

INTEGRATED SCHEME OF OILSEEDS, PULSES, OILPALM AND MAIZE (ISOPOM)

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INTEGRATED SCHEME OF OILSEEDS, PULSES, OILPALM AND MAIZE (ISOPOM)

GUIDELINES FOR IMPLEMENTATION DURING TENTH PLAN **(EFFECTIVE FROM 2004-05)**

1. BACKGROUND

The Technology Mission on Oilseeds (TMO) was launched in May, 1986 with a view to increase the production and productivity of oilseeds to make the country self-reliant in this vital sector. Subsequently pulses, oil palm & maize were also brought into the ambit of the Technology Mission in 1990, 1992-93 & 1995-96, respectively.

1.1 OILSEEDS

Oilseeds stand next only to foodgrains in agricultural production and economy of the country. Bulk of the oilseeds and vegetable oils production in the country is derived from the nine annual oilseed crops, i.e. groundnut, soybean, rapeseed and mustard, sunflower, sesamum, safflower, niger, castor and linseed.

The Mission's integrated strategy from development of production technologies to crop production, post harvest processing, price support and marketing, implemented through four Mini – Missions had brought about near self sufficiency in the edible oils. The production of nine oilseeds was more than doubled to 247.5 lakh tonnes by 1998-99 from the level of 109.3 lakh tonnes in 1985-86. This was brought about not only by increase in area but also by improving the productivity from 569 kg per ha. to 944 kg per ha. Imports of edible oils were brought down from 18.2 lakh tonnes (value Rs.920 crore) to merely 1.1 lakh tonnes (value Rs.160 crore). From major importer of edible oils till 1988-89, India became exporter of oilseeds products. Exports of oilseeds products increased from Rs. 1,280 crore in 1995-96 to Rs. 2,680 crore in 1993-94. Most significant contribution in export came from soybean, deoiled meal and castor oil. Soybean production increased significantly in the states of Madhya Pradesh, Maharashtra and Rajasthan and castor production in Gujarat

However, gradual lowering of duties on imports of edible oils from 65% (1994) to 15% (1998) and liberalisation of imports of vegetable oils under WTO regime, resulted in unbridled imports of cheap vegetable oils in the country. Edible oil imports increased from 1.4 lakh tonnes in 1993-94 to over 40 lakh tonnes in 1999-2000. This increased imports of cheap edible oils depressed the prices of domestic oilseeds. Added to this, adverse weather conditions in major oilseeds growing states since 1999-2000 to 2002-03 have adversely affected the production of oilseeds in the country. This has led to the wide gap in demand and supply in edible oils. There is a need for urgent steps to increase production and productivity of oilseeds in the country through mission mode approach. This requires addressing all the issues in the oilseeds sector holistically in harmonized way right from development of production technologies to processing and marketing supported by enabling policy environment. The diverse agro-ecological conditions in the country offer an excellent opportunity for increasing production and productivity of oilseeds.

1.2 PULSES

Pulses are the principal source of dietary proteins in a vegetarian country like India. Increasing their production and keeping their prices within the reach of the poor

therefore assume paramount importance. Major contribution of the TMOP&M to Pulse sector may be attributed to area stabilization (coverage) of pulses despite, the increase in irrigation/resources which motivate farmers to go for the cultivation as rich input responsive crops like Cereals/Vegetables/Sugarcane etc. The area coverage of 235.0 lakh hectares and a production of 149.1 lakh tonnes (634 kg/ha yield) achieved in 1998-99 may be credited to the NPDP implementation in 30 States/U.Ts covering 350 districts of the country. The major pulse crops of the country are redgram or pigeonpea (tur, arhar), chickpea or gram, blackgram (urdbean), greengram (mungbean) and lentil (masur). Minor pulses include rajmash and other beans, cowpea, horsegram, moth, khesari-dal, guar etc

1.3 MAIZE

Maize is the most important cereal crop with highest production and productivity. It can be consumed as food, feed, fodder and is a source of more than 3,500 products including specialized maize like quality protein maize (QPM), baby corn, sweet corn, pop corn, high starch and high oil etc. Its suitability to diverse agro-eco-zones is unmatched to any other crop. Due to recent research advancements, the quality protein maize, single cross and 3-way cross hybrids have given a fillip to the nutritional quality of this cereal. It has immense potential for employment generation through post harvest processing and value addition. Thus, maize occupies an important position in sustainable agriculture. Concerted efforts in public sector over last fifty years have made it possible to attain an overall eight fold increase in production and nearly four fold increase in productivity of maize. However, after implementation of Accelerated Maize Development Programme (AMDP) in a Mission Mode Approach, there has been record increase in area, production & productivity of maize.

1.4 OIL PALM

Oil palm, highest yielder of vegetable oil, was initially introduced in the country in Kerala and Andaman & Nicobar Islands. Subsequently, under the aegis of TMOP&M, cultivation of oil palm was extended through the centrally sponsored Oil Palm Development Programme (OPDP) to other potential areas in the states of Andhra Pradesh, Karnataka, Tamilnadu, Orissa, Gujarat and Goa since 1992 onwards. Though the programme was also sanctioned for Assam and Tripura but no tangible progress was made in these two states upto Ninth Plan. Under OPDP, an area of 59229 ha. was planted during the period from 1992 to 2003. However, uprooting of the palms took place in some areas due to sharp decline in domestic edible oil prices due to huge imports of edible oils at cheaper prices during 1999 to 2002 and lack of processing back up in some of the states.

To support the oil palm development programmes, following infrastructure and other facilities have already been created:

- a. Seed gardens with a production capacity of producing 1.5 million seed sprouts alongwith nurseries set up by the entrepreneurs.
- b. Processing capacity to the extent of 110.5 tonnes FFB per hour (i.e..5.525 lakh tonnes FFB per annum @ 20 hr.X250 days running).
- c. Leaf analysis laboratory.
- d. National Research Centre for Oil Palm to provide requisite research support to the crop development programmes.

2. INTEGRATED SCHEME OF OILSEEDS, PULSES, MAIZE AND OIL PALM (ISOPOM)

The Department of Agriculture & Cooperation has been implementing the following Centrally Sponsored Schemes under TMOP&M for increasing production of oilseeds, pulses, maize and oil palm in the country:

- i. Oilseeds Production Programme (OPP)
- ii. National Pulses Development Project (NPDP)
- iii. Accelerated Maize Development Programme (AMDP)
- iv. Oil Palm Development Programme (OPDP)

To provide flexibility to the States in implementation of these programmes based on regionally differentiated approach, to promote crop diversification, to provide focused approach to the programmes and in view of the suggestions of the Planning Commission, the above four schemes have been modified and merged into one Centrally Sponsored Integrated Scheme of Oilseeds, Pulses, Oil Palm and Maize (ISOPOM) during the 10th Five Year Plan. The Integrated Scheme of Oilseeds, Pulses, Oil Palm and Maize (ISOPOM) will be implemented from 2004-05.

