme is being implemented through a subsidy route under National Horticulture Mission with active involvement

of all stakeholders at various levels under public private partnership mode during the XIth Plan. The subsidy ceiling would be 40% with a floor subsidy of 25% of project cost with a maximum subsidy amount of Rs. 50 crore to the TMC Projects based on competitive bidding. Two Terminal markets projects viz. TMC Patna (Bihar) and TMC Perundurai (Tamil Nadu) have been approved. The bidding for TMC Babangaon has been completed by Maharashtra and recommendation from the state is awaited. In principle approval has been given to TMC Madurai, TMC Kancheepuram and TMC Nagpur to initiate the bid process.

10.31 **Ch Charan Singh National Institute of Agricultural Marketing:**

The National Institute of Agricultural Marketing (NIAM) is a premier National level Institute set up by the Government of India in August 1988 to offer specialized Training, Research, Education and Consultancy in the field of Agricultural Marketing. NIAM is an autonomous body under the aegis of the Ministry of Agriculture, Government of India. It was set up as a Registered Society to cater to the needs of agricultural marketing personnel in India as well as from South East Asian Countries. The Union Minister for Agriculture is the president of the General Body of NIAM and Secretary, Department of Agriculture and Cooperation is the Chairman of the Executive Committee.

10.32 For the year 2010-11, 50 programmes have been designed which include core programmes, farmer awareness programmes, target group specific programme such as programmes for cooperative Officials, Women etc. The programmes are being organized in different locations of the country to cover the vast clientele and to address the need based issues of stakeholders.

10.33 Training programmes for Central Sector Schemes include Training of Officers of Kissan Call Centres, Training of Officials of Cooperatives, bankers and State market

officials under Marketing Infrastructure Scheme and training of entrepreneurs and farmers under Rural Godown scheme. In tune with its mandate to conduct applied research on various aspects of Agricultural Marketing, NIAM is conducting five research studies during 2010-11.

10.34 NIAM is offering a two year Post Graduate Diploma in Agri-Business Management Programme (PGDABM) which is a AICTE approved residential programme, for students with undergraduate degree in Agriculture and Allied Sciences. The program combines the best of MBA with unique skills required for a career in Agribusiness. A total of 60 seats is offered through a national level written examination followed by Group Discussion and Personal Interview. So far 100% placement has been achieved by this programme since inception. NIAM has been rated among top 50 B-schools by the Business World.

10.35 In order to generate resources and make optimum utilization of the expertise of the NIAM faculty, the Institute is taking up 8 Consultancy Projects in the year 2010-11.

10.36 **Programme for North East and Women:** Considering the specific needs of the north eastern state, 10% of the Training Programmes will be for the officers and stakeholders of North East region. Focus will also be given to address the gender issues by building capacities of women and empowering them in Agricultural Marketing. 5% of the Training Programmes will be for Women stakeholders.

10.37 **Small Farmers' Agri Business Consortium:** Small Farmers Agri-business Consortium (SFAC) was registered by Department of Agriculture and Cooperation on 18th January, 1994 as a society under the Societies Registration Act, 1860. Currently, the 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.

10.38 The 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/producers' groups for preparing quality Detailed Project Reports (DPR).

10.39 For effective implementation of the scheme SFAC has already signed MOU with 21 commercial banks including OBC, UCO Bank, Bank of Baroda, Punjab National Bank, Central Bank of India, Allahabad Bank, Canara Bank, Vijaya Bank, The Jammu & Kashmir Bank Ltd, Bank of Maharashtra, United Bank of India, Syndicate Bank, State Bank of India, State Bank of Bikaner & Jaipur, Indian Bank, Dena Bank, Union Bank of India, Bank of India, State Bank of Patiala, State Bank of Saurashtra and Indian Overseas Bank. During 2010-11, SFAC surpassed the physical target of 65 projects and achieved 45 projects and 26 DPRs have been prepared so far against a target of 30. The scheme is open to women entrepreneurs also. SFAC has assisted project proposals from two women entrepreneurs which have been granted venture capital as per norms.

10.40 Since inception of the Scheme for Agribusiness Development, Department of Agriculture and Cooperation released an amount of Rs. 88.93 crores till 31.03.2010 against which the expenditure incurred was Rs. 88.92 crores. SFAC has also assisted 304 agribusiness projects and released VCA of Rs. 81.39 crores generating private investment of Rs. 791.07 crores, which will provide an assured market to 63674 farmers, for their produce, and create direct employment for 23439 persons.

Chapter - 11

Agricultural Trade





11

Agricultural Trade

11.1 India is among the 15 leading exporters of agricultural products in the world. 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.

11.2 Agricultural exports increased from Rs.85951.56 crores in 2008-09 to Rs. 89522.89 crores in the financial year 2009-10 registering a growth of about 4.16%. Share of agricultural exports in total exports increased from 10.22% in 2008-09 to 10.59% in 2009-10. Increase in value of agricultural exports during 2009-10 was primarily on account of higher exports of basmati rice, tobacco (un-manufactured), meat and meat preparations, paper/wood products, castor oil, and tea fresh & processed fruits & vegetables compared to corresponding period of previous year. Export of non-basmati rice, wheat, sugar, dairy products and poultry, molasses, oil meals, floriculture registered a decline as compared to last year.

11.3 Agricultural imports recorded sharper increase from Rs. 37183.49 crores in 2008-09 to Rs.61452.57 crores in 2009-10

registering a growth of 65.27%. The Share of agricultural imports in the total imports also increased from 2.71% in 2008-09 to 4.53% in 2009-10. Increase in value of agricultural imports during this period was primarily due to higher imports of wheat, sugar, vegetables oils fixed (edible), cotton raw & waste, cashew nuts, other cereals, pulses, dairy products, oil seeds and jute raw. However, decrease in imports was registered in the case of rice in 2009-10.

11.4 There has been generally a surplus in agricultural trade over the years. However, trade surplus decreased from Rs.48768.07 crores in 2008-09 to Rs. 28070.32 crores in 2009-10 mainly due to higher imports of wheat, cotton raw & waste, vegetable oil fixed (edible) and sugar.

11.5 The scheme, "Capacity Building to Enhance Competitiveness of Indian Agriculture and Registration of Organic Production Abroad" aims to address micro-level capacity development issues. The Scheme has an outlay of Rs. 1 crore for the year 2009-10. The Department is getting a study done on the effect of World Trade Organization on Indian Agriculture through Research

and Information System for Developing Countries (RIS), and updating and hosting a database of items of export interest through Agricultural and Processed Food Products Export Development Authority (APEDA). The Department is also taking up a programme for capacity building of farmers, officials, traders under the scheme.

11.6 EC-India Joint Working Group on Agriculture and Marine Products has been set up for facilitating and promoting agricultural trade between India and European Union. The 4th meeting of the Joint Working Group was held in Brussels on 28th May 2010 to discuss agricultural policies, growth in bilateral trade and issues of mutual interest related to agricultural trade.

11.7 Negotiations on PTAs / FTAs are at various stages of progress with MERCOSUR (Brazil, Argentina, Paraguay, Uruguay), BIMSTEC (Bangladesh, Bhutan, Myanmar, Nepal, Sri Lanka and Thailand), Gulf Cooperation Council (Kuwait, Bahrain, Qatar, Oman, Saudi Arabia and United Arab Emirates), Thailand and the European Union. Agriculture Department has consistently taken a stand that agricultural commodities which are vulnerable to global competition and which are crucial for food security and livelihood security be kept out of the purview of concessions even under FTAs/RTAs. Besides, stringent rules of origin norms and built-in safeguards are being negotiated to protect the interest of farmers.

11.8 Doha Round of trade negotiations in the

World Trade Organisation (WTO), which were launched in November 2001, are in progress. Throughout the negotiations, India has been working constructively with coalition partners in developing country groupings, such as the G-20 and G-33. A Mini Ministerial was held in Geneva from 21st -29th July, 2008 to finalize the Modalities for Agriculture and NAMA. However, the Agricultural Negotiations broke down due to lack of consensus on the Special Safeguard Mechanism (SSM) apart from lack of consensus on other important areas of negotiation like sensitive products, tariff capping, tariff simplification etc. There were several other important developing country issues like cotton, preference erosion, tropical products, Duty Free Quota Free (DFQF) market access on which agreement has not reached. Chairman of the WTO Agriculture Negotiations brought out further Revised Draft Modalities on Agriculture and Non-Agriculture Market Access (NAMA) on 6th December, 2008. Multilateral discussions on the outstanding issues of 2008 modalities have not yet concluded in the WTO. The G-33 countries have done considerable work on SSM and issued six discussion papers on all aspects of SSM. India is committed to a successful conclusion of the Doha Round Negotiations, while protecting the livelihood and food security concerns of our farmers, as per the agreed framework for negotiation. Leaders of G-20 countries have recently given a call to attempt to conclude Doha round in 2011. Consequently, discussions on the outstanding issues have resumed recently.

Chapter - 12

Mechanisation and Technology





Mechanisation and Technology

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

with various agricultural operations. As a result of different programmes implemented by the Government of India over the years, the total farm power availability is estimated to have increased from 0.295 kW/ha in 1971-72 to 1.502 kW/ha in 2005-06.

12.2 As a result of the joint efforts made by the Government and the private sector, the level of mechanization has been increasing steadily over the years. This is evident from the sale of tractors and power tillers, taken as indicators of the 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 (Upto December 2010)	3,95,605	27,763

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 2010-11 (till 31st December, 2010), 4443 persons have been trained against the annual target of 6000 in different courses. The target of training during the Eleventh Plan has been increased to 28,000 from 25,000 during the Tenth Plan. To supplement the efforts of the FMTTIs in human resource development, outsourcing of training through SAUs, Agricultural Engineering colleges, polytechnics, etc., has been approved during the XIth 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 for training by outsourcing during the Eleventh Plan is 10,000 persons and the target for 2010-11 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 for 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 the Eleventh Plan, the target of testing has been kept at 550 machines/tools.

12.5 Authorized Testing Centers: To cope up with the ever increasing demand for testing of newly developed agricultural machines and equipments, during 2010-2011, 21 State Agricultural Universities (SAUs)/ICAR institutions have been designated 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 the departmental website for wider publicity among the users/ manufacturers.

12.6 The four FMTTIs altogether have tested 185 machines of various categories including tractors, power-tillers, combine harvesters, reapers, rotavators and other implements, till 31st December, 2010, 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 the cost of production, the induction of improved/new technology in the 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 the restructured scheme of 'Promotion and Strengthening of Agricultural Mechanization through Training, Testing and Demonstration' which continued during the Eleventh Plan. This scheme envisages conduct of demonstration of improved/newly developed agricultural/horticultural equipments identified by the 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 2010-11 (up to 31st January 2011), 14829 demonstrations have been conducted. Under outsourcing of training, 3380 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 the 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 2010-11 (up to 31st January, 2011), 3572 tractors, 700 power tillers, 31352 hand tools, 5417 bullock-drawn implements, 3426 tractor-driven implements, 1456 self-propelled/power-driven equipments, 1563 plant protection equipments, 1761 irrigation equipments and 2925 gender-friendly equipments have been supplied to the farmers.

12.11 State Agro Industries Corporations: The Government of India had advised the State Governments in the year 1964, to set up State Agro Industries Corporations (SAICs) in the public sector to act as catalysts in providing access to industrial inputs for farmers for their use in agriculture. Thus, 17 SAICs were set up in the joint sector with equity participation of the Government of India and respective State Governments in the States of Andhra Pradesh, Assam, Bihar, Gujarat, Haryana, Himachal Pradesh, Jammu and Kashmir, Karnataka, Kerala, Madhya Pradesh, Maharashtra, Orissa, Punjab, Rajasthan, Uttar Pradesh, Tamil Nadu and West

Bengal during 1965 to 1970. Many of the State Governments have increased their equity participation as a result of which 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 a policy of disinvestment of its shares in SAICs with a view to giving greater decision making power to the state governments by allowing transfer of its shares to the state governments as per the following guidelines:

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

12.12 So far, Government of India's shares in SAICs of Gujarat, Karnataka, Uttar Pradesh, Tamil Nadu, Rajasthan and West Bengal have been transferred to the State Governments concerned. The State Governments of Madhya Pradesh, Assam and Jammu & Kashmir have since agreed, in principle, for transfer of the Government of India's shares held in these SAICs.

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 the quality and performance characteristics of different agricultural implements and

machines in the region. During the year 2010-2011, the Institute imparted training to 504 persons and tested 12 machines (up to 31st December, 2010). The details of various programmes launched in the North-Eastern States during the year 2010-11 are indicated in **Annexure 12.1**.

12.14 Post Harvest Technology and Management: As one of the thrust areas for the Ministry of Agriculture, a scheme on Post Harvest Technology and Management has been proposed to be implemented with an outlay of Rs. 95.00 crores during the 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 established in the production catchments. The Scheme will basically focus on the lower end of the spectrum of post harvest management and processing i.e areas that are not covered

under the programmes of Ministry of Food Processing 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 and technologies for by-product management in the 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 2010-2011 (upto 31st December, 2010), 2609 demonstrations have been carried out to promote Post Harvest Technology and Management (PHT) and 1282 additional PHT units have been established. The figures for outsourcing of training are yet to be received from the concerned states.

Chapter - 13

Horticulture

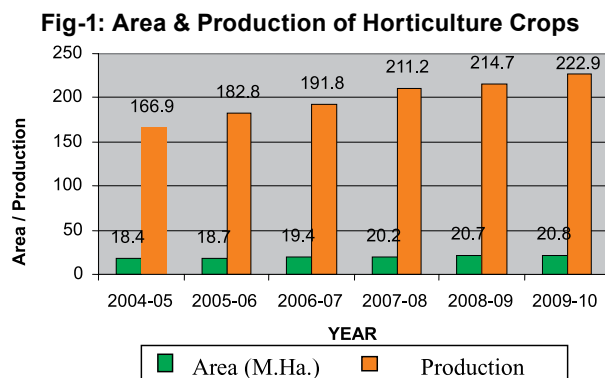




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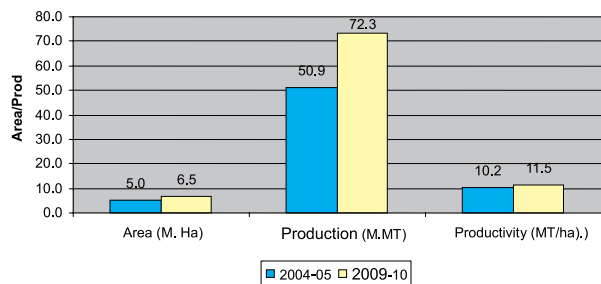
Horticulture

13.1 The horticulture sector covers a wide range of crops such as fruits, vegetables, root and tuber crops, flowers, aromatic and medicinal plants, spices and plantation crops, which facilitate diversification in agriculture. There is a realization that growing horticulture crops is now an option to improve livelihood security, enhance employment generation, attain food and nutritional security and increase income through value addition. As of 2009-10, horticultural crops occupied an area of 20.8 million hectares producing 222.9 million tonnes of horticultural produce. Over the years, there has been a significant improvement in the production of horticulture crops. The trend of area and production of horticulture crops during the past five years is depicted in Fig. 1



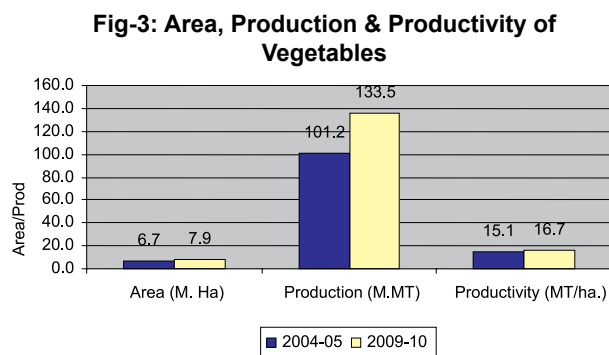
13.2 Fruits and vegetables together constitute about 92.3 per cent of the total horticultural production in the country. The area under fruit crops during 2009-10 was 6.3 million hectares with a total production of 72.3 million tonnes, which constituted 32.44 per cent share of total production. The comparison of area, production and productivity of fruits between 2004-05 and 2009-10 is given in Fig. 2

Fig-2: Area, Production & Productivity of Fruits



13.3 While India is the second largest producer of fruits in the world, it is the largest producer of fruits like mango, banana, papaya, sapota, pomegranate and Aonla. About 40 per cent of the world's mangoes and 30 per cent of the world's bananas and papayas are produced in India. In terms of productivity of grapes, India ranks first in the world.

13.4 Vegetables are an important crop in the horticulture sector and occupied an area of 7.9 million hectares during 2009-10 with a total production of 133.5 million tonnes and a productivity of 16.7 tonnes/ha. The trends are shown in Fig. 3.



13.5 India is the second largest producer of vegetables after China and is a leader in the production of peas and okra. Besides, India occupies the second position in the production of brinjal, cabbage, cauliflower and onion and third position in potato and tomato in the world. Vegetables that are produced in abundance are potato, tomato, brinjal, okra, and cucurbits.

13.6 After implementing various horticulture development programmes including National Horticulture Mission (NHM) in the country, the availability of fruits has increased from 138 gms/pers/day in 2005 to 172 gms/pers/day in 2010. Similarly, the availability of vegetables has increased from 279 gms/pers/day in 2005 to 318 gms/pers/day in 2010.

13.7 India has made noticeable advancements in the production of flowers, particularly cut flowers, which have a high potential for exports. During 2009-10, an area of 0.18 million hectares was covered under

floriculture, with a production of 1.02 million tonnes of loose and 66.67 million tonnes of cut flowers.

13.8 India is the largest producer, consumer and exporter of spices and spice products. The total production of spices during 2009-10 was 4.02 million metric tonnes from an area of 2.46 million hectares. The total production of plantation crops during 2009-10 was 11.26 million metric tonnes from an area of 3.27 million hectares.

13.9 Development of horticulture in the country is mainly through developmental programmes of the Department of Agriculture & Cooperation. The schemes under implementation include National Horticulture Mission (NHM), Horticulture Mission for North Eastern and Himalayan States (HMNEH), National Mission on Micro Irrigation (NMMI), National Bamboo Mission (NBM), Schemes of the National Horticulture Board (NHB) and 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 in Nagaland for providing technology & HRD support to the horticulture sector in the North-Eastern states.