2.1 SPECIAL FEATURES OF ISOPOM:

The ISOPOM has the following special features:

- 2.1.1. Flexibility to the states to utilize the funds for the scheme/crop of their choice.
- 2.1.2. Annual action plan to be formulated by the State Governments for consideration and approval of the Government of India.
- 2.1.3. Flexibility to the states for introducing innovative measures or any special component to the extent of 10% of financial allocation.
- 2.1.4. Involvement of private sector by the State Governments in the implementation of the programme with a financial cap of 15%.
- 2.1.5. Flexibility for inter component diversion of funds upto 20% for non-seed components only.
- 2.1.6. Diversion of funds from seed components to non-seed components with the prior approval of the Department of Agriculture & Cooperation.
- 2.1.7. Increase under staff & contingency not permitted except by revision of pay scale and increase in rate of Dearness Allowance with the prior approval of the Department of Agriculture & Cooperation.

2.2 STATES AND CROPS COVERED UNDER ISOPOM

- 2.2.1. The ISOPOM is to be implemented in 14 potential states Viz., Andhra Pradesh, Bihar, Chhattisgarh, Gujarat, Haryana, Karnataka, Madhya Pradesh, Maharashtra, Orissa, Punjab, Rajasthan, Tamil Nadu, Uttar Pradesh and West Bengal for oilseeds and pulses. However, for maize the states of Jammu & Kashmir and Himachal Pradesh have been included and Haryana has been excluded.
- 2.2.2. Other states may take up the development of these crops under their Work Plans for Macro-Management in Agriculture.

- 2.2.3. The Oil Palm Development Programme will be implemented in 12 states viz., Andhra Pradesh, Karnataka, Tamil Nadu, Gujarat, Goa, Orissa, Kerala, Assam, Tripura, West Bengal, Maharashtra and Mizoram.
- 2.2.4. All the districts covered under oilseeds and pulses programmes during Ninth Plan in 14 states will continue to be covered under ISOPOM during Tenth Plan. However, depending upon the potential of the districts, State Government may include more districts under the programme.

2.3 INPUT SUPPLY AND SUPPORT SERVICES UNDER ISOPOM FOR OILSEEDS, PULSES AND MAIZE

Based on the constraints in production, strategy proposed, potential for increasing production & productivity, following input supply and support services to farmers and development/extension agencies are approved under ISOPOM for oilseed, pulse and maize crops:

2.3.1 EXISTING COMPONENTS CONTINUED IN 10th PLAN:

- i. Production and purchase of breeder seed.
- ii. Production of foundation seed.
- iii. Production of certified seeds through Seed Village Scheme.
- iv. Distribution of certified seeds.
- v. Distribution of seed minikits.
- vi. Assistance for infrastructure development for seed production.
- vii. Supply of plant protection chemicals/weedicide/bio-pesticides.
- viii. Supply of plant protection equipment.
- ix. IPM Demonstration by State Department of Agriculture.
- x. Frontline Demonstrations by ICAR system.
- xi. Supply of sprinkler sets.
- xii. Distribution of Bio-fertilizers.
- xiii. Distribution of Nuclear Polyhedrosis Virus (NPV) for control of pod borer in gram & arhar.
- xiv. Farmers training.
- xv. Staff & contingency.
- xvi. Distribution of Gypsum/Pyrite/Liming/Dolomite.
- xvii. Evaluation of the implementation of the Scheme.

2.3.2 NEW COMPONENTS INCLUDED DURING TENTH PLAN.

- i. Inclusion of pipes (75 mm HDPE).
- ii. Publicity.
- iii. Involvement of private sector including NGO's, farmers' Organisations, Cooperative bodies, Public Sector agencies in the following activities:-
 - a) Seed Production.
 - b) Supply of inputs.
 - c) Extension Support.

- d) Block demonstrations & Frontline demonstrations.
- iv. Innovative measures and additional components by the states to the extent of 10% allocation.
- v. Training of officers/Extension workers.
- vi. Foreign visits.

The following components/input supply have been dropped or integrated into the other components:-

- a. Seed Treatment:-as seed treatment is an integral part of IPM and therefore, it has been dropped as a separate component
- b. Root grub control:-In root grub infested/endemic areas integrated control measures could be organized under IPM demonstrations
- c. Supply of improved farm implements, and
- d. Supply of micro nutrients.

2.3.3 COMPONENT OUTLAYS

- i. The input and support services provided under ISOPOM fall under the following three categories in case of oilseeds, pulses and maize:
 - a. Seed component.
 - b. Transfer of technology.
 - c. Non seed components (Other).
- ii. Though operational flexibilities have been provided to states in terms of selection of crops, districts, inter-component adjustments and even addition of new innovations/ components, considering the fact that inadequate availability of seed of improved varieties/ hybrids of these crops continues to be a major constraint, more emphasis has to be given to this component to improve the quality seed availability. It is in this context that following tentative allocation is made between the above three categories of ISOPOM components:

TENTATIVE OUTLAYS (RUPEES IN LAKH) 2004-05 TO 2006-07

CROP AND SHARING	COMPONENT CATEGORY			
	SEED TOTAL	TRANSFER OF TECNOLOGY	NONSEED COMPONENTS	TOTAL 2004-07 3-YEARS
OILSEEDS				
CENTRAL	13785.0	10250.0	13065.0	37100
STATE	3771.6	1200.0	4330.2	9301.8
TOTAL	17556.6	11450.0	17395.2	46401.8
PULSES				
CENTRAL	4911.0	5759.0	4130.0	14800 .0
STATE	1148.3	473.8	1375.9	2998 .0
TOTAL	6059.3	6232.8	5505.9	17798 .0
MAIZE				
CENTRAL	186.0	1164.0	300.0	1650 .0
STATE	48.0	201.9	98.1	348 .0
TOTAL	234 .0	1365.9	398.1	1998 .0
GRAND TOTAL-OILSEEDS, PULSES AND MAIZE				
CENTRAL	18882.0	17173.0	17495.0	53550 .0
STATE	4967.9	1875.7	5807.2	12650.8
TOTAL	23849.9	19048.7	23302.2	66200.8

2.4 INPUT SUPPLY AND SUPPORT SERVICES UNDER ISOPOM FOR OIL PALM

The existing components from IXth Plan are being continued with following changes:

- 2.4.1. **Planting material:-** The limit of assistance to the extent of 75% of cost has been increased from Rs. 5400/- per ha. to Rs.7500/- per ha.
- 2.4.2. **Cost of cultivation:-** While the assistance to farmers on cultivation cost will remain limited to 50% subject to Rs. 15500/- per ha. for the gestation period, the ceiling of the area for assistance has been increased from existing 6 ha. to 15 ha.
- 2.4.3. **Drip irrigation:-** The rate of assistance for drip irrigation to different categories of beneficiaries and the maximum ceiling of 4 ha. per beneficiary remain unchanged.
- 2.4.4. **Training, extension, Publicity, Establishment & Staff and other ongoing components (seed garden, leaf analysis, training of officers and staff and testing genotypes, etc):-** need based support will be continued to be provided as per the requirements.
- 2.4.5. **Demonstrations:-** In block where new plantations of 500 ha. or above are being taken up on farmers fields, assistance will be provided for conducting 20 demonstrations of one ha. each on cultivation and management practices and potential yield of oil palm. Assistance will be limited to a maximum of Rs. 10000/- per ha. of planting material and Rs. 30950/- per ha. for cultivation during gestation period of 4-5 years.
- 2.4.6. **Diesel pump sets:-** The limit of assistance to the extent of 50% of cost has been increased from Rs. 8000/- to Rs.10000/- per set.
- 2.4.7. **Development of wastelands:-** 15% of the funds allocated for development of wasteland owned by farmers/Government/State Corporations/Central Government / Corporations/ Co-operatives, will be ear-marked for oil palm development in the aforementioned potential states. Out of the 15%, 25% funds will be provided for irrigation infrastructure facilities for wastelands.

2.5 IMPLEMENTING AGENCIES

1. The ISOPOM will continue to be implemented by the state Governments through their Departments of Agriculture/Horticulture.
2. Indian Council of Agricultural Research (ICAR) is the nodal agency for production of breeder's seed and conduct of frontline demonstrations.
3. National Seeds Corporation (NSC), State Farms Corporation of India (SFCI), KRIBHCO etc. will implement the programme for foundation and certified seed production, while distribution of certified seeds and minikits will be done by NSC and SFCI at the central level.
4. The private sector like NGOs, farmer's organizations, cooperative bodies, and public sector agencies will also be involved through State governments in the implementation of some of the components of the programme. However, the involvement of private sector and other Non-Government Bodies in the implementation of different components of the programme will be limited to 15% of the allocation for a particular component. This ceiling of 15% could be increased, if necessary, after a mid-term review of the involvement of private sector by the Department of Agriculture & Cooperation and Planning Commission.

5. Impact assessment/evaluation of the scheme will be undertaken at the end of the 10th Plan by an independent agency.

2.6 PATTERN OF FINANCIAL ASSISTANCE UNDER ISOPOM

2.6.1. Oilseeds, Pulses and Maize:-

- i. The pattern of financial assistance in respect of components, approved for development of oilseeds, pulses and maize in the selected states, is given in **Annexure-I**.
- ii. Experiences in the past revealed that most of the state governments held up the allocated/released funds of the Govt. of India besides non-accordance of sanction for the state matching grant. Delayed/non-issuance of states' administrative approvals well before each sowing season hamper the programme implementation. States would therefore, ensure issuing of state sanction including the state matching share in time. Inordinate delay/non-utilization of budget may result in non-release of the due installments as also diversion of the same to best performing states.
- iii. **State Level Sanctioning Committee (SLSC)** will be mandatory for the ISOPOM states. The SLSC will meet at least twice in a year, once before the onset of Kharif and Rabi seasons each. A representative from Commodity Development Directorates (CDDs) and a representative of TMOP&M will also be invited to participate in the meeting.
- iv. Flexibility for inter-componental diversion of funds by the State Governments is permitted within the limit of 20% of the fund allocated to non-seed component only. Flexibility to the states for introducing innovative measures or any special component to the extent of 10% of financial allocation is also allowed. However, these changes can only be proposed with the approval of the State Department of Agriculture, after duly approved by the SLSC. These changes should be reported to the TMOP&M and the Directorates of Oilseeds and Pulses Development.
- v. As already mentioned, scope for area expansion, which has contributed most to increased production so far, is now very limited. Therefore, further increase in production will have to come mostly from increased productivity. It is suggested that to increase the productivity, input support on a package basis may be provided to a large number of beneficiary farmers in a compact area (cluster basis) in a district in such a manner that the entire area with maximum potential for achieving desired increase in area/productivity of a district is brought under intensive package over a period of next 4-5 years. Extension support and plant protection umbrella with IPM approach may, however, be made available over the entire districts covered under ISOPOM.

2.6.2. Oil Palm

- i. The pattern of financial assistance in respect of components, approved for development of oil palm in the selected states, is given in **Annexure-II**.
- ii. Flexibilities available for other crops under ISOPOM, could also be availed by states subject to their applicability to this crop.

2.7 PRODUCTION TARGETS AND OUTLAYS FOR Xth FIVE YEAR PLAN PERIOD

2.7.1 PRODUCTION TARGETS

- i. Keeping in view the need to increase production to reduce the demand supply gap and imports in vegetable oils and pulses, potential and possibilities that exist in the country for increasing their production, the production of nine oilseeds, palm oil and pulses has to be stepped up further.
- ii. Increasing production of maize is also the need of the hour for nutritional security, both in terms of quantity and nutritional requirements, meet rising demand for animal feeds and for industrial usage, possibilities of development of large number of diversified value added products which will in turn help in better value realization from the crop and much needed diversification of cropping system.
- iii. Though total potential for development of oil palm plantations in the country is identified by an expert group to be of the order of 5.7 lakh ha., the experience gained hitherto indicates to follow a more cautious approach and concentrated efforts in limited area to pave way for more ambitious expansion programme in future. Following are the year-wise targets of production of oilseeds, pulses, maize and area expansion under oil palm for the Xth Five Year Plan period:-

TENTH PLAN TARGETS

YEAR	PRODUCTION (lakh tonnes)			AREA (ha.)
	NINE OILSEEDS	PULSES	MAIZE	OIL PALM
8 years average production	220.0	140.0	120.7	
2002-03	233.0	144.0	125.0	8000
2003-04	247.0	148.0	130.0	9000
2004-05	262.0	153.0	135.5	10000
2005-06	278.0	157.0	141.0	11000
2006-07	294.0	162.0	146.5	12000
Tenth Plan - growth rate target	6%	3%	4%	--
Total Tenth Plan Target of area under Oil Palm				50000

2.7.2 FINANCIAL OUTLAYS

The financial allocation for input and service support under ISOPOM during the Xth Five-Year Plan Period is as follows:

FINANCIAL OUTLAYS PROPOSED UNDER ISOPOM (Rs. in crore.)