13.10 National Horticulture Mission (NHM): The Department of Agriculture & Cooperation, Ministry of Agriculture is implementing a Centrally Sponsored Scheme “National Horticulture Mission (NHM)” in the country since 2005-06 for the holistic development of horticulture sector duly ensuring forward and backward linkages by adopting cluster approach, with the active participation of all the stake-holders. All the States and three Union Territories of Andaman Nicobar Islands, Lakshadweep and Puducherry are covered under the Mission, except the eight North Eastern States, including Sikkim, and the States of Jammu & Kashmir, Himachal Pradesh and Uttrakhand, which are covered under the Horticulture Mission for North East & Himalayan States (HMNEH). At present, 371 districts in 18 States and 3 Union Territories have been covered under NHM. Apart from the States and Union Territories, 13 National Level Agencies (NLAs) have been included for

providing support for the developmental efforts which require inputs at the National Level.

13.11 The objective of NHM is to promote holistic growth of the horticulture sector through area –based, regionally differentiated strategies. The 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 the major programmes of the Mission.

13.12 **Physical Progress:** The summary details of the progress achieved is given in Table below:

(Area in lakh hectares)

S.No.	Component	Progress during 2005-06 to 2009-10	Progress During 2010-11 (up to January, 2011)
1	Nurseries (No.)	2192	55
2	Area Expansion	16.57	2.10
3	Rejuvenation of old and senile orchards	2.78	0.37
4	Organic farming	1.37	0.05
5	Integrated Pest / Nutrient Management	7.53	1.04
6	Pack houses (No.)	1091	546
7	Cold Storage (No.)	367	43
8	Mobile/Primary processing units	264	69
9	Markets (No.)	172	9
	(a) Whole Sale	9	2
	(b) Rural	163	7

13.13 Financial Progress: With effect from 2007-08, the first year of the Eleventh Plan, State Governments are contributing 15 percent of the budget as their share and Government of India is providing 85 percent share. From 2005-06 to 2009-10, an amount of Rs. 4303.12 crores was released for the implementation of the scheme, out of which an expenditure of Rs. 4125.43 crores was reported. During 2010-11 an outlay of Rs. 1061.98 crores has been earmarked against which an amount of Rs. 801.38 crores has been released so far for implementation of the scheme.

13.14 National Mission on Micro Irrigation (NMMI): The centrally sponsored scheme on micro-irrigation was launched in January, 2006 during the Xth Plan for implementing drip and sprinkler irrigation in the country.

During the XIth Plan period from June, 2010 the scheme is now being implemented as the National Mission on Micro Irrigation (NMMI) with enhanced scope for coverage incorporating revised cost norms with the inclusion of additional components.

13.15 NMMI now has a three tier structure-National, State and District level for its implementation, coordination and monitoring. Expected outcomes of NMMI are as under:

- i. 2.85 million hectares to be brought under micro irrigation.
- ii. Saving in use of irrigation water, fertilizers and electricity.
- iii. Increase in production and productivity of crops.
- iv. Convergence with other ongoing schemes of DAC & schemes of other Ministries on creation of Water harvesting structures and linking the same with Micro Irrigation system for higher water use efficiency.
- v. Enhanced return to the farmers.

13.16 The National Mission on Micro Irrigation (NMMI) is being implemented with an outlay of Rs 8032.90 crores of which Rs. 3409.26 crores will be contributed by DAC as Central share comprising 40% subsidy for general farmers and 50% subsidy for small and marginal farmers.

13.17 The transfer of technology through human resource development, including training programmes, publications, awareness programmes etc, are implemented by different states. Training programmes are coordinated by the National Committee on Plasticulture Application in Horticulture (NCPAH), involving 22 Precision Farming Development Centres (PFDC's), SAU's, ICAR Institutes, and reputed manufacturers.

13.18 Since the inception of the scheme, an area of 17.92 lakh hectares has been brought under micro irrigation in 18 states by utilizing Rs. 2013.39 crores as Central share. During the current financial year (2010-11) there is a budget allocation of Rs. 1000.00 crores (BE) to achieve area expansion of 6.30 lakh ha in 16 states. An area of 3.87 lakh ha has been covered involving GOI assistance of Rs. 775.00 crores so far.

13.19 Coconut Development Board (CDB): The Coconut Development Board is a statutory body set up by the Government of India for integrated development of coconut cultivation and industry in the country. Coconut provides food and livelihood security to more than 10 million people across 18 states and three UTs in the country. There are five million coconut holdings in the country and the average size of these holdings is less than one hectare. India accounts for 15.65 per cent of area and 24.14 per cent of production in the world. According to the all-India final estimate of 2008-09, India recorded a production of 15729.75 million nuts from an area of 1.89 million hectares,

with an average productivity of 8303 nuts per hectare.

13.20 The thrust areas of the Coconut Development Board are: production and distribution of quality planting material, expansion of area under coconut cultivation especially in potential and non-traditional areas, improving the productivity of coconut in major coconut producing states, developing technology in post-harvest processing and marketing activities, integrated control of major pests and diseases and product diversification and by-product utilization of coconut for value addition.

13.21 Achievements during 2009-10:

- The production and productivity during 2009-10 increased by 6.69 % and 7.18 % respectively over 2008-09.
- An amount of Rs. 74.13 crores was utilized against the allocation of Rs. 75 crores for implementation of the scheme “Integrated Development of Coconut Cultivation and Industry in the Country” including the scheme “Technology Mission on Coconut”.
- Under the new scheme “Replanting and Rejuvenation of Coconut Gardens”, an area of 35,500 hectares was covered in the three districts of Thriuvananthapuram, Kollam and Thrissur in Kerala and 1.485 lakh old senile and unproductive coconut palms were removed for which a subsidy of Rs. 5.95 crores was paid.
- Under the area expansion programme of the Board, an area of 3637 hectares was additionally brought under coconut cultivation for which financial assistance of Rs. 246.64 lakhs benefiting 7731 farmers was given.
- Total production of 9.80 lakh nuts and 1.68 lakh seedlings was recorded from the seven Demonstration Seed

Production (DSP) Farms of the Board situated in various States. A total revenue of Rs. 146.87 lakhs was realized from all the farms.

- About 10.35 lakh quality coconut seedlings were produced by extending financial assistance of Rs. 130.95 lakh under the scheme “Establishment of Regional Coconut Nurseries” and “Production and distribution of hybrids/ other local tall seedlings” to various States.
- Coconut Exports grew by 34.19 percent in terms of value, to touch Rs. 442.56 crores in 2009-10 with an increase of 30.65 percent in volume constituting 116554.96 MT of exports. The Activated Carbon Manufacturing Units in the country exported Activated Carbon worth Rs. 212.00 crores during 2009-10.
- Under the scheme “Technology Mission on Coconut”, 39 Coconut and coconut By-product Processing Units, which include 9 Desiccated Coconut Powder manufacturing units were established.

13.22 Coconut Palm Insurance Scheme (CPIS) was introduced as a pilot scheme in the states of Kerala, Karnataka, Andhra Pradesh, West Bengal and Goa with the premium sharing of 50:25:25 amongst the Coconut Development Board, the participating State and the farmers respectively. Under this scheme, Rs. 62.66 lakh was released to the Agriculture Insurance Company of India Limited (AIC) during the year 2009-10.

13.23 **National Horticulture Board (NHB):** The NHB was established in 1984 as an autonomous registered society under this Department, with its headquarters at Gurgaon (Haryana) and 35 field offices located all over the country. Its main objectives are creation of production hubs for commercial horticulture development, post harvest

infrastructure and cold chain facilities, promotion of new technologies, introduction and promotion of new crops and promotion of growers' associations. These objectives are being achieved through various schemes, namely, Development of Commercial Horticulture through Production and Post-Harvest Management of Horticulture Crops, Capital Investment Subsidy for Construction/Expansion/Modernization of Cold Storages and Storage for Horticulture Crops, Technology Development and Transfer, Market Information Service Scheme and the Horticulture Promotion Service.

13.24 These schemes have helped in the promotion of public investment in the horticulture sector through credit from financial institutions for the creation of hubs for development of hi-tech commercial horticulture and strengthening of cold chain network for horticulture products. The scheme has also helped in the introduction of new crops, promotion of technology and capacity building among grower-farmers.

13.25 During 2010-11, the NHB has so far sanctioned 3915 integrated hi-tech commercial horticulture projects under its "Development of Commercial Horticulture through production and post harvest management" scheme and The Board has set the target of sanctioning 4700 projects during the year. A total of 88 cold storage-related projects have also been assisted so far during the year. Activities relating to technology development and transfer for the promotion of horticulture has also been undertaken. For this, the Board had assisted 90 events/organizations to update farmers about latest advancement in the field of hi-tech horticulture including organization of seminars, inter State visits, etc.

Three new components, namely Accreditation and Rating of Nurseries, Mother Plant Nurseries for High Pedigree Planting Material

for Fruit Crops and assistance for Common Facilities in Horticulture parks/Agri. Export Zones have been incorporated in the scheme with effect from 2010-11.

Thirty six Market Information Centers are collecting information on prices and arrival trends under the Market Information Service for horticulture crops. Short term and long term strategies for systematic development of horticulture are being developed under the Horticulture Promotion Service Scheme.

13.26 Field trials of Apricot varieties "Yerevani" and "Sateni" from Armenia, field demonstrations of farm machineries imported recently from Israel under Indo-Israel cooperation, development of Date cluster in the Kutch region in Gujarat State, registration under the Geographical Indication of Goods (Registration and Protection) Act-1999; Project to study various factors responsible for Post harvest losses in Tomato awarded to student's team of Institute of Rural Management (IRMA), Anand and Cold chain Development are the other initiatives undertaken by NHB.

13.27 **NATIONAL BAMBOO MISSION:** In order to harness the potential of bamboo crop, Department of Agriculture & Cooperation, Ministry of Agriculture 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 & Kashmir, Jharkhand, Karnataka, Kerala, Madhya Pradesh, Maharashtra, Orissa, 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 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 resources and marketing facilities. The expected benefits of the Mission include coverage of 1.76 lakh ha of virgin area under bamboo plantation over a period of five years, employment generation of 50.4 million mandays through bamboo plantation and related activities and generation of about 9.7 lakh mandays through bamboo nursery .

13.28 Objectives:

- To promote growth of the bamboo sector through an area-based regionally-differentiated strategy;
- To increase the coverage of area under bamboo in potential areas, with suitable species to enhance yields;
- To promote marketing of bamboo and bamboo-based handicrafts;
- To establish convergence and synergy among stakeholders for development of bamboo;
- To promote, develop and disseminate technologies through a seamless blend of traditional wisdom and modern scientific knowledge;
- To generate employment opportunities for skilled and unskilled persons, especially unemployed youth.

13.29 Achievements: During the current year (2010-11), 8585 ha in the forest areas and 3861 ha in the non-forest areas have been covered so far under the bamboo plantation. Since inception, 1,51,427 ha land

has been covered with bamboo plantation. An area of 40,934 ha of existing bamboo plantation has been improved for higher productivity. In addition, 1165 nurseries have been established to supply quality planting material. In different States, 29,888 farmers and 4802 field functionaries have been trained in the area of nursery management and bamboo plantation. In order to generate awareness among bamboo growers, 34 state-level and 397 district-level workshops / seminars have been conducted.

13.30 Financial Assistance Provided:

During 2010-11, a budgetary provision of Rs. 6000.00 lakh has been made for NBM, against which Rs. 5857.46 lakh has been released to different States so far including Rs. 123.46 lakh to R&D institutions. In the North-Eastern States including Sikkim, the Mission has allocated Rs. 4000.00 lakh against which a sum of Rs. 3885.91 lakh has already been released. During the year, these States have covered 7064 ha area with bamboo plantation and 2110 ha of existing stock has been improved for higher productivity. Further it may be mentioned that a sum of Rs. 105.00 crores has been made available for NBM at R.E. stage, out of which Rs. 70.00 crores is for N.E. states.

13.31 Horticulture Mission for North East and Himalayan States:

The Technology Mission for Integrated Development of Horticulture was launched in 2001-02 with a comprehensive programme concerning generation of appropriate technologies and issues related to production and productivity, post harvest handling, marketing and processing of horticulture crops in North Eastern States including Sikkim. The Mission was further extended to three Himalayan States namely, Himachal Pradesh, Jammu & Kashmir and Uttarakhand in 2003-04. The Mission covers the entire spectrum, right from production to consumption through backward and forward linkages. During the

course of its implementation, it was realized that some additional components need to be introduced to achieve the objective of holistic growth of horticulture sector. Accordingly, some new components such as high density planting, vegetable seed production, horticulture mechanization, GAP certification, Integrated C/A chamber with pre-cooling and grading facilities, etc. have been included in the mission. This has now been renamed as Horticulture Mission for North East and Himalayan States (HMNEH) along with revision of the cost norms to incentivize investment and to supplement income generation for the beneficiaries.

13.32 During the current financial year 2010-11, an amount of Rs.400 crores has been earmarked and an amount of Rs.277.48 crores has been released, out of which Rs.195.60 crores has been released to North Eastern States and Rs.81.88 crores to the Himalayan states.

13.33 During the year 2009-10, an amount of Rs.359 crores was earmarked and an amount of Rs. 325.72 crores was released under the Mission, out of which Rs.248.23 crores has been released to North Eastern states and Rs.77.49 crores to Himalayan states.

13.34 Under the Mission, the progress made since inception up to 2009-10 helped in bringing an additional area of 528748 hectares under various horticulture crops in North Eastern and Himalayan states. Of this, fruits contributed 287516 ha, vegetables 104202 ha, spices 74317 ha, medicinal & aromatic plants 16647 ha, root & tubers 1319 ha, flowers 30468 ha, plantation crops 14111 ha and saffron 168 ha. In addition, 36968 ha of senile and unproductive orchards have been rejuvenated to increase productivity. Major infrastructure which has come up under the Mission includes 1017 nurseries, 11177 community tanks and 14583 tube wells.

Drip irrigation has been extended to 15751 ha. Twenty seven (27) model floriculture centres and 57 herbal gardens have been established. Besides this, 27 tissue culture units and 22 disease forecasting units have also been set up. The Mission gave special thrust to high value crops like tomato, capsicum, strawberry and flowers to ensure production of quality produce. More than 8.5 million sq. mt. of protected cultivation has been established in the two regions. So far 5927 power tillers, 65775 manually operated machines, 12748 power operated implements and 13267 diesel engines have been distributed under the Mission. For proper handling and marketing of horticulture produce, 47 whole-sale markets, 345 rural primary / apni mandies, 35 cold storages, 65 processing units and 18 State Grading laboratories have been established.

13.35 During 2010-11, so far an additional area of about 22828 ha has been brought under cultivation of various horticulture crops in the North eastern and Himalayan States. Of this, fruits contributed 12534 ha, vegetables 7152 ha, spices 2609 hectare, aromatic plants 193 ha, and flowers 340 ha. Besides, 9 rural primary markets have been completed during 2010-11. In addition, during the current year, Rs.13.76 crores has been released for setting up of 11 processing units in the Himalayan States.

13.36 Under the Mission, 73,912 women entrepreneurs were trained on different aspects of horticulture up to 2009-10. During the year 2010-11, under the training component which includes women, so far 9033 farmers have been trained on various aspects of horticulture.

13.37 **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 conducted trainings for farmers, and state/district Horticulture officers, erected green houses for protected cultivation of fruit crops/flowers, developed mother stocks for fruits and vegetable crops and has been engaged in other core developmental activities over last five years. The Institute is being set up in an area of 43.50 ha. The objectives and the identified programmes of the Institute are as given below:

- capacity building by training of trainers, extension officers, farmers, entrepreneurs, processors and exporters,
- demonstration of improved technologies such as use of improved varieties / hybrids, adoption of INM / IPM practices, Hi-tech farming, precision farming, protected cultivation, post harvest technology, etc.
- extension support in the field of horticulture.
- promotion of organic cultivation of horticultural crops.
- establishing convergence and synergy among programmes in the field of horticultural research and development.
- monitoring of Centrally sponsored programmes in the area of horticulture.

13.38 During 2009-10, about 6 hectares of land has been developed for various

plantation activities such as plantation of road side avenue plants, Bamboo plantation (NBRC) along the fencing, Arecanut plantation around water harvesting pond, and Citrus rootstock (Cleopatra mandarin collected from state horticulture farm, Longnak) planted along the fencing area. A citrus scion block was also developed in a polyhouse of 2000 sq.m. Besides this, CIH has started production of roses, gerbera and carnation in the polyhouses. The Institute has developed Scion block of Cashew, Citrus, Gauva, Mango, Beal, Aonla and Peach for further multiplication of planting material following all standard cultural practices.

13.39 During 2010-11, about 4 ha of land has been developed for various plantation activities. A citrus rootstock block of one hectare has also been developed. 1300 numbers of rootstock for fruits and 4000 plants of flowers have been raised during the period. Mother block of 1 ha has been developed for passion fruit. Establishment of one banana fibre extraction unit and one home scale processing unit are in progress. About 1200 sq. m. of protected cultivation for tomato and capsicum has been established.

13.40 During 2010-11, Central Institute of Horticulture conducted 6 training programmes on various aspects of horticulture in which a total of 264 trainers have been trained. The Institute also conducted 25 training programmes for 1857 farmers.

Chapter - 14

Natural Resource Management





Natural Resource Management

14.1 Introduction: As per study conducted by National Bureau of Soil Survey & Land Use Planning (NBSS&LUP), Nagpur, a Regional Centre of Indian Council of Agricultural Research (ICAR), an area of about 146.82 million hectares is subjected to various kinds of land degradation viz water & wind erosion, water logging, alkalinity/salinity, soil acidity and other complex problems across the country. Frequent events of droughts, floods and climate change also have an impact on soil fertility and land degradation, thereby, affecting foodgrain production in the country.

14.2 With a view to prevent land degradation and to sustain agricultural production, Department of Agriculture & Cooperation, is implementing various Soil & Water Conservation Programmes for treatment/reclamation of degraded lands.