Year	OILSEEDS		
	Central Share	State Share	Total
2002-03	76.000	17.132	93.132
2003-04	93.000	22.000	115.000
2004-05	120.000	30.158	150.151
2005-06	124.000	31.050	155.050
2006-07	127.000	31.817	158.817
Total	540.000	132.157	672.15 0
Year	PULSES		
	Central Share	State Share	Total
2002-03	31.000	2.714	33.714
2003-04	36.000	6.375	42.375
2004-05	45.000	8.990	53.990
2005-06	50.000	10.218	60.218
2006-07	53.000	10.772	63.772
Total	215.000	39.069	254.069
Year	MAIZE		
	Central Share	State Share	Total
2002-03	5.500	1.061	6.561
2003-04	8.000	1.825	9.825
2004-05	5.500	1.160	6.660
2005-06	5.500	1.160	6.660

2006-07	5.500	1.160	6.660
Total	30.000	6.366	36.366
OIL PALM			
2002-03	3.950	1.317	5.267
2003-04	4.000	1.333	5.333
2004-05	14.020	4.673	18.693
2005-06	14.020	4.673	18.693
2006-07	14.010	4.670	18.680
Total	50.000	16.666	66.666
TOTAL ISOPOM*			
2002-03	116.450	22.222	138.672
2003-04	141.000	31.533	172.533
2004-05	184.520	44.983	229.503
2005-06	193.520	47.101	240.621
2006-07	199.510	48.419	247.929
Total	835.000	194.258	1029.258

*Under ISOPOM, flexibility is provided to the states to utilize the funds for the scheme/crop of their choice.

2.8. COMPONENT-WISE OPERATIONAL GUIDELINES - OILSEEDS, PULSES AND MAIZE

The following are the broad guidelines for implementing the ISOPOM by the State Governments:

2.8.1 Production and Distribution of Seed

- i. Shortage of quality seed continues to be one of the major constraints in spread of new improved varieties/hybrids and realising their yield potential. Production of seed is time consuming, cost intensive and risky under rainfed conditions in which oilseeds, pulses and maize are grown. Seed production thus requires advance planning on the part of States taking following factors into account:-
 - a) increase in area under crop;
 - b) varietal replacement contemplated;
 - c) progressive replacement of seed in case of self/open pollinated varieties;
 - d) area expansion under hybrids; and
 - e) promotion of the new varieties/hybrids
- ii. The Management of Seed is the responsibility of the State Governments in collaboration with the State and Central Seed Producing Agencies. To ensure supply of quality seed, the State Governments shall prepare a Five Year Seed Plan indicating requirement of breeder, foundation, and certified seeds for each coming year and ensure their proper multiplication and distribution.
- iii. The following chart indicates the stages and time involved in production of quality seed:

PRODUCTION YEAR	PRODUCTION STAGE	PRODUCING AGENCY
First Year	Nucleus	ICAR
Second Year	Nucleus to Breeder	ICAR
Third Year	Breeder to Foundation	ICAR / Seed Corporations / SAUs / SFCI / KRIBHCO / NSC
Fourth Year	Foundation to Certified	Seed Corporations, OILFEDs, Others
Fifth Year	Distribution to farmer for cultivation	

- iv. Production and Supply of Breeders Seed:
- a. ICAR is the nodal agency for organising production and supply of breeders' seed of oilseed, pulses and maize crops.
 - b. State Departments of Agriculture (SDAs) and other indenting agencies will place their variety-wise indents of breeders seed with Seed Division in the DOAC, with copies to Technology Mission of Oilseeds and Pulses (TMOP&M) and its Directorates of Oilseeds Development, Hyderabad and Directorate of Pulses Development, Bhopal for scrutiny and onward transmission to Indian Council of Agricultural Research (ICAR) to organise production.
 - c. The indent should be realistic and newly released, recommended improved varieties to the respective states, as far as possible, should be given preference in placing the indents to facilitate their timely spread.
 - d. State at times, are also placing indents of breeders seed directly to their SAUs, for production and supply of breeder seed in respect of some popular national varieties, covered by ICAR Programme, over and above the indents placed by them with Government of India to get additional supplies of breeders' seed of these varieties.
 - e. In respect of State-varieties of these crops, not covered by breeders' seed production programme being organised by DAC through ICAR, SDAs may place their indents with their respective SAUs/Breeder's Seed Production Agencies within State, in consultation with TMOP&M in DAC and its Directorates.
 - f. In respect of varieties/hybrids included in the breeder's seed production programme being organised by ICAR, state will communicate their entire requirement with justification to Seeds Division, as per schedule fixed, with copies to TMOP&M and DOD, Hyderabad and DPD, Bhopal for scrutiny and for onward transmission to ICAR.
 - g. Lifting of breeder's seed of varieties/hybrids, included in ICAR programme, by indenting agencies and its supply to them by producing agencies will be strictly in accordance with the allocation made by Department of Agriculture and Cooperation.
 - h. To ensure lifting of breeders seed, producing agencies may furnish immediately after the cut off date a report on breeder seed stocks remaining unlifted and names of indenting agencies who have failed to lift the seed together with reasons, if any.
 - i. A report on breeder seed lifted will also be furnished by SDAs/Indenting Agencies to Seeds Division of DAC and other concerned by August end for kharif oilseeds and by November end for rabi oilseeds.
 - j. Non-lifting of breeder seed due to poor quality will be reported immediately to the Head of Breeder- seed producing agency, Assistant Director General (Seeds), ICAR, Krishi Bhavan, New Delhi, and to other concerned authorities.
 - k. An assistance of Rs. 175/-lakh per annum will be provided to ICAR for 124 posts sanctioned to organize production of breeder seed of these crops.
 - l. The Breeder Seed will be lifted by the Indentors/ allottees from the production centres of ICAR/SAU's against 100% payment of the cost in

accordance with uniform rates fixed for breeder's seed by DAC (Govt. of India). However, the entire cost of breeder seed to state- agencies is reimbursed through state Governments on 75:25 sharing basis between GOI and the States.

- v. Production of Foundation Seed ([*modified w.e.f. 21.08.2007*](#))
 - a. Assistance @ Rs.500/- per quintal will be provided to the SDAs, NSC, KRIBHCO, SFCI etc. to organise production of foundation seed. It has, however, been observed that though there is an improvement in the availability of foundation seed, its production is still not commensurate with the supply of breeder's seed. Therefore, proper monitoring of the conversion/multiplication of foundation seed has to be ensured under the guidance of technical experts.
 - b. To ensure achieving targeted seed multiplication ratio in conversion of breeders seed, an approach suggested for certified seed production under seed village programme should be adopted for production of foundation seed too.
- vi. Certified Seed Production (Seed Village Programme) (*modified w.e.f. 21.08.2007*)
 - a. Seed villages should be organised in each district based on the demand. This would ensure timely availability of seed and reduce the handling cost.
 - b. Production be organised under more assured irrigated conditions, for better yields and quality.
 - c. In selection of seed villages, following aspects be kept in view:
 - Selection of villages should be on long term/permanent basis where more than one crop (oilseed/ pulse/ maize) could be grown in different seasons to make seed production a continuous activity with farmers in such villages.
 - Fields selected should have irrigation facility.
 - Seed villages under rainfed conditions be selected in watershed areas with provision to provide protective supplemental irrigation.
 - Farmers involved should be progressive, willing to make requisite investment on inputs, eligible for crop-loans and other term credits and take collective action.
 - A minimum limit of area and number of beneficiaries may also be fixed for eligibility of a village to receive assistance under seed village.
 - Selection of the area will be done in consultation with District Agriculture Officer (DDA/ADA) well in time and the area selected for Seed Village programme should be potential and may not be changed every year. The programme may also be implemented through Seed Societies in which, minimum 11 and maximum 51 seed growers may be the member of the Seed Society.
 - d. The assistance provided under Seed Village @ Rs.500/- per quintal a part of it i.e., Rs.375/- per quintal be provided to farmers to meet the cost of certification, loss due to rouging and under sized seed. Part of assistance be utilised to improve infrastructure and other facilities for cleaning, grading, packing, etc. It is suggested that the specific amount out of the

total allocation of seed village programme may be set aside for creation of these facilities in a phased manner.

- e. Remaining amount of Rs.125/- could be placed at the disposal of the procurement agencies (SSC/OILFEDS,NSC,SFCI) towards handling, processing/cleaning/grading, transportation and storage charges, etc.
- f. To make perfect coordination and in-built monitoring of the component, subsidy of Rs.500/- per qtl. (375+125) has to be routed through the Department of Agriculture and distributed to beneficiaries through the District Agriculture Officer.
- g. Besides Seed Corporations and OILFEDS, NGOs, Private Agencies, KVKs could also be involved in organizing seed village programme.
- h. Seed Producing agencies, in consultation with the SDA will finalize the judicious certified seed production programme in which only promising/notified/latest varieties recommended for the state will be included.
- i. Long term strategy for seed village programme could be worked out to organise production and marketing of certified seed through farmers seed cooperatives while the Seed Corporations/OILFEDS etc. may concentrate their efforts on production of breeder's and foundation seed of new/improved varieties.
- j. Farmers and field level functionaries involved in seed villages will be provided all the requisite technical guidance and training with the assistance available under "Farmers-Training" Component. Some of the general demonstrations, could be allocated to seed villages by the State governments.
- k. Contractual obligations be made a prerequisite to financial assistance to ensure that contracted/ targeted quantities of seed are produced and supplied.
- l. Timely lifting of seed and prompt payment to the farmers may be ensured to create confidence amongst the farmers.
- m. New varieties, hybrids, should receive greater attention and space in the programme.
- n. Old/absolte/de-notified varieties and varieties identified for phasing out are not entitled for assistance under seed village programme.
- o. Seed production should be monitored by special monitoring teams/seed certification teams.
- p. Seed Procurement, Cleaning and Storage:
 - Procurement of seeds, their cleaning and storage are the most crucial aspects of certified seed production. Therefore, the **seed producing agencies** have to make provision for **cleaning equipments** at the proximity of Seed village. The basic idea is to ensure the availability of locally recommended improved certified seed varieties to the farmers within their approach at a reasonable price, thereby improving the Seed Replacement Rate (SRR).

- State Govts. may involve different private agencies/cooperatives/federations/NGOs/SAUs etc having experience and infrastructure in seed production programmes.
 - The major difficulty, which might come in the way, is of supply of credit. States Govt. should find solution to this either by linking it up with cooperative banks or with NABARD or with commercial banks. This would facilitate prompt payment to the farmers for supply of seeds.
 - The seed producing agencies will also ensure storage facility in the proximity of Seed Village through hiring of private/State Govt. godowns or creating their own storage facilities.
- vii. Crash Programme For Quality Seed Production (***modified w.e.f. 21.08.2007***)
- a. Crash programme for quality seed production of oilseeds and pulses will continue during X Plan.
 - b. As this component is for meeting out the emergency/contingent requirement of seeds, that the nodal agencies (NSC/SFCI) would also involve Federations/NGOs/registered seed growers/SSCs, Private Agencies, etc. in crash seed production programme.
 - c. The concerned State Governments may send their variety -wise requirements of seed production under crash programme for above crops atleast six months ahead of crop production season to TMOP&M
 - d. Rate of assistance on production of quality seed will be similar to Seed Village Scheme i.e Rs. 375/-per qtl. to seed producer + Rs. 125/- per qtl. to handling agency.
 - e. The procured quality seed will be graded and packed by the nodal agency (NSC/SFCI) and the expenditure on processing and packing will be borne by these agencies out of the revolving funds earlier provided by TMOP.
 - f. The seed production has to be arranged in the nearby areas to the targeted areas to minimize transportation costs.
 - g. Fields of crash programme will necessarily be inspected by a team consisting of the representative of producing agency, Scientists of SAUs/ICAR Institutions, DAC twice in the growing season first at pre flowering and second at the stage of maturity.
 - h. NSC/SFCI will also avail assistance on distribution of Truthfully Labeled seed @ 25% of the cost of seed limited to Rs. 600/- per quintal whichever is less.
- viii. Distribution of Certified Seed (***modified w.e.f. 21.08.2007***)
- a. The assistance to the extent of 30% of the cost of the seed limited to Rs.800/- per quintal will be available for supply of certified seed to farmers at subsidized prices. This assistance will be available for all oilseeds, pulses and maize crop. However, no assistance will be provided for varieties already de-notified/phased out.
 - b. An assistance @ 25% of the seed cost or Rs.600/- per quintal whichever is less will also be admissible for truthfully labeled seed of above crops only in cases where the following conditions are fulfilled.
 - In case of new varieties which have been identified and recommended for release but awaiting notification, varieties/hybrids released at State level

by State Varietal Release Committee and in case of popular varieties having large demand but limited certified seed production.