14.3 Aims and Objectives: The aims and objectives of various schemes/programmes being implemented by Natural Resource Management division are as under:-

- Implementation of Soil & Water Conservation Programmes for the

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

- Formulation of policies and strategies to address the issues regarding “sustainable agriculture” in the context of risks associated with climate change and suggesting appropriate adaptation and mitigation measures to combat adverse effect of climate change on agriculture production including natural resources;
- Reclamation and development of land affected by Alkalinity and Acidity;
- Providing scientific database on soil and land uses for watershed planning and programme implementation;
- Prevention of runoff and premature siltation of the reservoirs, thereby sustaining irrigation potential and water storage capacity of the various reservoirs across the country;
- Encouraging settled cultivation in lieu of shifting cultivation among the Jhumia families of the States of North East

Region and restoration of ecology and checking land degradation;

- Creation of employment opportunities and improving the socio-economic conditions of the rural community;
- Development of human resources through training and capacity building programmes of state officials working in the area of soil and water conservation.

14.4 Schemes/Programmes: The Central Sector Schemes and Centrally Sponsored Programmes being implemented by the Natural Resource Management (NRM) Division for development of degraded lands are given below.

(A) Central Sector Schemes

14.5 Soil and Land Use Survey of India (SLUSI): The Soil and Land Use Survey of India (SLUSI) is a subordinate office of the Department of Agriculture & Cooperation, established in the year 1958 with its headquarters at New Delhi. SLUSI has seven Regional Centers located at Noida, Kolkata, Bengaluru, Nagpur, Hyderabad, Ahmedabad and Ranchi. The major mandate of SLUSI is to conduct various types of soil and land resource surveys and provide a soil related database for the planning and implementation of programmes relating to soil and water conservation for the development of degraded lands. The main activities are:-

- Rapid Reconnaissance Survey (RRS) of the catchments of River Valley Project and Flood Prone River for categorization of watersheds;
- Detailed Soil Survey (DSS) of selected "Very High" and "High" priority watersheds to provide a sound database for execution of soil conservation measures as well as for scientific land use planning;
- Soil Resource Mapping (SRM);

- Development of GIS based Web Server;
- Organizing short training courses on soil surveys and data use for planning of Watershed Management; and
- Consultancy Projects in Soil Mapping.

14.6 The organization is engaged in conducting soil surveys to provide database for land-based developmental programmes for the user organizations. Besides, SLUSI provides training to the State officials drawn from the state departments such as agriculture, soil conservation, soil survey, forestry and irrigation.

14.7 During 2010-11, Rapid Reconnaissance Survey (RRS) of 135.00 lakh hectares area, Detailed Soil Survey (DSS) of 3.80 lakh hectares area and Soil Resource Mapping (SRM) of 146.00 lakh hectares area have been targeted, against which RRS of 86.50 lakh hectares, DSS of 0.80 lakh hectares and SRM of 76.50 lakh hectares have been completed upto 31st January, 2011.

14.8 Soil Conservation Training Centre Damodar Valley Corporation (DVC), Hazaribagh, Jharkhand: This Centre organizes medium and short duration training courses every year for field functionaries and project officers of the State Government engaged in implementation of soil and water conservation programmes.

(B) Centrally Sponsored Programmes (subsumed under MMA):

14.9 Soil Conservation in the Catchments of River Valley Project and Flood Prone River (RVP and FPR): Presently, this programme is being implemented in 60 catchments of 27 States (all the States except Goa) including all the states of North Eastern Region of the country. The total catchment area of ongoing programme is about 113.51 million hectares, out of which an area about 30.15 million hectares is categorized as a

priority area, needing urgent treatment under this programme. The catchments are mostly inter-state in nature and all categories of lands viz. agriculture, waste lands and forests are taken up for treatment in an integrated manner on watershed approach basis. The main objectives are:-

- Prevention of land degradation by adopting a multi-disciplinary integrated approach for soil conservation and watershed management in catchment areas;
- Improvement of land capability and moisture regime in the watersheds;
- Promotion of land uses to match land capability;
- Prevention of runoff and premature siltation of the reservoirs, thereby sustaining irrigation potential and water storage capacity of the various reservoirs across the country.

14.10 Under this programme, various soil and water conservation measures, namely; Contour Vegetative Hedges, Contour/ Graded Bunding, Horticulture Plantation, Contour/ Staggered Trenching, Sowing and Planting of Plants, Silvi-Pasture Development, Pasture Development, Afforestation, Farm Ponds, Percolation Tanks, Drainage Line Treatment (Earthen Loose Boulders, Water Harvesting Structure, Check Bund, Spill-way, Sediment Detention Structure, etc.) are implemented on watershed approach. With a view to assess the impact of soil and water conservation measures, a system of continuous monitoring of rainfall, runoff and sediment parameters prior to, during and after treatment of the watershed are collected and analyzed for assessing the impact of watershed interventions. For this purpose, an amount of 3 percent of the allocated funds are earmarked for meeting the cost of establishment of Sediment

Monitoring Stations (SMS) and also to meet the operational cost of these SMSs.

14.11 Under this programme, since inception and till 2009-10, an area of 73.34 lakh hectares has been treated with an expenditure of Rs.3012.15 crores, including Prime Minister's Package for Jammu & Kashmir, against a priority area of 301.50 lakh hectares needing urgent treatment. During 2010-11, an area of about 1.93 lakh hectares is targeted for treatment, against which an area of 1.12 lakh hectares has been treated upto 31st January, 2011.

14.12 Reclamation and Development of Alkali and Acid Soils (RADAS): This Programme has been restructured and launched during XIth Plan for development of alkali and acid Soils in the states of Arunachal Pradesh and Mizoram in North Eastern Region and in Gujarat, Haryana, Punjab, Karnataka and Rajasthan.

14.13 The Programme aims at improving physical conditions and the productivity status of alkali and acid soils for restoring optimum crop production. The major components permissible under the programme are on farm development viz. land leveling, bunding, community drainage systems, application of soil amendments, organic manures, crop/ horticultural/fuel wood production, etc.

14.14 Under this programme, upto 2009-10, an area of 8.06 lakh ha. has been developed with an expenditure of Rs.148.31 crores. During 2010-11, an area of 0.26 lakh hectares has been targeted for reclamation and development, against which an area of 0.02 lakh hectares has been reclaimed upto 31st January, 2011.

(C) Special Central Assistance to State Plan Scheme:

14.15 Watershed Development Project in Shifting Cultivation Areas (WDPSCA): This Scheme was launched during the Eighth Five

Year Plan in seven states of North Eastern Region, namely, Arunachal Pradesh, Assam, Manipur, Meghalaya, Mizoram, Nagaland and Tripura with 100 percent Special Central Assistance to the State Plan. The major objectives of the scheme are to:

- protect hill slopes of Jhum areas through soil and water conservation measures on a watershed basis 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 the socio-economic status of Jhumia families through household/land based activities;
- mitigate the ill effects of shifting cultivation by introducing appropriate land use as per land capability and improved technologies.

14.16 Under this scheme, treatment of arable and non-arable land through drainage line treatment, water harvesting structures, farm ponds, horticulture, afforestation, silvi-pasture, crop demonstration, etc. are taken up. The Rehabilitation Components (RC) include improvement of land based and landless/asset less household production systems like piggery, poultry, fishery, sericulture, basket/rope making, tailoring, carpentry, etc. depending on the choice of the farmers. A one time assistance of upto Rs. 25,000 is provided to beneficiaries.

14.17 The total treatable jhum area covered under the scheme is estimated to be 14.66 lakh ha, out of which an area of 5.13 lakh hectares has been treated since inception upto 2009-10 at an expenditure of Rs. 413.09 crores. During 2010-11, an area of 0.35 lakh ha of Jhum land has been targeted for development, against which an area of 0.23

lakh hectares has already been developed with an expenditure of Rs.19.80 crores upto 31st January, 2011.

(D) Externally Aided Project:

14.18 **Sodic Land Reclamation & Development Project with World Bank Assistance:** The project proposal on “Uttar Pradesh Land Reclamation and Development Project” at an estimated cost of Rs.2000.00 crores for reclamation and development of 3.10 lakh hectare area was proposed for seeking financial assistance from the World Bank. The Technical and Financial agreement has been signed in June, 2009 for development of 1.35 lakh hectares of degraded land comprising 1.30 lakh hectare of Sodic lands and 5000 hectares of ravine area at an estimated cost of Rs.1224.00 crores in 6 years.

14.19 **Crop Diversification in Himachal Pradesh with Japan International Cooperation Agency (JICA):** Project agreement for implementation of various interventions for Crop Diversification in Himachal Pradesh with JICA assistance has been signed on 1st October, 2010 at an estimated cost of Rs.321.00 crores for 7 years. The project is likely to commence from February, 2011.

(E) National Mission for Sustainable Agriculture (NMSA)

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

14.21 The Mission identifies ten key dimensions for promoting sustainable agricultural practices, which will be realized by implementing a Programme of Action (POA) that covers both adaptation and mitigation measures through four functional areas, namely, Research and Development, Technologies, products and practices, Infrastructure and Capacity building. While recognizing the role of modern technologies and research in promoting the sustainability of agricultural production, the Mission also emphasizes the need to harness traditional knowledge and agricultural heritage for in-situ conservation of genetic resources.

14.22 The POA would be operationalised by mainstreaming adaptation and mitigation strategies in ongoing research and development programmes and in flagship schemes including; Rashtriya Krishi Vikas Yojana (RKVY), National

Horticulture Mission (NHM), National Food Security Mission (NFSM) etc. through a process of selective up scaling and course correction measures. This would further be supplemented by introduction of new programmatic interventions and by seeking convergence with other National Missions and collaborations with key Ministries/ Departments for institutionalizing linkages for addressing cross-sectoral issues.

14.23 The Mission document on NMSA has been approved in principle by Prime Minister's Council on Climate Change (PMCCC).

14.24 **Schemes / Programmes implemented in the North Eastern Region:** The target, budget allocation and achievement during 2010-11 under the various schemes/ programmes being implemented in the States of North Eastern Region are given at **Annexure 14.1**.

Chapter - 15

Rainfed Farming Systems



15

Rainfed Farming Systems



15.1 The rainfed agro-ecologies cover about 60 per cent of the net sown area of 141 million ha. and are widely distributed in the country. Rainfed agriculture is practiced under a wide variety of soil types, agro-climatic and rainfall conditions. The distribution of rainfed areas can be broadly classified into arid, semi-arid, dry-sub humid and humid regions. As per available estimates, 15 million ha. of rainfed crop area lies in the arid region which receives less than 500 mm annual rainfall, another 15 million ha. is in 500-750 mm annual rainfall zone, and 42 million ha. is in the 750-1100 mm rainfall zone. The remaining area lies in annual rainfall zone of greater than 1100 mm. Out of the 127 Agro Climatic Zones (ACZs) in India, 73 are predominantly rainfed. Rainfed agro-ecologies cover about 87% area of coarse cereals and pulses, 77% of oilseeds, 66% of cotton and 50% of cereals besides of mangoes and apples and about 100% of forests. Rainfed areas are home to majority of rural poor and marginal farmers and at the same time risk and distress prone..

15.2 The recent policy discourse, especially in the wake of the XIIth Five Year Plan, has increasingly emphasized the need for

enhancing agriculture growth in rainfed areas that include dryland farming, by improving regeneration and sustainable use of natural resources, especially, land and ground water. The emphasis accorded to rainfed farming is through location specific package of practices and interventions to harness the potential of rainfed regions in the central and eastern states, and dryland regions in the western and southern states. The focus has been mainly on soil moisture conservation and rain water harvesting through integrated watershed development approach

15.3 **National Watershed Development Project for Rainfed Areas (NWDPA):** This was launched in 1990-91 in 28 States and 2 Union Territories based on the twin concepts of integrated watershed management and sustainable farming systems. The NWDPA scheme has been subsumed in the Scheme for Macro Management of Agriculture since 2000-2001. The programme specifically focuses on:

- conservation, development and sustainable management of natural resources;
- enhancement of agricultural production

and productivity in a sustainable manner;

- restoration of the ecological balance in degraded and fragile rainfed ecosystems by greening these areas through an appropriate mix of trees, shrubs and grasses;
- reduction in the regional disparity between irrigated and rainfed areas; and
- creation of sustained employment opportunities for the rural community including the landless.

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

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

15.5 The scheme is being continued during the Eleventh Plan as per the new Common Guidelines for Watershed Development Projects prepared by the National Rainfed Area Authority (NRAA). It is proposed to develop about 2.28 million ha. in the XIth Plan period covering about 3745 micro watersheds. By the end of December, 2010, an area of 10.21 lakh ha. has been developed at a cost of Rs. 882.97 crores.

Externally Aided Projects

15.6 **World Bank Assisted Integrated Watershed Management Projects:** Three World Bank Assisted Integrated Watershed Management Projects in the States of

Uttarakhand, Himachal Pradesh and Assam are being implemented. This department is involved in the supervision, coordination, and monitoring of these projects. The World Bank provides funds for these projects directly to the State Governments.

15.7 **Uttarakhand Decentralized Watershed Development Project:** The Uttarakhand Decentralized Watershed Development Project was launched in September, 2004 and will end in March 2012. The project aims at improving the productive potential of natural resources and increasing incomes of rural inhabitants in selected watersheds, through socially inclusive, and environmentally sustainable interventions. The project envisages Participatory Watershed Development and Management, Enhancing of Livelihood Opportunities and Institutional Strengthening. The total cost of this project is Rs.402.98 crores and the total area to be covered is 2.34 lakh hectares in 468 Gram Panchayats in 11 districts namely Almora, Champawat, Nainital, Rudrapur, Uttarkashi, Bageshwar, Dehradun, Pauri Garhwal, Tehri Garhwal, Pithoragarh, and Chamoli. At present work is in progress in all the selected Gram Panchayats with an investment of Rs. 376.85 crores.

15.8 **Himachal Pradesh Mid-Himalayan Watershed Development:** The Mid-Himalayan Watershed Development project became operative in February, 2006 and it will end in March 2013. The project aims at preventing degradation and protection of bio-diversity, improving accessibility to rural areas and productivity of livestock etc. The project envisages institutional strengthening, watershed development and management, enhancing livelihood opportunities, project management and coordination. The total cost of the project is Rs. 337.50 crores and the 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 the selected Gram Panchayats and a total of Rs. 220.32 crores has been spent upto December, 2010.

15.9 Assam Agricultural Competitiveness

Project: The Assam Agricultural Competitiveness Project was launched in February, 2005 and it will end in December, 2011. The project aims at increasing the productivity and market access of targeted farmers and community groups to stimulate growth in Assam's agricultural economy. The total cost of the project is Rs.1,022 crores covering 23 districts for infrastructure development, such as rural roads, agricultural services & market chain development and minor irrigation. As on December, 2010 an amount of Rs 630.41 crores has been incurred towards installation of 47,164 shallow tube wells (STW), 12455 lift pump sets, supply of 1077 power tillers, provision of 721 tractors, laying 627 km rural roads and drainage treatment of 16,000 hectares of area.

15.10 German Technical Cooperation (GTZ) Assisted Project - Strengthening Capacity Building for Decentralized Watershed Development:

The objective of the programme is to strengthen the capacities and networking of regional and state organizations for decentralized watershed management. In the first phase, the project is being implemented in the States of Karnataka, Rajasthan and Uttarakhand on a pilot basis. The project is aimed at strengthening the capacity development system for Watershed Development Projects at the regional and state level. A National Consortium comprising Ministry of Agriculture, GTZ, International Crops Research Institute for Semi-Arid Tropics (ICRISAT) and National Institute of Agricultural Extension Management (MANAGE) has been constituted for achieving these objectives. The project was launched in December, 2006 and will continue upto

November, 2011. The total cost of the project is a grant of 3.5 million Euros from the GTZ towards Technical cooperation.

15.11 Watershed Development Fund (WDF):

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

15.12 The objective of the 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, Orissa, Jharkhand, Madhya Pradesh, Himachal Pradesh and West Bengal. During 2006 after announcement of the Prime Minister's Rehabilitation Package in 31 distressed districts in the States of Andhra Pradesh, Karnataka, Kerala and Maharashtra, it was decided to implement participatory watershed development programme in all these distressed districts through WDF. Since inception and up to the end of September, 2010 an amount of Rs. 262.78 crores consisting of Rs. 232.96 crores as grant and Rs. 29.82 crores as loan has been released to NGOs by NABARD. Out of the Rs. 232.96 crores grant component, Rs. 171.23 crores has been released to 31 non-distressed districts under the PM's rehabilitation package. At present, a total number of 1264 watersheds have been selected comprising 492 in non distressed districts of 13 states and remaining 772 watersheds under the PM's package for 31 distressed districts in four states under WDF.

15.13 Development of Model Watersheds:

To address the bio-physical and socio-

economic dimensions of specific agro-climatic conditions and to develop suitable technologies for maximizing the development process under watershed programmes, 18 Model Watershed Projects covering different agro ecological regions of the country have been assigned to the 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 the development of nine model watersheds in the

states of Uttarakhand, Rajasthan, Karnataka, Tamil Nadu, Gujarat, Uttar Pradesh, Punjab, Madhya Pradesh and Orissa. An amount of Rs. 2.72 crores has so far been released to the CSWCRTI under the Direct Funded Component of MMA. Similarly, ICRISAT has also been assigned nine model watersheds in the states of Rajasthan, Gujarat, Maharashtra, Madhya Pradesh, Andhra Pradesh, Karnataka, Uttar Pradesh, Orissa and Tamil Nadu. An amount of Rs. 5.00 crores has so far been released to ICRISAT.

15.14 Programmes in North-Eastern States: Details of the programmes being executed in the 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.

16.2 Cooperation Division is implementing two Central Sector Plan Schemes in the country during the year 2010-11. These are – (a) Restructured Central Sector Scheme for Cooperative Education and Training (b) Restructured Central Sector Scheme for assistance to NCDC Programmes for Cooperative Development.

16.3 Cooperative Education and Training: Government of India has been implementing a Central Sector Scheme for Cooperative Education and Training through the National Cooperative Union of India (NCUI) and the National Council for Cooperative Training (NCCT) since Third Five year plan. The programmes relating to cooperative Education are being implemented by the NCUI. The National Cooperative Union of India has been implementing the Central Sector Scheme for Cooperative Education in cooperatively under developed States/under

developed area of Developed States. The Government of India is providing 100% grants in aid to NCUI for implementing the Special Scheme of Intensification of Cooperative Education in Cooperatively under Developed States. At present NCUI is running 44 projects.

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, 14 Institutes of Cooperative Management, located in different states and Vaikunth Mehta National Institute of Cooperative Management, Pune. Government of India provides financial assistance in the form of grants-in-aid to NCCT for conducting cooperative training programmes.