- The seed is obtained from Seed Village Programme/Registered Seed Growers/ NGOs/ Seed Societies and Frontline/Block Demonstrations/ Crash Programme organised under ISOPOM.
- The seed has been produced under the supervision of the known agencies like ICAR/other Research Institutions/ SAUs/ OILFEDs/ State Seed Corporations /Cooperative Agencies in the States/NSC/SFCI and NGOs/ Private Agencies specifically identified for the purpose and having qualified manpower to supervise the seed production.
- The processed graded commercial grain will not be termed as TL seed and will not qualify for subsidy.

ix. Distribution of Minikits-Varietal Diversification [\(modified w.e.f. 21.08.2007\)](#)

- i.i Minikits are meant for introduction and popularisation of latest released/pre released varieties and their propagation among the farmers. The Government has fixed a limit that up to 10 year old varieties/ hybrids will qualify for financial assistance under this programme.
- i.ii In case of released varieties, only certified seed will be supplied in minikits.
- i.iii Hybrids of oilseed, pulse and maize crops are allowed for distribution under minikits.
- i.iv Though NSC will continue to be the nodal agency for production, procurement of seeds of varieties/ hybrids identified for distribution in minikits, SFCI will also be producing and supplying minikits as per indents placed/ allocation made directly by TMOP&M.
- i.v A committee under the chairmanship of the Agriculture Commissioner, Government of India will decide the programme for distribution of minikits of oilseeds, pulses and maize in consultation with the State Governments. The Committee will have following compositions:

1. Agriculture Commissioner	-	Chairman
2. Joint Secretary (TMOP)	-	Member
3. Director, DOD, Hyderabad & DPD, Bhopal	-	Member
4. Director (TMOP)	-	Member
5. Representative of Seeds Div, DAC	-	Member
6. Representative of NSC/SFCI	-	Member
7. ADG (Seeds), ICAR	-	Member
8. Project Coordinators (FLDS),ICAR	-	Member
9. Director Agriculture of the States or their representative	-	Member
10. Scheme Officer of TMOP & M	-	Member
11. Experts/NGOs/Pvt. Sector as may be invited by TMOP	-	Member
- i.vi The Committee will be meeting before the commencement of each crop season i.e. in April for Kharif and in August for Rabi/Summer season programmes to:

- review the requirements of the states, seed availability of identified varieties.
- review performance of varieties/ hybrids distributed in the states in previous seasons/years under seed Minikit distribution programmes.
- formulate minikit distribution programme for the season.
- review availability and production programmes of breeder's, foundation and certified seed of newly released varieties and hybrids.
- review the programmes of the states for production of seeds of the varieties/ hybrids found most promising under minikit programmes for general distribution to farmers.
- identify the agencies amongst the SSCs, OILFEDS, KVKs, NGOs, private sector, cooperative and public sector agencies having necessary technological and infrastructure base to widen the seed production programmes. NSC will coordinate the programme with these agencies.

i.vii Seed Minikits will also contain seed treating chemicals, *Rhizobium* Culture (for legumes) and recommended package of practices for the variety or hybrid.

i.viii Crop-wise size of the seed mini kits will be as follows:

SEED MINIKITS SIZE								
OILSEEDS			PULSES			MAIZE		
CROP	AREA (ha.)	SEED (kg.)	CROP	AREA (ha.)	SEED (kg.)	CROP	AREA (ha.)	SEED (kg.)
Groundnut	0.125	20	Arhar/Tur		4		0.1	2
Soybean		8	Moong		4			
Rapeseed & Mustard	0.2	2	Urad		4			
Sunflower	0.1	2	Lentil/ masur		4			
Sesamum	0.2	1	Cow-pea		4			
Safflower	0.1	2	Moth		4			
Niger	0.1	1	Guar		4			
Castor	0.1	2	Gram		8			
Linseed	0.1	3	Pea		8			
			Rajmash		3			

i.ix The cost of seed minikits to be reimbursed to NSC/ SFCI and other minikit supplying agencies, if any, will be decided by a committee set up under the chairmanship of the Joint Secretary (TMOP&M), with Director (TMOP&M), Director (Finance) DAC, Deputy/Assistant Commissioner (O&P), SPC(Maize) and Under Secretary, TMOP&M, representatives of NSC, SFCI and other minikit supplying agencies, if any as members.

i.x The cut off dates for supply of minikits for different seasons will be as follows:

- Kharif premonsoon crops: April-end
- Kharif normal season crops: May end
- Late kharif crops like sunflower: July end
- Early rabi crops like toria: August end
- Rabi crops: 15th September

- Summer crops: to States of peninsular and eastern regions - November end and to States of northern and western regions - 15th January.
- i.xi The seed minikits of only new varieties will be supplied by NSC/SFCI as per programme approved by TMOP&M. The minikits will be supplied by NSC/SFCI to farmers through SDAs only. The cost of minikits will be reimbursed to NSC/SFCI as per rates fixed by TMOP&M on receipt of bills and acknowledgement of seed minikits receipt by respective State Departments of Agriculture.
- x. Infrastructural Development ([modified w.e.f. 21.08.2007](#))

Increased production of seed and its storage is crucial for the success of the programme. States are, therefore, requested to create appropriate need based infrastructure facilities for this purpose. Allocation in respect of the component for the development of infrastructure has been made in the scheme. The assistance for creation of infrastructure facilities will be available to seed farms of the State Government, farms of the OILFEDs and State Seed Corporations and also for compact areas taken up under the Seed Village Programme. The NSC and SFCI are also eligible for this assistance.