16.5 From the year, 2004-05, this Department has introduced a new component in the Central Sector Scheme (CSS) for Assistance to Junior Cooperative Training Centres (JCTCs) in conducting Training Programmes. JCTCs are financed and run by the State Cooperative Unions/State Governments.

16.6 The outlay earmarked for implementing the Cooperative Education and Training programmes under Re-structured Central Sector Scheme for Cooperative Education & Training during the year 2010-11 is Rs. 2705.00 lakhs.

16.7. Cooperative Education and Training Activities in the North Eastern Region:

The Government of India is implementing a special scheme for Intensification of cooperative education in cooperatively under-developed states including the North-Eastern Region through NCUI with 100 percent financial assistance. NCUI has established 8 field projects namely Aizwal (Mizoram), Bishnupur, West Imphal (Manipur), Jorhat, Kamrup (Assam), Kohima (Nagaland), Shillong (Meghalaya) and West Sikkim in the North-Eastern Region. These projects have made tangible impact in improving the income of members of self-help groups and cooperatives. During the period from April, 2010 to September 2010, a total of 1538 programmes were conducted and 23715 persons were educated and trained by these projects.

16.8 Restructured Central Sector Scheme for assistance to NCDC Programmes for Cooperative Development:

Government of India implements its cooperative development programmes, inter alia, 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 the restructured central sector scheme. It has been decided that under this scheme, subsidy component will be provided by

Government of India and the 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 the 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 the NCDC Act in 2002, scope of activities of the 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 the 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. In 2010-11, up to 30.09.2010 an assistance of Rs.945.40 crore (provisional) has been disbursed by the NCDC against approved outlay of Rs.3600.00 crore.

16.10 Cooperative Spinning Mills: In order to improve the economic condition of the cotton growers as well as handloom and powerloom weavers and to consolidate the gains achieved so far, the Department, through NCDC, continued to provide financial assistance to the spinning mills & ginning and pressing units in the cooperative sector. During the year 2010-11 (upto 30.09.2010) NCDC released an amount of Rs.47.42 crore.

16.11 NCDC is implementing Restructured Central Sector Scheme of DAC for share capital participation in Growers'/Weavers' Cooperative Spinning Mills. Loans are met out of funds of the Corporation and subsidy is provided by GOI under this scheme.

16.12 Cooperative Storage and Cold Storage: 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 149.66 lakh tonnes as on 31.3.2010.

16.13 During the year 2010-11 (upto 30.09.2010), financial assistance of Rs.11.06 crore (Rs.7.09 crore loan + Rs.3.97 crore subsidy) has been released and Rs.36.42 crore (Rs.26.50 crore loan + Rs.9.92 crore subsidy) has been sanctioned for the storage programme under Central Sector Scheme of DAC, Corporation Sponsored Scheme and Gramin Bhandaran Yojana.

16.14 This Department, through NCDC, has been providing financial assistance to State Governments and also directly to the cooperative societies for establishment of Cold Storages aimed at facilitating expanded shelf life of potatoes and other fruits and vegetables. By the end of the financial year 2009-10, total cold storage capacity created with NCDC's finance has increased to 9.905 lakh tons.

16.15 NCDC provides financial assistance to the extent of 90% of the block cost to the State Governments 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 Governments / Cooperatives for cold storage projects. In such cases, quantum of assistance provided by NCDC is reduced by the subsidy available under the Capital Investment Scheme (CIS) of NHB. The scheme provides enhanced back-ended subsidy @ 40% of the project cost for general and 55% in case of hilly and scheduled areas for maximum storage capacity up to 5,000 ton per project at normative cost @ Rs.6000 / 7000 / 8000 per ton as per prescribed standards under the scheme.

16.16 During the financial year 2010-11 (upto 30.09.2010), financial assistance of Rs.6.426 crore (Rs.4.998 crore loan + Rs.1.428 crore subsidy) has been sanctioned to cold storage projects under the Central Sector Scheme of the Cooperative Development Programme of DAC, centrally sponsored scheme of NCDC.

16.17 Integrated Cooperative Development Projects: 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 the Integrated Cooperative Development Projects (ICDP) scheme in selected districts in the rural areas. During the year 2010-11 (up to 30.09.2010), 2 Projects in Bihar at a cost of Rs.75.78 crore have been sanctioned, involving NCDC's share of assistance of Rs.71.80 crore (Rs.53.63 crore as loan and Rs.18.17 crore as subsidy). During the same period, NCDC has released loan assistance of Rs.3.76 crore and subsidy of Rs.1.95 crore (totaling to Rs.5.71 crore) for ICDP.

16.18 Under the Restructured Central Sector Scheme during 2010-11 (up to 30.09.2010) for ICDP, subsidy of Rs.1.12 crore has been released towards expenditure on Project Implementation Team.

16.19 Cooperatives In Under Developed States: The process of economic development in the country brought to light certain regional disparities and imbalances in some parts due to inherent factors like topography, agro-climatic conditions and poor infrastructure. During formulation of the Fifth five-year plan, the limitations of this approach came to the fore and as a consequence, the concept of cooperatively under-developed States evolved to ensure balanced regional development.

16.20 The categorization of States for funding by NCDC was reviewed by the 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 the existing States. Now 10 States and two UTs. have been categorized as cooperatively under-developed and 11 States as least-developed.

16.21 During the year 2009-10, financial assistance of Rs.2279.98 crore has been disbursed by the NCDC to cooperatives in cooperatively least/under-developed states/UTs. under its various schemes.

16.22 During 2010-11 (upto 30.09.2010) under the Restructured Central Sector Scheme for assistance to cooperatives for marketing, processing, storage programmes in cooperatively under-developed/least developed States, subsidy of Rs.7.24 crore has been disbursed.

16.23 Strengthening of National Level Cooperative Federations: The progressive expansion and diversification of the cooperative movement has led to organization of national-level cooperative institutions in different fields of economic activity with a view to accelerating the 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 the 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.

16.24 Revitalization of Cooperatives: With phenomenal expansion of cooperatives in almost all the sectors, signs of structural weakness and regional imbalances have also become apparent. The reason for such weakness would be attributed to the 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 the 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 frame-work for sound and healthy growth of cooperatives.

16.25 Amendment to the Constitution of India relating to Cooperatives: Pursuant to the Common Minimum Programme of the UPA Government to ensure functioning of cooperatives in a democratic, autonomous, professional and economically sound manner, it has been decided to initiate a proposal for amendment to the Constitution for the purpose. Accordingly, the Constitution (One Hundred and Sixth Amendment) Bill, 2006 was introduced in the Lok Sabha on 22.05.2006. The Standing Committee of Parliament on Agriculture considered the Bill and submitted its report to Lok Sabha on

20.08.2007. This report was considered by the Government and it was decided to move official amendments to the Bill. Accordingly, official amendments to the Bill were moved in the Lok Sabha. However, the Bill could not be discussed in the Lok Sabha for passing. The Bill lapsed upon dissolution of 14th Lok Sabha on 18.05.2009. It was decided to reintroduce the Bill for amendment to the Constitution. Accordingly, the Constitution (One Hundred & Eleventh Amendment) Bill, 2009 was introduced in the Lok Sabha on 30.11.2009. The Bill was referred to the Standing Committee of Parliament on Agriculture which considered the Bill and submitted its report to Lok Sabha on 03.09.2010. The suggestions made by the Standing Committee have been considered by the Government and it has been decided with the approval of the Cabinet to move official amendments to the Constitution (111th Amendment) Bill, 2009. Accordingly, notices have been sent for moving the official amendments in the forth-coming budget session of Parliament.

16.26 Amendment of the Multi-State Co-operative Societies Act, 2002: The proposed amendment to the MSCS Act, 2002 intends to strengthen the cooperatives by making them more member-driven and professional. It defines an active member to ensure member's active participation in the affairs of the society. Time bound decision by the society for admitting members is proposed to prevent inordinate delay by the society in admitting members. A clause is proposed to be inserted for ensuring that the members make their payment due to the society to be eligible for exercising their rights as a member. It is proposed to allow the MSCS to refund full or part of the share capital subscribed by the Government to reduce/eliminate Government control of these cooperatives. To ensure presence of experts on the board, it is proposed to provide that the co-opted directors should have experience in the field of banking, management, finance or specialization in any field relating to the objects and activities

undertaken by the MSCS. The Directors will also be required to disclose the interest of their relatives in the affairs of the society. It is proposed to give freedom to the Board to constitute an Executive Committee and other committees or sub-committees as specified in the bye-laws. However, it is proposed that every society shall be required to constitute an Audit and Ethics Committee of the Board. The existing restriction on borrowings by the society is proposed to be relaxed and decrees, awards under section 84 of MSCS Act, 2002 are proposed to be included in section 94 of the Act for the purpose of execution.

16.27 The proposed amendments also include provisions for filing of applications, documents, inspections, payment of fees, charges and issuance of certificates of registration and maintenance of documents by Central Registrar in electronic forms. It also provides for cancellation of registration if obtained by mis-representations of facts, submission of false or misleading information, suppression of material facts or fraud etc. Reservation of seat for the SC/ST and women on the board, constitution of interim board of experts for rehabilitation of a sick society, election authority for conduct of election and Cooperative Rehabilitation and Reconstruction Fund for rehabilitation and development of cooperative societies have also been proposed. The proposed amendments also include provision for Cooperative Information Officer and Appellate Authority to provide information to the members about the affairs and management of the society; penal provisions for non filing of returns; non-admission of new members by the administrators when the board is under supersession; obligation on the part of a Multi-State Co-operative Society to make available its products and services to its members and their patronage by the members, etc.

16.28 The MSCS Act (Amendment) Bill, 2010 was introduced in the Lok Sabha. The Bill has been referred to the Standing Committee of Parliament on Agriculture for its examination.

16.29 Helping farmers in getting remunerative price for their produce through NAFED: The Department 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 the Government. The Department is also implementing Market Intervention Scheme (MIS) for horticultural and agricultural commodities generally perishable in nature and not covered under Price Support Scheme. These measures help the farmers in getting remunerative price for their produce.

16.30 Price Support Scheme (PSS): The Department 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 Cotton Corporation of India. NAFED undertakes procurement of oilseeds, pulses and cotton under PSS as and when the prices fall below the 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 the Central Government. Profit, if any, earned in undertaking MSP operations are credited to the Central Government.

16.31 During the year 2009-10, the prices of Copra, Sunflower seed and Cotton ruled below the respective Minimum Support Prices (MSPs) fixed by the Government of India for the relevant marketing season. NAFED procured a quantity of 64094 MTs of Milling Copra valued at Rs.28771.17 Lakhs in the States of Kerala, Tamil Nadu,

Lakshadweep, A&N Islands and 1250 MTs Ball Copra valued at Rs.587.41 Lakhs in the state of Karnataka under PSS. NAFED also procured 2656 MTs of Copra of Special Grade (below FAQ valued at Rs.1181.97 Lakhs in the State of Andhra Pradesh. A quantity of 1690 MTs of Sunflower seed valued at Rs.760.90 Lakhs was procured under PSS in the States of Karnataka, Maharashtra, Andhra Pradesh and Haryana. NAFED also procured a quantity of 574550 MTs of Cotton valuing Rs.163471.22 Lakhs in the States of Maharashtra, Gujarat and Andhra Pradesh under PSS during 2009-10.

16.32 Market Intervention Scheme (MIS): The Department is implementing Market Intervention Scheme (MIS) on the request of State/UT Governments 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 the growers of these commodities from making distress sale in the event of bumper crop when there is glut in the market and the prices tend to fall below economic levels/cost of production. Procurement under MIS is made by NAFED as Central agency and by the State designated agencies. Losses, if any, incurred by the procuring agencies are shared between Central Government and the 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 the concerned State Government is restricted to 25% of the procurement cost. Profit, if any, earned by the procuring agencies is retained by them. MIS implemented for the year 2010-11 is as under.

S. No.	State	Commodity	MIP (Rs. per MT)	Qty. (in MTs)
1.	Andhra Pradesh	Oil palm	5,000	47,500
2.	Himachal Pradesh	C grade apple	20,000	5,150

Chapter - 17

Drought Management





17

Drought Management

17.1 The Department of Agriculture & Cooperation is entrusted with the responsibility of coordinating relief measures necessitated by drought, hailstorm and pest attacks. South-West Monsoon (June – September) is the main rainfall season in the country when more than 70% annual rainfall is received. This Department monitors the progress of South-West Monsoon in the country in close coordination with the India Meteorological Department (IMD) and keeps watch over emerging signs, if any, of distress. Though the primary responsibility for taking necessary measures in the wake of drought is the domain of the State Governments concerned, this Department constantly remains in touch with the States to assist them in tiding over the situation.

17.2. During South West Monsoon 2010 (1.6.2010 to 30.9.2010), the country as a whole received 912.8 mm of rainfall against normal average rainfall of 893.2 mm, with a deviation of +2%, which is normal (+19% to -19%). Out of 36 meteorological sub-divisions in the country, 14 received excess rainfall (+20% of more), 17 received normal rainfall (+19% to -19%) and 5 received deficient

rainfall (-20% to 59%). There was no sub-division with scanty rainfall (-60% to -99%).

17.3 The total live storage in 81 important reservoirs in the country monitored by the Central Water Commission (CWC) as on 30.9.2010 was 114.454 Billion Cubic Meter (BCM), which was 75% of the storage capacity at Full Reservoir Level (FRL). The current year's storage was nearly 127% of the previous year's storage and 115% of the average of previous 10 years.

17.4 The States have ready availability of funds under the State Disaster Response Fund (SDRF) for taking immediate measures in the wake of natural calamities including drought. As recommended by the 13th Finance Commission for the 5-year period 2010-11 to 2014-15, contribution to SDRF is made by Central Government and State Governments in the ratio of 3:1 in respect of General category 17 States (Andhra Pradesh, Bihar, Chhattisgarh, Goa, Gujarat, Haryana, Jharkhand, Karnataka, Kerala, Madhya Pradesh, Maharashtra, Orissa, Punjab, Rajasthan, Tamil Nadu, Uttar Pradesh and West Bengal) and 9:1

in respect of 11 Special category states (Arunachal Pradesh, Nagaland, Mizoram, Manipur, Tripura, Meghalaya, Assam, Sikkim, Himachal Pradesh, Jammu & Kashmir and Uttarakhand). Additional assistance in case of natural calamities of severe nature is considered on submission of Memorandum by the affected State from the National Disaster Response Fund (NDRF) in accordance with the procedure in vogue.

17.5 Due to deficit rainfall during the South-West Monsoon 2010, Bihar & Jharkhand

declared all their 38 districts and 24 districts, respectively as drought affected. Likewise, Orissa and West Bengal declared 17 out of 30 districts and 11 out of 19 districts, respectively, as drought affected. While 1st installment of Central share of SDRF for 2010-11 has been released to all the States, 2nd installment of Central share of SDRF has been released in advance to Bihar, Jharkhand, West Bengal and Orissa in view of drought to enable these states to take necessary mitigation measures expeditiously, as indicated below:

State	State Disaster Response Fund (SDRF) for 2010-11 (in crores)			
	Allocation	Central Share	State Share	Central Share released
Bihar	334.49	250.87	83.62	250.87
Jharkhand	259.45	194.59	64.86	194.59
Orissa	391.58	293.69	97.89	293.69
West Bengal	304.83	228.62	76.21	228.62

17.6 In response to the Memoranda submitted by Bihar for the initial 28 districts, Jharkhand, West Bengal and Orissa for Central assistance in the wake of drought, the Government has approved from the National Disaster Response Fund (NDRF) assistance of ` 1459.54 crores to Bihar, ` 855.30 crores to Jharkhand, and ` 724.99 crores to West Bengal subject to adjustment of available balance in SDRF of the States, as determined by the Ministry of Home Affairs. The proposal relating to assistance to Orissa is under consideration of the Government.

17.7 For 2010-11, this Department has brought out a Crisis Management Plan (CMP) for Drought, an actionable programme, which could be pressed into action in the

event of a drought situation to minimize the damage to life, property and environment. CMP lays down overall spectrum of Drought Management Plan and defines the roles and responsibilities of various Agencies involved in drought management.

17.8 In view of drought/deficit rainfall, it has been decided to implement the scheme of "Diesel Subsidy" during Kharif 2010 (14.7.2010 to 30.9.2010) in drought/deficit rainfall areas to save the standing crops in the field.

17.9 Drought during 2009-10 in a number of States in the country has been documented indicating the steps taken by the Central Government and the respective State Governments to mitigate the impact.

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 United Nations Organization, Food & Agriculture Organization and World Food Program. Memoranda of Understanding, Agreements, Protocols and Workplans are signed bilaterally with the countries of strategic interest 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 the FAO and has been taking part in all its activities. Indian delegation led by Agriculture Commissioner attended the 30th Session of the FAO Regional Conference for Asia and the Pacific held in the Republic of Korea from 27th September to 1st October, 2010. The 36th Session of the Committee on World Food Security held in Rome from 11 – 14 and 16th October, 2010 was attended by the Indian delegation led by Shri Ashish Bahuguna,

Additional Secretary in this Department.

18.3 **World Food Day:** The World Food Day is celebrated throughout the world on 16th October to mark the establishment of the FAO. The theme for this year's celebration was 'United against Hunger'.

18.4 **Technical Cooperation Programme:** India has been availing services from the FAO from time to time in the form of training, consultancy services, equipments and materials in the field of agriculture and allied sectors under its technical cooperation programme. The details of the projects which are currently under implementation with FAO assistance are as under:

- Immediate Technical Assistance to Strengthen Emergency Preparedness for Highly Pathogenic Avian Influenza (HPAI) to India - this project was signed on 23.6.2010 for a period of three years. FAO's contribution for the project is US \$ 1 220 000.
- Capacity Building on Modernization of Irrigation systems in Asian countries – This project was signed on 6.8.2010 for a period of two years. Project budget

of US \$480 000 is being contributed by FAO.

- Development of a Regional Initiative on Re-Inventing Irrigation and Agricultural Water Governance in Asia to meet the Millennium Development Goals - This project was signed on 6.8.2010 for a period of two years. Project budget of US \$ 487 000 is being contributed by FAO.
- Reversing Environmental Degradation and Rural Poverty through adaptation to climate Change in Drought Stricken areas in Southern India – A Hydrological Unit Pilot Project approach – this project was signed on 1.9.2010 for a period of three years. Total Budget for the project is US \$ 3,762,654 of which US \$ 909,091 will be contributed by Global Environment Facility (GEF), the donor and the rest by FAO, Bharathi Integrated Rural Development Society (BIRDS) and partner NGOs.

18.5 Office of Minister (Agriculture), Embassy of India, Rome: The Government of India for the purpose of maintaining liaison and coordination with the FAO has nominated the Indian Ambassador in Rome as its permanent representative to the FAO. Keeping in view, the specialised nature and the increasing volume of interaction with the FAO and its various bodies, an agricultural wing headed by a senior officer in the rank of Joint Secretary to the Government of India with the designation of Minister (Agriculture) has been functioning in the Indian Embassy, Rome. Minister (Agriculture) has been designated as India's Alternate Permanent Representative (APR) to the FAO and the World Food Programme (WFP). Minister (Agriculture) represents Indian interests at the meetings of FAO/WFP and other agencies having their headquarters in Rome e.g. International Fund for Agricultural Development (IFAD) dealing with issues

relating to Agriculture.

18.6 World Food Programme (WFP): The World Food Programme (WFP) was set up in 1963 jointly by the United Nations and the Food & Agriculture Organization (UN/FAO). India is the founder member of WFP. WFP is mandated to provide emergency feeding in places facing acute food insecurity due to natural calamities as also man-made causes. Government of India contributes US \$ 1.92 million every biennium towards WFP which is used by them in support of their India Country Programme. Since its inception India has contributed US \$ 34.54 million to the WFP up to financial year 2010-2011.

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 the children and creating livelihood opportunities for the poor. WFP has also made notable contributions through product innovations such as Indiamix and mapping of hunger in India through the 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 would be providing 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 would be 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 the 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) to be procured within the country. In addition, WFP would be raising USD 5.4 million through donation from foundations and private sector to meet costs towards component (i). The country programme is estimated to cover about 2 million beneficiaries in the five States of Jharkhand, Chattisgarh, Orissa, Madhya Pradesh and Rajasthan, apart from the States which request for assistance under component (ii). The State Governments, where WFP is planning to support the ICDS programme, would also be providing contribution worth USD 23.4 million in terms of 259,000 Mt. tones of food grains.

18.9 World Bank: Presently, there are four agriculture sector based projects which are being operated with the assistance of World Bank. These projects mainly relate to Watershed Development, Soil and Water Conservation measures (Natural Resource Management), as well as overall agricultural development related issues involving a total IDA credit of XDR 321.11 million.

B. Bilateral Cooperation

18.10 Agreements / MoUs / Work Plans: There are more than 50 countries with whom India has signed MoUs / Agreements / Work Plans for agricultural cooperation. During 2010-11, following MoUs / Agreements / Work Plans were signed by the Department of Agriculture and Cooperation:

1. MOU with South Africa, signed on 4.6.2010.
2. Work Plan and Protocol with Turkey, signed on 18.6.2010.
3. MOU with Argentina, signed on 11.9.2010.
4. MOU with Austria, signed on 13.9.2010.

5. Agreement with Tajikistan, signed on 7.10.2010.

C. Others

18.11 Contributions to International Organisations: This Department is a member of many International Organisations and the Annual contribution is made by IC Division to the following International Organizations :

- Food and Agriculture Organisation of United Nations.
- Trust Fund of FAO for Desert Locust in Eastern Region.
- Trust Fund for International Desert Locust.
- Asia Pacific Rural and Agricultural Credit Association (APRACA).
- Regional Network on Development of Agricultural Cooperatives (NEDAC).
- Organisation for Economic Cooperation & Development (OECD).
- Asia and Pacific Coconut Community (APCC).
- World Food Programme(WFP).
- Asia-Pacific Plant Protection Convention (APPPC) Trust Fund.

18.12 International Seminars/Workshops /Conferences etc.: During 2010-11 this Department took part in 72 International Conferences/Meetings/Seminars/Trainings etc. dealing with various aspects of agricultural development organised by the FAO and other International Organisations. Technical Clearances were also provided for the visits of about 36 Ministers/Officials of various State Governments.

Chapter - 19

Macro Management of Agriculture





Macro- Management of Agriculture

19.1 Agriculture is a state subject. Hence, the primary role for increasing productivity and production of food grains and other agriculture crops is that of the State Governments. However, in order to supplement the efforts of the 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) Scheme:** This is a Centrally Sponsored Scheme, which was formulated in 2000-01 with the objective to ensure that the central assistance is spent through focused and specific interventions for development of agriculture in the States out of a broad menu of agriculture development sub-schemes, as per their priorities and choices. The Scheme consisted of 27 sub-schemes relating to Cooperatives, Crop Production Programmes (for rice, wheat, coarse cereals, jute, sugarcane etc.), Watershed Development Programme (National Watershed Development Project for Rainfed Areas, River Valley Projects / Flood Prone Rivers etc.), 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 the purview of this scheme.

19.3 **Revised MMA Scheme:** In the year 2008-09, the MMA scheme was revised to improve its efficacy in supplementing / complementing the efforts of the States towards enhancement of agricultural production and productivity. 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 the States to achieve the basic objectives of food security and improving the 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 Fertilizers
- 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 The salient features of the 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 would be provided to the States/UTs as 100% grant.
- Subsidy structure has been aligned to make subsidy pattern uniform under all the schemes implemented by the Department of Agriculture & Cooperation. Revised subsidy norms indicate the maximum permissible limit of assistance. States have freedom to retain existing norms, or increase them to a reasonable level provided that the same do not exceed the specified revised upper limits.
- Two new components have been added namely, (a) Pulses and oilseeds crop production programmes for the areas not

covered under the Integrated Scheme of Oilseeds, Pulses, Oil palm and Maize (ISOPOM) and (b) "Reclamation of Acidic Soil" to the existing component of "Reclamation of Alkali Soil".

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

19.5 During 2009-10, an amount of Rs. 95000.00 lakh was provided for implementation of the revised MMA scheme in the BE. Of this, an amount of Rs. 94520.00 lakh was earmarked for States/UTs and Rs. 480.00 lakh for Direct Funded Components (DFCs). Budget was revised to Rs. 93000.00 lakh at RE stage. Out of this, an amount of Rs. 91853.92 lakh was released to States/UTs and Rs. 290.78 lakh for DFCs totaling to Rs. 92144.70 lakh, which was 99.08 % of RE.

19.6 During 2010-11, a sum of Rs. 100000.00 lakh has been provided in the Budget Estimates for implementation of the revised Macro Management of Agriculture Scheme. Of this, an amount of Rs. 99526.00 lakh has been earmarked for States/UTs and Rs. 474.00 lakh for Direct Funded Component. Work plans of all the States/UTs have been agreed to for a total of Rs. 108554.59 lakhs including unutilized opening balances and States' contribution of 10% (for applicable States). Funds totaling Rs. 81459.14 lakhs (81.46%) have been released upto 31st January, 2011. The status of State-wise work plan approved, opening balances as on 1.4.2010 and funds released during 2010-11 is given in Annexure 19.1.

Chapter -20

Information Technology





20

Information Technology

20.1 The National Agriculture Policy (NAP) lays emphasis on the use of information technology for achieving rapid development of agriculture in India. The thrust of the ICT initiatives is on e-Governance, i.e., to make improved services accessible to farmers using Information and Communication Technology. The Department of Agriculture and Cooperation has launched a Centrally Sponsored Scheme “National e-Governance Plan in Agriculture (NeGP-A)” in 7 States in phase-I for achieving this target.

20.2 **National e-Governance Plan in Agriculture (NeGP-A):** The underlying vision behind this project is to “create an environment conducive for raising farm productivity and income to global levels through provision of relevant information and services to the stakeholders.” The initial phase of the Project was envisaged to identify the key elements that need to be focused in the Agriculture and allied sectors. The next phase focused on detailed strategy, road map and guidelines for implementation of e-Governance in Agriculture at both Central and State levels. 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 may be able to make proper and timely use of the available information. Such information is intended to be provided to farmers through various channels including Common Service Centers, Internet Kiosks and through SMSs. 12 clusters of services have been identified and the project has been sanctioned for a sum of Rs. 227.79 crores for implementation in phase-I in 7 States i.e. Assam, Himachal Pradesh, Karnataka, Jharkhand, Kerala, Madhya Pradesh and Maharashtra.

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 / Directorates: Under the DACNET Project, the Directorates/field units have already been provided basic infrastructure which has helped in achieving e-readiness. It has been decided that respective Directorates and field offices would meet their expenditure from out of their budget. However, the residual expenditure on networking, software development and training for Field Offices/Directorates may be met from this component of the scheme.

20.5 Development of Agricultural Informatics and Communication: The objectives of this component are to build a reservoir of data related to agriculture and development of web-based applications. A number of software development works such as Farmers' portal, Kisan Knowledge Management System (KKMS) digitization of Soil Mapping Data, RFS and Watershed Development are under various stages of development. 80 portals / websites / applications have been developed and are under various stages of implementation. This includes DACNET, DAC website, DACNET INTRADAC, SEEDNET, NHM, NFSM, RKVY and AGMARKNET

20.6 As the number of portals and the quantity and expansion of content increase over the years, there will be a need to have proper infrastructure for updation of content. It is expected that over time, regular data updating and designing of web content will require manpower. It is proposed to partly outsource such activities.

20.7 Strengthening of IT Apparatus in Agriculture and Cooperation in the States and Union Territories (AGRISNET): States have a major role in providing improved

services to the farmers through the use of ICT. The present component of AGRISNET is being continued in the XIth Plan and further strengthened. Till date 23 States/UTs have so far availed of assistance under AGRISNET. In these States too, funds have been released mostly for implementation of limited e-Governance applications in ATMA districts. Therefore, the scheme needs to be expanded multifold for providing improved services to farmers throughout the country. It is also envisaged that based on the experience gained in the XIth Plan, more services would be covered under AGRISNET.

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. 1800-180-1551). The scheme was launched on 21 January 2004. The entire country is covered under the scheme. The facility is being publicized among the farmers through publicity campaigns through Doordarshan, All India Radio and private TV channels and also through direct publicity campaigns in the field. Since inception of the Scheme, till December, 2010 about 59.06 lakh calls have been received by the Kisan Call Centers throughout the country.

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 Guwahat, 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.

Chapter -21

Agricultural Census





21

Agricultural Census

21.1 The Agriculture Census 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 agriculture in the country. As the operational holding is the ultimate unit for taking agriculture related decisions at the 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 and cropping patterns, irrigation status, tenancy, terms of leasing and dispersal of holdings. This information is tabulated by different size classes and social groups to serve as an input for development planning, socio-economic policy formulation, and the establishment of national priorities. The census also provides the basis for the development of a comprehensive integrated national system of agricultural statistics. The Agriculture Census is implemented in three distinct phases which are statistically linked, but focus on different aspects of agricultural statistics. In Phase-I, a list of holdings with

area, gender, types of holdings and the social groups of holders is prepared. In Phase-II, detailed data on agricultural characteristics of holdings are collected from selected villages from which 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 levels.

21.3 The Agriculture Census is conducted by following broad guidelines of the decennial World Census of Agriculture evolved by the Food and Agriculture Organization of the United Nations. India is one of the participants in the World Agricultural Census Programme. Since 1970-71, seven Agriculture Censuses and six Input Surveys since 1976-77 have been completed in the country. The data processing work of 8th Agriculture Census 2005-06 and 7th Input Survey 2006-07 are currently underway.

21.4 During 2010-11, the All India Report on Agriculture Census 2005-06 on Number and Area of operational holdings based on Phase-I data, has been published. This data is available on the Department's

website. The salient features of the report are as follows:-

- The total number of operational holdings in the country has increased from 120 million in 2000-01 to 129 million in 2005-06 and operated area has decreased from 159.44 million ha. in 2000-01 to 158.32 million ha. in 2005-06. The average size of the operational holding has declined to 1.23 ha. in 2005-06 as compared to 1.33 ha. in 2000-01 at All India level.
- The number of female operational holders has increased from 10.83 percent in 2000-01 to 11.70 percent in 2005-06 with corresponding figures of 8.39 percent and 9.33 percent in the operated area.
- Small and marginal holdings (below 2.00 ha.) taken together constituted 83.29 percent of the total number of holdings in 2005-06 against 81.80 in 2000-01 with operated area of 41.14 percent 2005-06 as against 38.86 percent in 2000-01.
- Semi-medium and medium operational holdings (2.00 ha. – 10.00 ha.) in 2005-06 were 15.86 percent of the total number of holdings with operated area of 47.04 percent.
- Large holdings (10.00 ha. & above) were 0.85 percent of total number of holdings in 2005-06 with share of 11.82 percent in the operated area as against 1.03 percent and 13.21 percent respectively in 2000-01 Agriculture Census.

21.5 Tables based on Phase-II data of Agriculture Census 2005-06 have been finalized for 31 States/UTs. Data entry/validation for Madhya Pradesh is currently underway. (Phase-II of Agriculture Census 2005-06 could not be conducted in Maharashtra, Bihar and Jharkhand)

21.6 Tables based on Phase-III data, i.e., of Input Survey 2006-07 have been generated for 24 states out of which data have been finalized for 14 States. Data entry / validation in the remaining states (except Bihar, Jharkhand and Maharashtra where Phase-III of Agriculture Census could not be conducted) is going on.

21.7 The Schedules and Manuals for instructions for data collection of Agriculture Census 2010-11 for both Land Record states and Non Land Record States have been finalized and circulated to the States. The Agriculture Census 2010-11 has been launched in the country on 4th January, 2011.

21.8 The 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 now being given to states and UTs for payment of salaries, office expenses, honoraria, tabulation costs and printing of schedules, etc.

21.9 Gender based data is being collected in Agriculture Census since 1995-96. The data confirms the increased participation of women in the operations and management of agricultural holdings in the country.

Chapter -22

Other Special Policy Initiatives





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. Under this scheme, overdue debt of about three crore small and marginal farmers has been waived, and about 68 lakh other farmers have been given debt relief. The main objective of the Debt Waiver and Debt Relief Scheme, 2008, was to enable indebted farmers to avail of fresh institutional credit. The other features of the Scheme are mentioned below.

22.3 In the case of marginal farmers (i.e., holding up to one hectare) and small farmers (one-two hectares), the entire eligible amount has been waived. In the case of other farmers

there is a One Time Settlement (OTS) scheme, under which the farmer will be given a rebate of 25 per cent of the eligible amount, subject to the condition that the farmer pays the balance 75 per cent of the eligible amount. In case of revenue districts covered under the Drought Prone Areas Programme (DPAP), the Desert Development Project (DDP) and the Prime Minister's Special Relief Package, other farmers are given an OTS rebate of 25 per cent of the eligible amount or Rs. 20,000, whichever is higher, subject to the condition that the farmer pays the balance of the eligible amount. Agricultural loans restructured and rescheduled by banks in 2004 and 2006 through special packages and other loans rescheduled in the normal course as per RBI guidelines, are also eligible either for a

waiver or for an OTS on the same pattern. The period for payment of dues under OTS was extended upto June, 2010.

22.4 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. Some the recommendations of the Committee including those relating to Kisan Credit Card have been accepted and concerned agencies have been advised accordingly. Other recommendations are under examination in consultation with the State Governments and concerned agencies.

Chapter -23

Rashtriya Krishi Vikas Yojana





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 the Additional Central Assistance Scheme (ACA) for Agriculture & Allied Sectors, namely, the Rashtriya Krishi Vikas Yojana (RKVY) with an envisaged outlay of Rs.25,000 crores during the XIth Five Year Plan. For the years 2007-08 & 2008-09, 2009-10, outlays of Rs.1,263 crores, Rs.3165.67 crores and Rs.3777.07 crores were approved at RE stage and for the current year, an amount of Rs.6722 crores has been allocated under this scheme. RKVY aims at achieving 4% annual growth in the agriculture sector during the XIth Plan period, by ensuring holistic development of agriculture and allied sectors.

23.2 Objectives: Broad objectives of RKVY Scheme are as under:

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

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

23.3 Primary Strategic Relevance of the Scheme: RKVY Scheme is a State Plan scheme administered by the Union Ministry of Agriculture over and above its existing Centrally Sponsored Schemes. RKVY Scheme 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 focus States to generate additional growth in agriculture and allied sectors by better planning and undertaking appropriate growth oriented projects to achieve the goal. This is to be done by drawing up plans for their agriculture and allied sectors more comprehensively, by integrating livestock, poultry and fisheries reflecting needs/crops/priorities taking agro-climatic conditions, natural resource issues and technology into account. Funds under the scheme are provided to the States as 100% grant by the 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 growth projected and generated. There are no prescriptions about the 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 I of the guidelines):

- a. Base line share of agriculture and allied sectors in their total State Plan (excluding RKVY funds) is at least maintained. The base line is the moving average of the share of expenditure in the agriculture and allied sectors in the State Plan during the previous three years.
- b. District Agriculture Plans and State Agriculture Plans have been formulated.

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 the Planning Commission guidelines, which could be issued only in 2008. Criterion of maintaining base line expenditure was also relaxed to make it higher than the minimum of last three years' expenditure. However, this does not take away 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: The allocation by the 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.	Parameter	Weight
1.	The percentage share of net un-irrigated area in a state to the net un-irrigated area of the eligible states. Eligible States are those States that become eligible to avail of the RKVY Scheme based on their baseline level of expenditure under the State Plan and preparation of District and State Agricultural Plans.	20%

2.	The projected growth rates to a base year the Gross State Domestic Product (GSDP) for agriculture and allied sectors (say, 2005-06) will be applied to GSDP to be attained by the end of the 11 th Plan by the States. The parameter will be set in terms of inter-state proportion of these GSDPs projected to be reached by the State by the end of the 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-projected 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 the RKVY funds is to be used for specific projects/schemes/programmes which have been approved as part of the State and District Plans.
- **Stream-II:** A maximum of 25% of the 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 the 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 the 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 recognise and build on the need for convergence and integration of the various programmes implemented at district / State level into DAPs and SAP. Each district is required to formulate a District Agriculture Plan (DAP) by including the 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 the Central and State Finance Commissions etc.

23.10 The District Agriculture Plans reflect the financial requirements and the sources of financing the 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 the State Agriculture Plans (SAPs).