 - a. This facility will be used for providing irrigation facilities on the farms by providing bore-well/tube-well but will not be used for such works as lining of channels, levelling of the fields, fencing on the farm, office building, etc. Whereas motor pump for water discharge may be covered, charges for electrification, drawing of power lines and energising will not be covered.
 - b. In order to create adequate storage facility, storage godown may be built up with the provision for de-humidification wherever necessary. The size of the godown will be directly linked to the production capacity of the farms for oilseed, pulses and maize crops. Construction of threshing floors for proper drying and threshing is also permitted.
 - c. No farm machinery will be permitted under the component of the infrastructure development. Construction of godowns at seed village site can also be considered under the component.
 - d. Irrigation component will include construction/deepening of well/tube well, cost of electric motor, pump set and installation of sprinkler system.
 - e. Creation of drip irrigation facility will not be considered under this programme.
 - f. To develop these facilities separate proposals must be sent by the State Governments to the TMOP&M supported by estimates and construction plans as per the latest schedule of rates of State PWD. This component will not be implemented without prior and specific approval of DAC.
 - g. The expenditure on storage/godowns development will be shared by States and Centre on 50:50 basis. However, assistance to NSC/ SFCI will continue to be 100%.
- xi. Assistance to NSC/SFCI for Production and Distribution of Seed ([modified w.e.f. 21.08.2007](#))
 - i. To supplement the efforts of States to augment supplies of certified seed to farmers at reasonable prices, take advantage of the production and

distribution network and technical expertise available, financial assistance will also be made available to NSC and SFCI under ISOPOM for the following:

- Production of foundation seed.
- Organising Seed Village Programme for production of Certified Seed.
- Distribution of Certified Seed at subsidised price to farmers in ISOPOM districts.
- Distribution of seed minikits in special thrust areas identified by TMOP&M.
- Assistance to NSC for monitoring and inspection of breeder's seed production plots.
- Assistance to NSC and SFCI for infrastructure development at their seed farms for production of breeders and foundation and certified seeds.
 - a. While implementing the above activities NSC and SFCI will follow the guidelines given in the preceding paras and pattern of assistance approved under the scheme.
 - b. The cost of breeder seed lifted by NSC and SFCI, as per allocation made by the DAC, for production of foundation seed will be reimbursed to them by TMOP&M as per the uniform rates of breeder seed fixed by DAC.
 - c. The assistance @ 30% of the cost of seed limited to Rs.800/- per quintal whichever is less will be available for distribution of seed of oilseed, pulse and maize crops covered under ISOPOM on certified seed supplied to farmers through own retail outlets and authorised dealers by NSC and SFCI. Similarly, the assistance @ 25% of the cost of seed limited to Rs.600/- per quintal, whichever is less, will be available for distribution of truthfully labeled seed of oilseeds, pulses and maize to NSC and SFCI only on seed produced under Crash Programme. NSC and SFCI will reduce the retail price of the seed to the extent of assistance provided. To ensure that this benefit passes on to farmers in full, each seed packet must indicate-
 - the retail market price of the seed (without subsidy);
 - rate of subsidy;
 - net retail market price after subsidy;
 - d. The subsidised certified/ TL seed will be supplied only in ISOPOM districts.
 - e. An Annual Action Plan will be prepared by NSC/SFCI/KRIBHCO for production and distribution of seeds of oilseed, pulses and maize and will be submitted to TMOP well in advance for approval. The programme will be taken by these agencies as approved by the Division.

2.8.2 Transfer of Technology

- i. Block Demonstrations by SDA
 - a. For demonstrating improved crop production technology on farmers' fields, block demonstration programmes will continue during X plan.

- b. In these demonstrations, besides testing the particular variety, judicious use of inputs and production technologies emphasis may also be given on oilseeds, pulses and maize based cropping systems, inter-cropping etc.
- c. Monitorable targets may be laid down for each demonstration based on local conditions and constraints. The specific recommendations, emanating from research and frontline demonstrations, be included under block demonstrations.
- d. The size of each demonstration will be 5 ha. in a compact area to the extent possible. All fields selected not necessarily are contiguous. If requisite area is not available in one village, fields may be selected in adjoining villages.
- e. In hills and hilly tracts, demonstration size should be smaller 1 ha.
- f. To facilitate participation by maximum number of beneficiaries, individual beneficiary should not get the benefit of inputs for more than 1 ha.; for hilly areas it may be restricted to a maximum 0.2 ha.
- g. Selection of farmers' fields should be done with care and bench mark data should be maintained to highlight the increase in production and productivity as a result of application of improved technologies.
- h. Identification of beneficiaries and positioning of inputs for demonstrations may be done well in advance of sowing season
- i. The demonstration will be organized in a district on rotational basis changing the block, villages and beneficiary farmers from year to year.
- j. In demonstration villages, in addition to the demonstration plots, some adjacent plots, not covered by demonstration, may also be brought under study as control plots for comparing the performance of demonstration plots vis- a- vis controlled plots.
- k. New varieties/hybrids will be invariably incorporated in these demonstrations. Only varieties/hybrids released or identified by ICAR/SAUs after testing are to be taken up in these demonstrations.
- l. Only certified seed will be used in case of notified varieties/hybrids. Truthfully labelled seed produced under seed village programme/ crash programme can also be used.
- m. Financial assistance is to be given only to the extent of 50% of actual cost of inputs supplied, subject to the crop-wise limits given in the pattern of assistance. Labour costs, land rent/ revenue, irrigation charges, inputs used by farmers with their own resources are not to be taken into account for subsidy.
- n. A display board will be put on the road clearly indicating the details of the block demonstration. A register on block demonstration will also be kept at Panchayat level to help Panchayat in dissemination of the technology. In addition, some local publicity may also be made through various media.
- o. The demonstrations will be linked with farmers training/ field days for which funds have been provided separately under relevant component.
- p. The Extension functionaries should closely supervise these demonstrations and provide requisite technical advise to farmers regularly. Scientists from local research stations/extension centres of SAUs, KVKs etc., should be closely involved in conduct of demonstrations and farmers training.

- q. Results will be analysed and evaluated and given wide publicity through distribution of leaflets and other mass communication media. A consolidated report of demonstrations (district-wise) conducted, results obtained and their impact will be furnished by SDAs to DOD, Hyderabad, DPD, Bhopal and SPC(Maize)TMOP&M and DAC. For kharif season report may be sent by the first week of Feb. and for the rabi season by the first week of July. Impact evaluation studies should be taken up in subsequent crop seasons / years to assess the extent to which technology demonstrated is actually adopted by the farmers in the villages of demonstration and adjoining villages exposed to demonstrations. If not, the reasons and measures needed to remove constraints/ bottlenecks should be analyzed and adopted.
- ii. Block Demonstrations of Polythene Mulch Technology in Groundnut by SDAs
 - a. Use of polythene sheets as mulch in groundnut is reported to have increased groundnut yields to the extent of 92.1% in China. Initial research trials conducted by ICAR, using 7-8 micron polythene sheets as mulch following Broad Bed and Furrow (BBF) gave groundnut yields 5.0-7.0 tonnes per ha. compared to 2.6 tonnes in non-mulched plots. This increase was attributed to initial increase of soil temperature, better retention of soil moisture, increased efficiency of soil micro-organisms, improved microclimate, reduced weed intensity and reduced incidence of sucking pests. Savings in water for irrigation were to the extent of 40%.
 - b. Accordingly ICAR has recommended Polythene Mulch in Groundnut (PMG) technology to be demonstrated to the farmers for adoption in following situations/ states:
 - rice fallow residual moisture situation in Orissa, Tamilnadu, West Bengal.
 - summer irrigated situation of Gujarat, Maharashtra, Karnataka.
 - low temperature areas of Punjab, Rajasthan, U.P.
 - command areas in rabi/ summer particularly under Tungabhadra Project where groundnut is grown during November.
 - c. The size of each demonstration will be one ha. For conduct of demonstration, besides 50% subsidy on inputs as provided for block demonstrations a subsidy to the extent of Rs. 3000/- per ha. is also provided for polythene mulch sheet. ([modified w.e.f. 21.08.2007](#))
 - d. Only bio-degradable polythene mulch sheets are to be used in demonstrations.
 - e. Amalgamation of PMG demonstrations with the block demonstrations is advisable for better management of the demonstrations and impact presentation to farmers.
 - f. Other guidelines given for block demonstrations are to be followed for PMG demonstrations also.