23.11 Status of Preparation of District Agriculture Plans:

Preparation of the District Agriculture Plans (DAPs) and the State Agriculture Plan (SAP) is the cornerstone of the strategy of implementation of RKVY. An amount of Rs.55.30 crores was released to

the States / UTs @ Rs.10 lakhs per district for preparation of DAPs under RKVY. Most of the State Governments have already prepared the DAPs (600 districts out of 609 districts in the country). 23 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 fund allocation by the states to agriculture & allied sectors 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 2010-11 is given at **Annexure 23.2**.

23.13 While, growth in agriculture and allied sectors in States is not attributable entirely to RKVY projects as there are many other programmes and policies contributing to it, RKVY has emerged as a principal instrument of development of agriculture and allied sectors in 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 5.11 % of total State Plan Expenditure in 2006-07. This has gone up to 6.29 % in 2009-10 (RE/ Approved).

23.15 Important Schemes started during 2010-11: Two new sub-schemes have been introduced under RKVY from the current year. The first one is a scheme for Extending Green Revolution to the Eastern Region of the country, covering States of Assam, Bihar, Chhattisgarh, Jharkhand, Orissa, Eastern UP and West Bengal, with an allocation of Rs.400 crores for 2010-11. This is aimed at increasing crop productivity of the region by intensive cultivation through promotion of recommended agricultural technologies and package of practices and development of missing links in the agriculture infrastructure through execution of a well-documented Strategic Plan based on the needs of the agro ecological sub regions.

23.16 The second scheme is "Special Initiative for Pulses and Oilseeds in Dryland Areas by organising 60,000 Pulses and Oilseeds Villages in Rainfed Areas", with an allocation of Rs.300 crores in the current year. The objectives of this scheme is to provide an integrated intervention of water harvesting, watershed management and soil health to enhance productivity of Dryland farming areas. This is sought to be achieved by organising 60,000 Pulses and Oilseeds Villages in identified watersheds by providing farm machinery and equipments on custom hiring basis to service the fields of pulses and oilseed farmers and dovetailing with other existing schemes of the Government of India having components for promotion of oilseeds and pulses production.

23.17 Knowledge Sharing and 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 projects under RKVY in an online mode by accessing RKVY website (<http://www.rkvy.nic.in>). Most States have started data entry in the system. It is expected that this system will be providing all stakeholders with current and authenticated data on outputs, outcomes and growth impact of projects taken up under RKVY.

23.18 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**.

23.19 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 the States to plan their strategy and design appropriate schemes to implement that strategy with complete flexibility in scheme designs and autonomy in its implementation.

23.20 RKVY has imparted definite momentum to the 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



Gender Perspectives in Agriculture



24.1 In line with the National Agriculture Policy 2000, policy level initiatives for gender mainstreaming are being promoted by the Department of Agriculture & Cooperation (DAC), Ministry of Agriculture. The National Gender Resource Centre for Agriculture (NGRCA) was set up under DAC during 2004-05 as one of the components under the Scheme 'Extension Support to Central Institutes'.

24.2 The Centre acts as a focal point for the convergence of gender related activities & issues in agriculture & allied sectors and adds a gender dimension to agriculture policies and programmes. It also renders advocacy and advisory services to the States and UTs to internalize gender specific interventions for bringing the farm women to the mainstream of agriculture development.

24.3 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 the Department of Agriculture & Cooperation, to look into the budgetary commitments of various schemes

of DAC and ensure a proportionate flow of the public expenditure to benefit women farmers. It has been mandated that a minimum of 30% funds would be utilized for women farmers under all the beneficiary oriented programmes and schemes. Division wise identified nodal officers/ gender coordinators have been sensitized about the 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 action research studies in critical thrusts areas including assessment of gender content and the impact of various on-going programmes/schemes of DAC and to make appropriate recommendations, if required, on strategy and design of schemes to incorporate gender perspective.
- Collecting, analyzing and documenting success stories of Women farmers.
- Assessing gender content and generating

'gender disaggregated data' in respect of various schemes & programmes of different divisions of DAC.

- To utilize Gender Sensitization Modules (GSM) for sensitizing extension functionaries at different levels, namely senior, middle and cutting-edge level.
- To revise reporting and monitoring formats to generate gender disaggregated data.
- As a part of its networking strategies, the NGRCA is committed to initiate appropriate action related to Agriculture on the recommendations of (i) National Policy for Empowerment of Women (NPEW) formulated by Ministry of Women & Child Development (MW&CD); (ii) Committee for Elimination of Discrimination Against Women (CEDAW); (iii) National Mission for Empowerment of Women - Convergence and Coordination 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 below:

24.5 Horticulture: Under the Scheme "Technology Mission for Integrated Development of Horticulture in the North Eastern States including Sikkim", during the financial year 2010 – 2011, as per the norms suggested and directives issued by the Planning Commission/Ministry of Finance, under Women Component Plan (WCP), 30% of the allocation has been earmarked for women beneficiaries/farmers. The assistance provided to women farmers under the scheme is enumerated as under:

- Baseline surveys to identify the amount and type of work being contributed by women in the field of horticulture, their role in the decision making process, and problems faced by them.

- Entrepreneurial Development: The programme envisages making women farmers self reliant by providing them equal opportunities so as to avail the benefits and opportunities of the existing agricultural systems.
- Organization/identification of women groups which would act as a network for channelizing horticultural support.
- Need assessment of women farmers in terms of horticulture support such as inputs, technology, extension etc.
- Prioritizing the activities of individual women's groups on the basis of need assessment.
- Providing adequate organizational and financial support to women self help groups to make them self reliant, so that they are able to orchestrate their own activities and resources through group interaction.
- Provide technical training to women farmers in horticulture and allied areas.
- Provide training in increased managerial, organizational, entrepreneurial and decision making skills.

24.6 Under the scheme, assistance is being provided as under:

- Baseline surveys, at the rate of Rs. 10,000 per district
- Curriculum development , at the rate of Rs. 20,000 per district
- Refresher training of facilitators, at the rate of Rs. 10,000 per district
- Women's Self Help Groups, at the rate of Rs. 5000 per group
- Five days training, at the rate of Rs. 1000 per farm woman for training in production technology, procedures for accessing credit and loans, techniques for marketing produce. etc.

24.7 The progress made under the given

components from 2001-02 to 2010-11 (up to January 2011) are given in Table below:

Achievements in Women's Empowerment

Women's Empowerment	Achievement(Nos.)
i) Training of Women (five Days)	81,946
ii) Self Help Groups	9,087

24.8 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.

24.9 Macro Management: Under the Revised Scheme 'Macro Management for Agriculture' States have been instructed to allocate funds for SC/ST women farmers proportionate to their population and utilize the 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. During the financial year 2010-11, 2014598 women farmers have benefited under the scheme.

24.10 Agricultural Extension: The Centrally Sponsored Scheme "Support to State Extension Programmes for Extension Reforms" (ATMA Scheme) is under implementation in 598 districts of 28 States and 3 UTs. Under the scheme, the funds are being released to the States on the basis of State Extension Work Plan (SEWP) formulated & submitted by them. As per the provisions of the Operational Guidelines of Modified ATMA Scheme 2010 [Para 4.13(ii)], at least 30% of resources meant for programmes

and activities are required to be allocated to women farmers and women extension functionaries with specific documentation of expenditure and performance for women being maintained. Besides this, the Scheme also provides for involvement of women in different decision making bodies at District and Block level such as Agriculture Technology Management Agency (ATMA) Governing Board and ATMA Management Committee at District level and Farmers Advisory Committees set up at Block/ District and State level and also involvement of more women as 'Farmer Friends' under the newly introduced mechanism for extension delivery below the Block level. Under the cafeteria of activities, beneficiary contribution for women has also been reduced from 10% normal beneficiary contribution to an extent of 5% for four beneficiary oriented activities viz. Farmers' Training, Demonstrations, Exposure Visits and Capacity Building of Farmers' Groups.

24.11 Since inception of the scheme in 2005-06, 26,73,772 farm women (25.02% of the total benefitted farmers) have participated in farmer oriented activities like exposure visits, trainings, demonstrations & Kisan Melas. 3,89,503 women farmers benefited during 2010-11 (up to January, 2011) viz. 55602 through Exposure Visits, 96268 through Trainings, 24855 through Demonstrations and 212778 through Kisan Melas.

24.12 The Central Sector Scheme "Establishment of Agri-Clinic & Agri-Business" (ACABC) is open to graduates in agriculture and allied subjects from State Agriculture

Universities (SAU)/ Central Agricultural Universities/ Universities recognized by ICAR/ UGC (ii) biological science graduates with post-graduation in Agriculture and allied subjects; (iii) Diploma/ Post Graduate Diploma holders in agriculture and allied subjects from SAUs (iv) Agriculture courses at intermediate (i.e., plus two) level. During 2010-11, 121 women agriculture graduates (up to December 2010) have been trained, out of whom 45 trained graduates have set up their ventures. A total of 1426 and 296 women have got trained and set up their ventures respectively since inception of the Scheme (till December, 2010). Higher credit linked back-ended subsidy @ 44% is provided in respect of women candidates.

24.13 The Central Sector Scheme “Mass Media Support to Agricultural Extension” was launched during Xth Plan period with a view to contribute to revamping the extension services in the country by using electronic media for transfer of technology/information to the 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 fields for bringing the 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.

24.14 **National Gender Resource Centre in Agriculture (NGRCA):** The progress of the macro/micro level action research studies / tasks undertaken is as under:-

- (i) Analytical Study on existing State Policies, Programmes, Interventions, Processes and their impact on Women's access to Land has been outsourced to MANAGE. The study is under process.
- (ii) Mainstreaming Gender Concerns in Agriculture has been outsourced to Centre for Management Development (CMD), Thycaud, Trivandrum, Kerala. The study has been completed and final report has been submitted by the agency.
- (iii) The one day duration Gender Sensitization Module (GSM) is being delivered by MANAGE in the on-going training programmes for senior and middle level extension functionaries, whereas, the three-day duration GSM for extension functionaries at the cutting edge level is being delivered through State Agricultural Management and Extension Training Institutes (SAMETIs). During a period of 4 years it is proposed to sensitize approximately 15,000 functionaries at the cutting edge level through 600 training programmes. During the financial year 2010-11, 127 extension functionaries have been sensitized through 9 training programmes. Funds were released to the SAMETIs of the States of A.P., Chattisgarh, Tamil Nadu and Sikkim for training 1000 extension functionaries through 40 training programmes. Reports are still awaited from the SAMETIs of A.P., Tamil Nadu and Sikkim.

24.15 The Reporting Formats of Extension Division have been revised to include and reflect the benefits accrued to women under different schemes/ programmes of the Division. These formats have been shared with all the subject matter divisions of the Department for revising the formats of the beneficiary oriented schemes of the respective divisions.

24.16 Watershed Development: The National Watershed Development Project for Rainfed Areas (NWDPRRA), does not have a gender-specific component. However, all communities living in watershed areas are benefited through Natural resource management. Since 2007-08, about 24348 Women Self Help Groups & 18075 User Groups of Women have been formed in the project areas covered under the programme.

24.17 The Guidelines of the Scheme/ EFC have been revised in favour of women. Under the Revised 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 all the perspectives and interests of women are adequately reflected in the watershed action plan. The Watershed Committees that are formed to implement NWDPRRA 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. Besides, it has been found that a large number of SHGs from watershed areas comprise women members.

24.18 Crops: The scheme 'National Food Security Mission (NFSM), was launched in October 2007-08, targeting three important food grain crops-rice, wheat and pulses. The beneficiaries of the Mission include small and marginal farmers, including women farmers. States have been advised to set aside at least 33% of the 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.

24.19 The Scheme Mini Mission-II of Jute

Technology is not a gender specific scheme. However, for components like distribution of agricultural inputs, instructions have been issued to the state Government to give priority to women particularly through those who own land. In case of training of farmers, priority is to be given to women farmers including landless women. Further, the States have been advised that 30% of the allocation should be spent for the benefit of women.

24.20 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, benefits to the tune of 30% of the allocation should flow to women farmers. Therefore, in components like distribution of agricultural inputs, training demonstration, etc., preference may be given to women headed house-holds. Under the scheme, assistance of Rs15, 000 is also provided for 210 meters of pipe for carrying water from the source to the field. Small/marginal, SC/ST and women farmers are also provided assistance up to a maximum of 4 ha per beneficiary for the development of Oil Palm. Further, the assistance provided to women farmers for drip irrigation component is 50% of the cost (with ceiling ranging from Rs7400 to Rs.9300), whereas, for other categories it is 35% (with a ceiling of Rs.5200 to Rs.6500).

24.21 Gramin Bhandaran Yojana : A Capital Investment Subsidy Scheme for Construction/Renovation of Rural Godowns: The Scheme was introduced in 2001-02 with a view to create scientific storage capacity with allied facilities in rural areas to meet the requirements of farmers for storing farm produce, processed farm produce and agricultural inputs; promotion of grading, standardization and quality control of agricultural produce to improve their marketability, prevention of distress

sale immediately after harvest by providing the facility of pledge financing and marketing credit.

24.22 Under the scheme the rate of subsidy for projects located in North-Eastern States, hilly areas and those belonging 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.

24.23 Under institutional lending a back-ended subsidy as term loan is provided by the banks up to a minimum of 50% of the 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 will be 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. The 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 other 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 and self-help groups, cooperatives located in the NE states/hilly areas and 50% for all other categories.

24.24 **Machinery and Technology:** Under the Central Sector Scheme 'Promotion and

Strengthening of Agricultural Mechanization through Training Testing and Demonstration, during 2010-11 (upto December, 2010) about 2925 gender friendly equipments have been distributed amongst farm women. A list of about 30 identified gender friendly tools/equipments developed by Research & Development Organization for use in different farm operations has been sent to all States/UTs for popularizing them. Under the scheme for 'Outsourcing of training & Demonstration of Newly Developed Agricultural Equipments including Horticultural Equipments at Farmers' Fields, 30 % of the funds has 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 women farmers. During 2010-11 (upto December 2010), a total of 499 women have been imparted training at The Farm Machinery, Training and Testing Institutes (FMTTIs).

24.25 Under the Scheme 'Post Harvest Technology and Management through Demonstration, Distribution and Outsourcing of Training', the implementing agencies like ICAR and SFCI have been directed to ensure release of 30% funds to women beneficiaries. Under the scheme 732 demonstrations have been conducted out of which 512 were exclusively for women farmers. The flow of funds to women farmers during 2010-11 (upto November, 2010) has been to the tune of Rs.80.36 lakhs.

24.26 **Integrated Nutrient Management(INM):** Under the 'National Programme for Organic Farming' (NPOF), 25 % seats have been reserved for training of women farmers in organic farming.

24.27 **Pest Management Approach in India:** With a view to improve the availability of bio-control agents and bio-pesticides to farmers, under the scheme "Strengthening and Modernization of Pest Management Approach in India", assistance is provided to private entrepreneurs, NGOs, Cooperatives,

SHGs, womens' organizations for opening mass production units of bio-control agents/bio-pesticides and for purchasing laboratory equipments for setting up bio-control laboratories. The subsidy on total cost of equipments is provided at 35% for general category & 50% for SC/ST/Womens' Organizations subject to a maximum of Rs.5.00 lakhs per unit.

24.28 Cooperation: The Cooperation Division is implementing two Central Sector Schemes viz. (i) Central Sector Scheme for Cooperative Education & Training (ii) Assistance to NCDC for Development of Cooperative programme, wherein due focus is given to women for their economic and social upliftment.

24.29 With the overall objective of bringing women in the cooperative fold, developing their participation in group activities and to improving their socio-economic conditions in selected blocks, NCUI is now running four exclusive womens' development projects located at Shimoga (Karnataka), Berhampur (Orissa), Imphal (Manipur) and Bhopal (MP). Under these projects, 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.

24.30 National Cooperative Development Corporation (NCDC) encourages womens' cooperatives to avail assistance under its various schemes. A large number of women members are engaged in cooperatives dealing in the areas of fisheries, power loom, garment manufacturing and knitting units, spinning mills, fruits & vegetables, marketing and processing, poultry and service cooperatives etc. So far, assistance of Rs.126.37 crores has been provided for women cooperatives in the country. Prominent among the women cooperatives which have so far been assisted by the NCDC include programmes related to textiles (spinning, handloom, power loom),

poultry, fisheries, plantation crops, service cooperatives and integrated cooperative development projects etc.

24.31 The cumulative outlay during the financial year 2010-11 for the women development of cooperative societies exclusively organized by women including Food Grain Processing, Plantation Crops, Oilseed Processing, Fisheries, Integrated Cooperative Development Projects (ICDPs), Spinning Mills, Handloom and Power loom Weaving and Super Mills etc. is Rs6.40 crores out of which Rs1.72 crores has been released upto December 2010.

24.32 Seeds: The objective of the scheme 'Development & Strengthening of Infrastructure, Facilities for Production & Distribution of Quality Seeds' is to develop and strengthen the existing infrastructure for the production and distribution of certified / quality 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 beneficiaries to ensure that assistance / subsidy benefits are equally available to all the farmers including women farmers.

24.33 Policy: The National Policy for Farmers 2007 announced by the Government envisages the following measures aimed at women's empowerment.

- Asset reforms under land, water, and livestock for an equitable share to women farmers.
- Better access to inputs and services science and technology, implements, credit and support services like crèches, child care centres, nutrition, health and training.
- Encouragement to women for

participating in group activities aimed at achieving economies of scale through farming groups.

- Involvement of women in conservation and development of bio-resources.

24.34 Agriculture Census: On the recommendation of the 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 collected information indicates the participation of women population in the operation and management of the agricultural holdings in the country.

24.35 The number and percentage of female operational holders as per the Agriculture Census 2005-06 is given in the following table:

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

Further details indicating the involvement of women in agriculture are given in **Annexure 24.1.**

24.36 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 the DAC, and their revision, if required, to ensure the flow of benefits to women farmers.
- Reporting and MIS formats of all Beneficiary-Oriented Schemes (BOS) of the DAC are being revised to generate gender disaggregated data.

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. The Reporting & MIS Formats have been revised to generate gender disaggregated data.

24.37 The Way Forward: The foremost

Annexures

CHAPTER- 2

FUNCTIONS AND ORGANISATIONAL STRUCTURE

List of Functional Divisions in the 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 ORGANISATIONAL 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 (Uttar Pradesh).
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 (Uttar Pradesh).

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 (Andhra Pradesh).
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).
12. Directorate of Extension, Krishi Vistar Bhavan, Dr. K.S. Krishnan Marg, IARI Campus, Pusa, New Delhi-110 012.
13. Directorate of Oilseeds Development, Telhan Bhavan, Himayat Nagar, Hyderabad-500029 (Andhra Pradesh).
14. Directorate of Pulses Development, 8th Floor, Vindhyachal Bhavan, Bhopal-462004 (Madhya Pradesh).
15. Central Fertilizer 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 (Uttar Pradesh).
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 (Uttar Pradesh).

CHAPTER- 2

FUNCTIONS AND ORGANISATIONAL 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 (Andhra Pradesh)

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- 2

FUNCTIONS AND ORGANISATIONAL STRUCTURE

Citizens' Charter: Mandate/ Services

This Department is committed to the welfare and economic upliftment of the farming community in general.

Our Services / Activities

- Registration of Multi-State Cooperative Societies(MSCS).
- Implementation of (a) Price Support Scheme (PSS) for procurement of oilseeds, pulses and cotton through NAFED as central agency and (b) Market Intervention Scheme (MIS) for procurement of agricultural & horticultural commodities which are generally perishable in nature.
- Administration/ Implementation of crop Insurance programme.
- Release of funds under crop development programmes of National Food Security Mission, Technology Mission on Cotton & Jute Mission.
- Monitoring the rainfall situation during South West Monsoon and its impact on Agricultural operations, in consultation with the States.
- Deputation of Inter-Ministerial central Teams to States affected by drought/hailstorm/pest attack for assessment of losses and requirement of central assistance.
- Supplement the efforts of the States through Central assistance to deal with drought, hailstorm & pest attack.
- Training and Extension Services to farmers – to make the extension system farmer-driven and farmer-accountable by way of new institutional arrangements for technology dissemination.
- Kissan Call Centres – Responding to farmers queries round the clock (24X7).
- Mass Media Support To Agriculture Extension - through the existing infrastructure of 96 FM Stations of AIR, 18 Regional Kendras, 180 Narrowcasting centres and 1 National Channel of Doordarshan.
- Setting up of new static/mobile soil testing laboratories (STLs) / fertilizer quality control laboratories (FQCLs), strengthening of existing STLs and FQCLS, training of STL staff/ extension officers / farmers, field demonstrations on balanced use of fertilizers and promoting use of organic manure, soil amendments, micro-nutrients and quality control of fertilizers under FCO.
- Promotion of organic farming in the country, capacity building, biological soil health assessment, organic input resources management, market development and quality control of bio-fertilizers and organic fertilizers under FCO.
- Strengthening of AGMARK Grading Facilities Scheme.
- To establish a nation-wide information network for speedy collection and dissemination of price and market related information to farmers and other related organizations through AGMARKNET (<http://agmarknet.nic.in>).
- Place Information relating to funds

- released and projects taken up under RKVY by the States on a Public website for information of all stakeholders, including citizens.
- Testing of Farm Machineries for ensuring the quality of product.
 - Registration of pesticides under the Insecticides Act 1968 and Integrated Pest Management.
 - Clearance of export/import consignments Service standards for clearance of export / import consignments under the Plant Quarantine (Regulations of import into India) Order, 2003.
 - To provide assistance for the Development and Strengthening of Infrastructure Facilities for Production and Distribution of Quality Seeds'.
 - Research studies/consultancy on various aspects of the international competitiveness of Indian agriculture.
 - Support for awareness creation and training programmes relating to the WTO Agreement on Agriculture and related Agreements among farmers/agricultural scientists /administrators in the country preferably by State Agricultural Universities

CHAPTER- 3
DIRECTORATE OF ECONOMICS AND STATISTICS
Minimum Support Prices
(According to Crop Year)

(As on 23.11.2010)
(Rs. per quintal)

Sl. No.	Commodity	Variety	2006-07	2007-08	2008-09	2009-10	(#) increase in MSP 2009-10 over 2008-09	2010-11	(#) increase in MSP 2010-11 over 2009-10
	KHARIF CROPS								
1	PADDY	Common	580 [^]	645 ^{\$\$} /850 [~]	850 ^{\$}	950 ^{&}	100(11.8)	1000	50(5.3)
		Grade 'A'	610 [^]	675 ^{\$\$} /880 [~]	880 ^{\$}	980 ^{&}	100(11.4)	1030	50(5.1)
2	JOWAR	Hybrid	540	600	840	840	0.0	880	40(4.8)
		Maldandi	555	620	860	860	0.0	900	40(4.7)
3	BAJRA		540	600	840	840	0.0	880	40(4.8)
4	MAIZE		540	620	840	840	0.0	880	40(4.8)
5	RAGI		540	600	915	915	0.0	965	50(5.5)
6	ARHAR(Tur)		1410	1550 ^{^^}	2000	2300	300(15.0)	3000 ^{¶¶}	700(30.4)
7	MOONG		1520	1700 ^{^^}	2520	2760	240(9.5)	3170 ^{¶¶}	410(14.9)
8	URAD		1520	1700 ^{^^}	2520	2520	0.0	2900 ^{¶¶}	380(15.1)
9	COTTON	Medium Staple	1770	1800	2500 ^a	2500 ^a	0.0	2500 ^a	0(0.0)
		Long Staple	1990	2030	3000 ^{aa}	3000 ^{aa}	0.0	3000 ^{aa}	0(0.0)
10	GROUNDNUT IN SHELL		1520	1550	2100	2100	0.0	2300	200(9.5)
11	SUNFLOWER SEED		1500	1510	2215	2215	0.0	2350	135(6.1)
12	SOYABEEN	Black	900	910	1350	1350	0.0	1400	50(3.7)
		Yellow	1020	1050	1390	1390	0.0	1440	50(3.6)
13	SESAMUM		1560	1580	2750	2850	100(3.6)	2900	50(1.8)
14	NIGERSEED		1220	1240	2405	2405	0.0	2450	45(1.9)
	RABI CROPS								
15	WHEAT		750 ^{\$\$}	1000	1080	1100	20(1.85)	1120	20(1.8)
16	BARLEY		565	650	680	750	70(10.29)	780	30(4.0)
17	GRAM		1445	1600	1730	1760	30(1.73)	2100	340(19.3)
18	MASUR (LENTIL)		1545	1700	1870	1870	0	2250	380(20.3)
19	RAPSEED/MUSTARD		1715	1800	1830	1830	0	1850	20(1.1)
20	SAFFLOWER		1565	1650	1650	1680	30(1.82)	1800	120(7.1)
21	TORIA		1680	1735	1735	1735	0(0)	1780	45(2.6)
	OTHER CROPS								
22	COPRA	Milling	3590	3620	3660	4450	790(21.6)	4450	0(0.0)
	(Calender Year)	Ball	3840	3870	3910	4700	790(20.2)	4700	0(0.0)
23	DE-HUSKED COCONUT	(Calender Year)	-	-	988	1200	212(21.5)	1200	0(0.0)
24	JUTE		1000	1055	1250	1375	125(10.0)	1575	200(14.5)
25	SUGARCANE	□	80.25	81.18	81.18	129.84	48.66(59.9)	139.12*	9.28(7.1)
26	TOBACCO(VFC)	Black Soil(F2 Gr)	32.00	32.00					
	(Rs. per kg.)	Light Soil (L2 Gr)	34.00	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).
An additional incentive bonus of Rs. 40 per quintal was payable on procurement between 1.10.2006 to 31.03.2007.
- ^ In case of Bihar and Kerala additional incentive bonus extended upto 31.5.2007 and in case of Andhra Pradesh, Chhatisgarh, Orissa, Tamil Nadu and West Bengal additional incentive bonus extended upto 30.9.2007.
- ^^ 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) Statutory Minimum Price (SMP) upto 2008-09. Fair and Remunerative Price (FRP) from 2009-10 onwards.
- At 9.5 percent recovery, subject to a premium of Rs.1.46 for every 0.1 percent increase in the recovery above 9.5 percent.
- *
- ¶ Additional incentive at the rate of Rs. 5 per kg of tur, urad and moong sold to procurement agencies is payable during the harvest/arrival period of two months.

CHAPTER- 5
SEEDS

Seeds Programme in North Eastern States

(as on 31.01.2010)

S . No.	Schemes/ Programmes/ Activities Approved	Details of Schemes/ Programmes/ Activities taken up	Target for 2009-10	Achieve ment 2009-10	Target for 2010-11
1.	2.	3.	4.	5.	6
1.	Establishment and Maintenance of Seed Bank.	The basic objective of this component is to keep seed available for meeting requirement during natural calamities.	36,235 quintals	34,315 quintals	38,350 quintals
2.	Transport Subsidy on movement of Seeds to North-Eastern States including Sikkim; Himachal Pradesh; Jammu & Kashmir; Uttaranchal; and Hill areas of West Bengal.	Due to the topographical and climatic conditions being not conducive for the production of seeds in the North-Eastern States, 100% reimbursement of transportation cost is allowed for the movement of seeds produced outside the North-Eastern States and the actual cost, restricted to a maximum of Rs. 60/- per quintal for the movement of seed within the State Capital/ district headquarters to sale outlets/sale counters is allowed.	It is reimbursement programme. Therefore Targets cannot be pre-fixed and transportation of seeds depends on demand which varies from year to year.	144711 Quintals of Seeds transported for NE States.	As mentioned in Col.4, targets cannot be pre-fixed. As per the information provided by the Implementing Agency, 44,629 quintals of seed already transported exclusively in NE States up to 31.01.2011.

CHAPTER- 9
AGRICULTURAL EXTENSION
PROGRAMMES IN NORTH-EASTERN STATES

Name of Division:- EXTENSION						
Sl.	Schemes/ Programme/ Activities Ap- proved	Details of Schemes/ Programmes/ Activities	Targets	Achievements (upto Jan.2010)	Budget Al- location	Utiliza- tion/ Re- lease (upto Jan.2010)
1.	Support to State Exten- sion Pro- grammes for Extension Reforms	Establishment of Agricultural Technology Management Agencies (ATMAs)	64	64	Rs.25crore	Rs.7.97 crore have been re- leased
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.8.36 crore have been released to Prasar Bharti centrally.
3	Establishment of Agri-Clinics and Agri-Busi- ness Centres	Training of unemployed candidates and establish- ment of agri- venture	Graduates d i p l o m a holders in agri & al- lied areas.	Ar. Pradesh-0* Assam-27* Manipur -15* Meghalaya-0* Mizoram-01* Nagaland -0* (*agri-ventures)	Rs. 2.50 crore	Rs. 1.00 crore released to MANAGE.
4	Kisan Call Centres	Receipt of calls from farmers	All farmers have free a c c e s s to KCCs t h r o u g h t o l l f r e e telephone lines.	Number of calls received during the year Arunachal Pr.(676) Assam (8304), Manipur (467), Meghalaya (3806), Mizoram (227), Nagaland (165), Sik- kim (669), and Tripura(921).	The funds are released to TCIL cen- trally.	
5	Extension Education In- stitutes (EEl), Jorhat	Training of middle level functionaries	22 cours- es	19 courses (458 -partici- pants)	Total of an amount of Rs. 1.00 crore al- located to EEI,Jorhat.	Rs.0.48 crore

CHAPTER- 12
MECHANIZATION AND TECHNOLOGY

Programmes of North-Eastern States during 2010-11
(Up to 31st December, 2010)

(Rs. in crore)

Sl. No	Activity/ Programme/ Schemes Approved	Details of Activities/ Programmes/ Schemes taken up	Targets	Achievements (upto 31.12. 2010)	Budget Allocation	Amount utilized (Upto 31.12.2010)
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: 504 Testing: 12	1.92	
		Outsourcing of training & Demonstration of Newly Developed Agricultural Equipments including Horticultural Equipments at Farmers' Fields (Implemented on all India basis including NER): (a) Demonstration of Newly Developed Agricultural Equipments Including Horticultural Equipments at Farmers' Fields (b) Training of farmers through outsourcing by identified institutions of the State Governments.	Arunachal Pradesh-1170 Manipur-466 Nagaland-115 Sikkim-120	Manipur-254 Nagaland-202	1.50	0.93

2	Post Harvest Technology (PHT) and Management.	(i) Demonstration of PHT Equipments. (ii) Distribution of PHT equipments through subsidies. (iii) Outsourcing of training	Manipur-833 Manipur-932 Nagaland-142	Manipur-833	3.50	1.05
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CHAPTER- 14

NATURAL RESOURCE MANAGEMENT

Natural Resource Management Programmes in North Eastern States

(Rs. in crore and area in lakh hectare)

S. No.	Name of the Schemes/ Programmes	Details of activities/components	Target	Achievement (upto 31 Jan. 2011)	Budget allocation	Utilization (upto Jan. 2011)
1	Special Central Assistance to State Plan Scheme on Watershed Development Project in Shifting Cultivation Areas;	Measures for development of arable and Non-arable land i.e. horticulture plantation, forestry, silvi-pasture development, farm ponds, water harvesting structures, Drainage line treatment and creation of Watershed Associations	0.35	0.23	40.00	19.80
	Centrally Sponsored Programme of Soil Conservation in the Catchments of River Valley Project and Flood Prone River	Contour vegetative hedges, contour/ graded bunding, horticulture plantation, contour/ staggered trenching, sowing and planting of plants, silvi-pasture development, pasture development, afforestation, farm ponds, percolation tanks, drainage line treatment etc	0.17	0.12	22.20	18.35
	Centrally Sponsored Programme of Reclamation and Development of Alkali and Acid Soils.	Identification of area affected by alkali and acid soils, leveling/terracing and contour bunding/field bunding, application of Gypsum/Pyrite/Lime as soil amendments followed by crop production and green manuring, capacity building and training of farmers/beneficiaries	0.16	0.01	13.58	8.45
		Total	0.68	0.36	75.78	46.60

CHAPTER- 15
RAINFED FARMING SYSTEM

Rainfed Farming System Programmes in North Eastern States (2010-11)

(As on December, 2010)

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)
	National Watershed Development Project for Rainfed Areas	All the components of National Watershed Development Project for Rainfed Areas	78,914	37,650	8913.05	4230.00

CHAPTER- 19

MACRO MANAGEMENT OF AGRICULTURE (MMA)

State-wise Allocation and Release of funds under revised Macro Management of Agriculture (MMA) Scheme during 2010-11.

(Rs. in lakh)

S. No.	State/UTs	Amount of Work Plan approved	Unspent Balance as on 01.04.2010	BE 2010-11	Release as on 31.01.2011
1.	Andhra Pradesh	7972.19	624.65	6307.19	3676.390
2	Arunachal Pradesh	3146.00	21.78	3021.00	3021.000
3	Assam	1981.00	203.03	2337.00	1168.500
4	Bihar	4262.76	975.25	3857.48	3305.400
5	Chhattisgarh	2230.46	149.69	2081.71	1040.850
6	Goa	50.57	0.84	45.51	45.510
7	Gujarat	4075.00	769.20	3657.56	1828.780
8	Haryana	1260.46	22.15	1608.04	567.200
9	Himachal Pradesh	2239.77	63.53	2015.79	2010.790
10	Jammu & Kashmir	1907.99	446.20	3716.06	958.030
11	Jharkhand	1320.30	241.77	1076.45	538.220
12	Karnataka	5509.84	175.66	4789.57	4789.570
13	Kerala	1446.77	121.37	1183.85	1183.850
14	Madhya Pradesh	7115.77	742.92	6165.40	6165.480
15	Maharashtra	10775.13	151.74	8910.17	8910.170
16	Manipur	3021.00	0.00	3021.00	3021.000
17	Meghalaya	2109.00	0.56	2109.00	1054.500
18	Mizoram	3540.00	795.00	3420.00	3420.000
19	Nagaland	3420.00	0.00	3420.00	1710.000
20	Orissa	3868.66	1362.37	3199.44	1599.720
21	Punjab	2081.88	589.24	1627.27	813.635
22	Rajasthan	6437.53	1336.02	5585.15	5585.150
23	Sikkim	2789.25	289.46	2736.00	2736.000
24	Tamil Nadu	3669.02	951.96	3283.01	4608.010
25	Tripura	2895.50	954.75	2736.00	2736.000
26	Uttar Pradesh	11254.46	461.94	10879.01	10129.010
27	Uttarakhand	2693.75	293.66	2322.54	2322.540
28	West Bengal	5306.15	789.82	4288.79	2144.400
29	Delhi	0.00	74.39	50.00	

30	Puducherry	62.38	25.27	50.00	25.000
31	A & Nicobar Islands	0.00	1.72	8.00	4.000
32	Chandigarh	0.00	0.00	0.00	
33	Dadra & N. Haveli	6.00	8.65	6.00	3.000
34	Daman & Diu	6.00	0.00	6.00	3.000
35	Lakshadweep	0.00	4.44	6.00	
	Total States /UTs	108454.59	12649.03	99526.00	81124.630
	Direct Funded Component			474.00	334.510
	Grand Total	108454.59	12649.03	100000.00	81459.140

CHAPTER-23

RASHTRIYA KRISHI VIKAS YOJANA (RKVY)

Status of District Agriculture Plans (DAPs) & and State Agriculture Plans (SAPs)

SI	State/UT	No. of Dis- tricts	DAP pre- pared	SAP pre- pared	SAPs received in DAC	
					Hard Copy	Soft copy/web link
1	2	3	4	5	6	7
1	Andhra Pradesh	23	23	Yes	yes	
2	Arunachal Pradesh	16	16	Yes	Yes	yes
3	Assam	27	27	Yes	yes	
4	Bihar	38	38	Yes	Yes	
5	Chhattisgarh	18	13	Yes	Yes	
6	Goa	2	In progress	No	No	
7	Gujarat	26	26	Yes	Yes	
8	Haryana	21	21	Yes	Yes Web link	
9	Himachal Pradesh	12	12	Yes	yes	
10	Jammu & Kashmir	22	22	Yes	yes	
11	Jharkhand	24	24	Yes	Yes	yes
12	Karnataka	29	29	Yes	yes	
13	Kerala	14	14	No	No	
14	Madhya Pradesh	50	50	Yes		
15	Maharashtra	33	33	Yes	Yes	
16	Manipur	9	9	Yes	yes	
17	Meghalaya	7	7	Yes	yes	
18	Mizoram	8	7	No	No	
19	Nagaland	8	8	Yes	yes	
20	Orissa	30	30	No	No	
21	Punjab	20	20	Yes	yes	
22	Rajasthan	33	33	Yes	yes	
23	Sikkim	4	4	Yes	yes	
24	Tamil Nadu	29	29	Yes	yes	
25	Tripura	4	4	Yes	No	
26	Uttarakhand	13	13	No	No	
27	Uttar Pradesh	71	71	Yes	yes	
28	West Bengal	18	17	Yes	Yes	yes
		609	600	23	21	

Sector wise Approved Project Cost

Select Year 2007-08

Unit In Crores

	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									42.90		1.86	13.00				1.08			0.24		59.08
2	BIHAR	6.44			12.41	0.41	3.42		4.04		0.32	1.50	6.21	19.29				3.02			3.35	60.41
3	CHATTISHGARH		9.78		11.95	10.00	3.90		0.14	5.44	2.05	0.94	1.46	7.79					4.89	0.50		58.84
4	GOA	0.31			0.19	0.38	0.04				0.21	0.12	0.02		0.75				0.05			2.07
5	GUJARAT	1.23			0.93									4.18				32.68				39.02
6	HARYANA	1.00	3.45				2.09				1.60	3.94								3.84		15.92
7	HIMACHAL PRADESH		2.70		1.38	0.12				2.22	0.06		0.30	0.04				5.15			0.26	12.23
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	20.00			37.00		25.00			110.00
10	KERALA	13.26	15.36	0.52	18.66		1.27		1.05		0.34	6.03	1.04	2.66	0.65		0.28	2.82	0.28	0.29	2.13	66.64
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													35.00					104.00			139.00
13	MEGHALAYA		2.11											0.84				1.81	1.04	0.50		6.30
14	ORISSA	3.59			0.05				0.24	1.81	2.07	8.08	1.81					10.10		0.97		28.72
15	PUNJAB		0.66		5.10				6.02		2.00	5.00	5.00	20.50				10.16			3.90	58.34
16	RAJASTHAN	5.00	10.86				2.23				4.48		4.00	0.50			11.71		0.77		3.00	42.55
17	SIKKIM														2.07							2.07
18	TAMILNADU	9.96	4.70		3.08	82.91	7.64			11.62	7.17	10.06				5.16			12.08	8.71	6.67	169.76
19	TRIPURA				0.50		0.60													3.30		4.40
20	UTTAR PRADESH		4.00		4.00	4.00				9.65			2.00						58.35			82.00
21	UTTARAKHAND																			1.71		1.71
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	49.10	68.30	0.52	79.73	96.15	32.81	0	11.49	120.89	30.13	57.12	51.51	116.54	6.13	5.32	50.07	123.48	211.26	21.06	25.60	1157.21

Sector wise Approved Project Cost

Select Year 2008-09

Unit In Crores

SNo	STATE NAME	CROP	HORT	SERI	ANHIB	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	7.51	30.21	142.62
3	BIHAR	5.51	2.00		30.57		2.41			10.00	6.21	26.23	24.41	5.44	4.80	12.20				8.02	0.27	193.48
4	CHATTISHGARH		18.52		27.27		10.90	13.00	1.62	12.97	1.56	0.38	14.90	9.20		1.25			4.00	2.80	5.63	129.41
5	GUJARAT	3.90	0.29		46.37		17.97	9.60	3.62	29.74	13.83	5.35	11.89	46.04			13.13	66.62		2.80	5.63	300.63
6	HARYANA		5.00		20.85		5.68		15.30	0.95	3.35			6.00				12.60	10.00	0.82		82.55
7	HIMACHAL PRADESH	0.60	3.14		1.97		0.65			1.59									7.01	1.50	0.37	16.94
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		105.05		112.05	4.00	58.00			81.54		366.36		41.80			27.70			34.40		830.90
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	1.34		2.00	237.52	12.10	2.20	9.59	2.01	2.10	5.20	10.00		784.51	6.44		1418.61
12	MAHARASHTRA		0.54		272.40				21.08	0.44				0.04					136.92		21.60	453.02
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	ORISSA	4.13	6.33		48.01	0.24	3.81			14.45	1.45		31.67	5.49	0.25		15.15	50.90	11.68	1.03	52.58	247.17
16	PUNJAB	12.00	19.88		32.14		1.70		5.70	2.20	2.00			15.00			7.00	20.50	1.88		11.56	131.56
17	RAJASTHAN		0.27		34.85				2.11				1.88				8.00		132.43			179.54
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	25.78							5.40	17.25	1.50	144.76
20	TRIPURA		5.99		9.18		3.25				1.70		3.00	5.00	0.69			0.90	5.76			35.47
21	UTTAR PRADESH		32.85	10.97	16.03	139.24	3.95		2.83		27.08		30.48					6.00	54.09	10.00	12.02	345.54
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	90.16	270.88	16.34	832.21	554.79	170.35	27.22	55.22	513.08	125.77	483.92	140.97	192.62	13.55	18.76	95.68	177.16	1196.21	113.43	185.01	5273.33

Sector wise Approved Project Cost

Select Year 2009-10

Unit 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	A AND N IS- LANDS						17.15			0.32												17.47
2	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
3	ARUNACHAL PRADESH	3.68	2.07	2.65	1.84		2.36						0.18	1.80						0.50		15.08
4	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
5	BIHAR	13.92			45.06	1.08	8.57	2.50				31.11	8.92	11.96	16.07	1.00	5.00	4.15			22.00	171.34
6	CHATTISHGARH	1.00	21.31		21.52	24.97	8.08		0.12	60.94	0.05	2.00	3.67	0.80					0.50	4.55		149.51
7	GOA											0.01									7.10	7.11
8	GUJARAT	3.62	4.68	0.52	18.13	12.93	4.10		1.08	5.31		4.30	3.13	16.87	10.54		2.81	186.41	2.02	1.67	2.38	280.50
9	HARYANA		1.00		13.00	0.25				7.35	0.95	4.46	0.50					9.60	27.44	1.61		66.16
10	HIMACHAL PRADESH	1.80	4.80		2.92		0.50			1.20			1.41	2.08			2.78	1.22	2.05	3.11		23.87
11	JHARKHAND				13.46	2.48	3.04				0.55		4.70					13.10		0.42	80.23	117.98
12	KARNATAKA				94.45	7.00			3.61		3.00			7.50			4.59				5.40	125.55
13	KERALA	43.95	1.37	0.44	21.88	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	255.27
14	MADHYA PRADESH	1.51			7.65	15.00	5.42		1.00	265.83	401.00		22.84		3.14		27.00		12.10	101.00		863.49
15	MAHARASHTRA					7.99		20.00	5.83	20.00			25.00	35.30					40.00			154.12
16	MANIPUR	1.33	1.00		1.00	0.06	0															3.39
17	MEGHALAYA	10.23																2.15				12.38
18	ORISSA									2.34		9.00		0.96	0.44			3.61	0.51	4.42	0.52	21.80
19	PUNJAB	7.00	5.88		38.04					1.60				0.23			4.00				0.14	56.89
20	RAJASTHAN				4.32								3.35	17.19			12.00		25.80			62.66
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		3.93		5.89	4.04	2.63			1.50		1.30	4.75	6.25			3.25		1.37	0.40		35.31
24	UTTAR PRADESH	2.83	41.71	7.48	26.71	100.00	2.52		8.85	33.13	46.08		4.27				7.48	18.65	81.56	3.98	12.02	397.27
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	134.52	156.03	11.09	459.93	206.98	94.85	32.78	21.11	550.25	462.92	202.26	99.89	142.29	30.82	1.00	99.15	306.41	221.68	135.83	172.84	3542.63

Select Year 2010-11

Unit 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	AAND N IS- LANDS						10.41															10.41
2	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
3	ARUNACHAL PRADESH																					0
4	ASSAM	1.70	13.17		8.00		14.00		15.54	8.50	4.26						13.00		140.00	3.70		221.87
5	BIHAR	22.27	9.70		25.55	8.17	9.97	3.01	25.68	74.08	37.31		7.00				1.83		1.63	33.05	8.40	354.77
6	CHATTISHGARH	27.93	37.44			10.46	20.69	6.50	1.12	28.92	0.46	22.00	36.03		45.15				46.00	15.00		297.70
7	GOA						0.04							0.78		3.00	0.34				0.22	4.38
8	GUJARAT	12.82	28.16		13.52	39.69	8.60		9.57	9.15	33.53	3.02	27.68				0.60	96.57	15.50	2.21	33.85	334.47
9	HARYANA	24.16	5.83		45.80	23.68	3.62		1.00	27.26	1.50	0.90	0.48	5.01			24.08		74.00		6.50	243.82
10	HIMACHAL PRADESH	6.36	14.87		23.67	3.73	6.38		0.33	3.37	1.67	0.88	0.11	10.68	0.59		3.56		11.93	22.66	4.98	115.77
11	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
12	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
13	KARNATAKA	1.10	4.00			16.25			0.62	0.50	1.00	4.50	6.20	0.78	2.00		2.38			0.50		39.83
14	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
15	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
16	MAHARASHTRA						81.59		11.94	15.85	51.23	51.00	0.72	176.60					544.00		0.50	933.43
17	MEGHALAYA		10.00			0.46	9.00	1.00	0.33		2.66							21.62				45.07
18	ORISSA	72.66	13.18		31.25			46.57	2.70	27.20	4.00	42.14	38.99	46.27			12.11	62.60	32.24	11.15	12.12	455.18
19	PUNJAB	12.50	11.00		54.36	0.10	2.42		13.25	5.00	7.10	10.60	22.00	11.00			6.77		40.00	8.50	6.35	210.95
20	RAJASTHAN	99.75	261.14		89.36	29.53	18.67	37.89	1.00	134.53	38.75	9.60	176.68	16.79		5.00	33.24	23.67	239.03	29.10	17.20	1260.93
21	TAMILNADU	55.55	4.14		7.46	44.01	1.89		1.25		55.00			106.23	2.00			0.70	1.38		1.00	280.61
22	TRIPURA	22.70	6.83		11.91		1.72		0.37	1.09	1.75	5.50		5.13	0.16			12.60	10.91	1.15	1.00	82.82
23	UTTAR PRADESH	14.71	0.08	23.71	30.72	90.00	6.02		6.02	78.23	64.32	84.28	42.89		3.00	0.19		62.50	146.03	15.37	31.13	699.20
24	UTTARAKHAND				1.90				0.50				1.71									4.11
25	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
26	TOTAL	398.33	588.22	26.26	847.12	435.96	262.55	137.36	79.30	729.02	284.82	607.17	500.20	467.69	72.81	8.51	171.61	324.37	1448.16	166.50	151.33	7707.29

STATE-WISE LIST OF FLAGSHIP PROJECTS

SI No	State	Flagship Interventions/Projects
1	Andhra Pradesh	Seed Management Intensified mechanisation Integrated vegetable programme in A.P. Induction of milch animals
2	Arunachal Pradesh	Area expansion by land terracing for paddy. Development of way side market sheds for fruits and vegetables Development of commercial fish farms through private fish farmers
3	Assam	Shallow Tube Wells with electrically operated pump sets - increase in irrigated area and crop production in areas where SWT have been installed. Establishment of Organic agriculture produce market Agri mechanisation through increased use of power tillers
4	Bihar	Farm mechanisation especially Power tillers Seed production and distribution programme Dairy activities undertaken under RKVY
5	Chattisgarh	Establishment of model villages 'Adarsh Gram' Performance linked incentives to AI workers AI lab to produce semen
6	Goa	Establishing modern rice mill processing facilities Incentivizing paddy cultivation through SHGs
7	Gujarat	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	Providing assistance on laying underground pipeline system for water conveyance so that water losses can be avoided and additional land brought under cultivation from the irrigation channels 100% treatment of certified wheat seed Cattle health management to optimise fertility
9	Himachal Pradesh	Construction of low cost green houses/ poly houses Organic cultivation Micro/minor irrigation and water harvesting
10	Jammu & Kashmir	Protected cultivation of flowers & vegetables Creation of irrigation infrastructure for Horticulture Organic farming
11	Jharkhand	Micro Lift Irrigation Vermi-composting Breed improvement programme by BAIF to improve milk production
12	Karnataka	Karnataka Seed Mission project Automated weather monitoring system Rainfed agriculture – Bhoo-chetana E-tendering project
13	Kerala	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	Micro irrigation schemes - Percolation tanks, minor irrigation tanks Seed replacement Development and promotion of hybrid rice varieties Kisan Call Centers
15	Maharashtra	Construction of farm ponds Creation of low cost onion storage structures Surveillance and Monitoring of Pest and Disease on soybean and cotton AI delivery system
16	Manipur	SRI paddy cultivation Micro irrigation and construction of ponds for harvesting water
17	Meghalaya	Water conservation structures – mini irrigation check dams Horticulture hubs Fisheries
18	Mizoram	
19	Nagaland	Pigs and poultry development Horticultural development
20	Orissa	Development of 100 new watersheds Acidic soil treatment Renovation of horticulture farms
21	Punjab	Animal insurance Conservation of irrigation water Milk units and bulk milk chiller
22	Rajasthan	PPP for innovation in olive, date palm and jojoba Operation golden rays – PPP for livelihood of 7.5 lakh families through hybrid maize Diggi Programme
23	Sikkim	Hi-tech green houses Integrated farming system for sustainable agriculture
24	Tamil Nadu	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	SRI Pineapple cultivation Development of demonstration unit on piggery
26	Uttar Pradesh	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	Strengthening milk grid Strengthening organic vision
28	West Bengal	Prani Bandhu Scheme Hybrid paddy seed production involving NGOs Implement hub at block level AI sexing project (– to be done by State Govt.)

CHAPTER- 24

GENDER PERSPECTIVE IN AGRICULTURE

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	The State Horticulture Missions have been directed to earmark at least 30% of the budget allocation for women beneficiaries in all ongoing programmes
		Technology Mission for Integrated Development of Horticulture in North Eastern States, Sikkim, Jammu & Kashmir, Himachal Pradesh and Uttaranchal (TMNE)	During 2010-11 (upto Jan 2011) 81946 women entrepreneurs have been trained on different aspects of horticulture and 9087 Women SHGs have been established.
2	Macro Management		The States have been instructed to allocate funds for SC/ST women farmers proportionate to their population and utilize the 10%-20% provided under "New Initiatives" for implementing activities for gender empowerment, development and to include Schemes which encourage group formation among Women/ SC/ST farmers in the Work Plan. During the financial year 2010-11, 2014598 women farmers have benefited under the scheme.
3.	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, total 26,73,772 farm women have participated in farmer oriented activities like exposure visit, training, Demonstrations, trainings & Kisan melas including 3,89,503 women farmers benefited during 2010-11 (up to January, 2011) i.e 55602 through Exposure Visits, 96268 through Trainings, 24855 through Demonstrations and 212778 through Kisan Melas.
		National Gender Resource Centre in Agriculture (NGRCA)	Focal point for convergence, coordination and mainstreaming gender concerns in agriculture. During 2010-11, 127 extension functionaries have been sensitized through 9 training programmes.
		Mass Media Support to Agriculture Extension	Special programmes are being produced & telecast by Doordarshan & AIR in areas of predominant 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 2010-11 (up to December 2010,), 121 women agriculture graduates have been trained, of whom 45 trained graduates have set up their ventures. The credit linked back-ended subsidy @ of 33% of the capital cost of the project funded through back loan is eligible under the scheme. The subsidy is 44% in respect of candidates belonging to SC/ ST, Women and other disadvantage sections and those from North-Eastern and Hill areas.

4.	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); Berhampur (Orissa), 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.</p> <p>About 71 women members are reported to on the Board of Directors of some of these Cooperatives and about 1354 members are expected to get employment through activities of the cooperatives.</p> <p>The cumulative outlay During the financial year 2010-11 for the women development of cooperative societies exclusively organized by women including Food Grain Processing, Plantation Crops, Oilseed Processing, Fisheries, Integrated Cooperative Development Projects (ICDPs), Spinning Mills, Handloom and Power loom Weaving and Super Mills etc. is Rs6.40 crores out of which Rs1.72 crores has been Released upto December 2010.</p>
5.	Rainfed Farming System	National Watershed Development Project for Rainfed Areas	Since 2007-08, 24348 Women Self Help Groups and 18075 User Groups of Women have been formed in the project areas covered under the programme .
6.	Crops	National Food Security Mission (NFSM)	States have been advised to set aside at least 33% of the total allocation for small and marginal farmers, including women farmers.
7.	TMOP	Integrated Scheme of Oilseeds, Pulses, Oil palm and Maize (ISOPOM)	Directions have been issued to the State government to ensure 30% of the allocation should flow to women farmers. Therefore, in components like distribution of agricultural inputs, training and demonstration, etc preference may be given to women headed house-holds. Under the scheme, assistance of Rs15, 000 is also provided for 210 meters of pipe for carrying water from the source to the field. Small/marginal, SC/ST and women farmers are also provided to a maximum of 4 ha per beneficiary for the development of Oil Palm. Further, the assistance provided to women farmers for drip irrigation component is 50% of the cost (with ceiling ranging from Rs7400 to Rs.9300), whereas, for other categories it is 35% (with a ceiling of Rs.5200 to Rs.6500).
8.	Mechanization & Technology	Promotion and Strengthening of Agricultural Mechanization through Training, Testing and Demonstration	During 2010-11 (upto December, 10), around 2925 gender friendly tools /equipments have been distributed among farm women and 499 women have been imparted training at Farm Machinery Training and Testing Institutes.
		Outsourcing of training & Demonstration of Newly Developed Agricultural Equipment including Horticultural Equipment at Farmers' Field	Separate physical targets have been fixed for women farmers and 30% of the funds have also been allocated for them List of about 30 identified gender friendly tools/equipments developed by Research & Development Organization for its use in different farm operations has been sent to all States/UTs for popularizing them
		Post Harvest Technology & Management through Demonstration, Distribution and Outsourcing of Training	732 demonstrations have been conducted out of which 512 were exclusively for women farmers. The flow of funds to women farmers during 2010-11 (upto November, 2010) has been to the tune of Rs.80.36 lakhs.

9	Integrated Nutrient Management (INM)	National Programme for Organic Farming' (NPOF),	25% seats have been reserved for training of women in organic farming.
10	Agricultural Marketing	Rural Godown Scheme	Under institutional lending a back-ended subsidy as term loan is provided by the banks up to a minimum of 50% of the 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 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 and self help groups, cooperatives located in the NE states/hilly areas and 50% for all other categories.