iii. Frontline Demonstrations by ICAR

The nodal agency for implementing FLDs is the ICAR. The frontline demonstrations consist of the following 4 sub-components:-

- i.i **Frontline demonstrations on production potential** on farmers fields on small scale (demonstration size 0.4 ha.) with latest varieties, improved

production technologies to tackle locations specific constraints under different agro-climatic regions.

- i.ii **Frontline demonstrations on improved agricultural machinery**
 - a. Training and demonstration of the efficacy of improved implements to farmers;
 - b. Organise training of village artisans and subject matter specialists in use, repair and maintenance of improved machinery.
 - i.iii **Frontline demonstration on discipline oriented programmes:** It covers cropping systems, efficiency of Rhizobium inoculation, application of micro and secondary nutrients, and balanced fertilization, etc.
 - i.iv **Frontline Demonstrations of Polythene Mulch Technology in Groundnut (PMG) By ICAR:** Provision has also been made under ISOPOM for conduct of frontline demonstrations (0.4 ha each) of the improvisations in PMG Technology on farmers fields by ICAR with an assistance limited to Rs. 8000/- per ha. (inclusive of the assistance for polythene mulch @ Rs. 3000/- per ha. [\(modified w.e.f. 21.08.2007\)](#))
 - i.v Concurrent evaluation of implementation of frontline demonstrations by AFC Ltd. has indicated that linkage and interaction between organising agencies (Zonal Coordinators) and SDAs is weak and needs strengthening.
 - i.vi SDAs may maintain a close liaison with them for conduct of these demonstrations, training of farmers and extension workers and evaluation of results. The specific recommendations emanating from these demonstrations should be given wide publicity and form the key thrust in large sized demonstrations being organised by SDAs. Similarly, SDAs may also take steps to arrange for mass scale production of improved agricultural implements, tested and demonstrated successfully, through their agro-industries corporations, rural artisans-and other cooperatives.
- iv. Demonstration on Integrated Pest Management (Farmers Field School)
- a. To avoid large scale use of chemicals in plant protection emphasis and thrust has been given on an integrated approach involving alternative techniques and options available to keep the pest population below economic threshold level (ETL) and use chemicals as a last option for pest control.
 - b. The broad strategy for Integrated Pest and Disease Management (IPM) consists of the following:
 - Use of varieties resistant/tolerant to pests and diseases.
 - Cultural practices like summer ploughing and destruction of stubbles/crop residues; trimming of bunds; proper preparation and levelling of fields; timely sowing, proper crop geometry; seed treatment; proper soil, water and weed management; rotation with non-host crops, harvesting of crop at right stage and under right conditions, raising trap crops as border/intercrop.
 - Regular monitoring of pest situation vis-à-vis their natural enemies (insects, spiders, predators, pathogens), weather, culture and field conditions are essential to observe pests build up for taking rational

decision. The use of yellow sticky traps, pheromone traps, light traps needs to be promoted for monitoring the pest population.

- Mechanical control through collection and destruction of egg masses, larvae and adults; use of light traps for trapping adults of insects which are attracted towards light; digging trenches around the fields during severe outbreak, vegetative traps placed at field-border and between plant rows have also been found effective in trapping certain pests.
 - Biological control by conserving naturally occurring parasites, predators and pathogens. For attracting predator birds of insects bird-perch stands could be set in fields. Some bio-agents are now available for control of some major pests. These are pest specific and not injurious to other flora and fauna.
 - Use of pesticides has to be need based and on the basis of ETL as a last resort. A number of neem based chemical formulations are now available in the market, which have been found effective against certain pests in these crops. However, before procuring them, their quality, effective concentration, shelf life and efficacy may be ascertained.
- v. The farmers field school approach for IPM demonstrations envisages season long training and motivation for community/group action involving entire farming community in the demonstration area which is the key to success of IPM technology. For day today monitoring of pest situation, regular communication between farming community-technology resource persons-input and financial support providing agencies is a must. The liaison persons have to be found among the farming community itself. Voluntary organisations can play a very useful role in this regard.
 - vi. IPM demonstration shall have to be organised in a compact area of 10 hectares. Guidelines given for general demonstrations supra may be followed for selection of area, beneficiaries, etc. However, to get tangible results and clear impact of the technology demonstrated IPM demonstrations may be taken in same field for two consecutive years.
 - vii. Assistance for NPV @ Rs.22680/- per demonstration (the break-up of Rs. 22680/- is given in **Annexure-III**) has been provided under ISOPOM for conduct of IPM demonstrations on farmers fields as the Farmers Field School concept. This assistance will also include pheromone traps and rodent control. The assistance could be used for making available various inputs, training to farmers and village scouts/coordinators and extension workers, publicity materials like posters, charts, leaflets, audio and visual cassettes. The norms for sharing the cost of inputs between farmers and SDA could be worked out by State Level Sanctioning Committees (SLSCs). SLSCs could also provide for some incentive to the farming community in demonstration area and voluntary organisation involved in such demonstrations.
 - viii. Use of Bio-agents at different stages of plant growth
 - ix. Bio-agents use for gram and pigeonpea mustard, groundnut and soybean as recommended.
 - x. State Departments of Agriculture (SDAs) may draw action plans for IPM demonstrations in consultation with their SAUs, other ICAR Research and Extension Institutes, Central Integrated Pest Management Centres and Central

Biological Control Laboratories of Directorate of Plant Protection Quarantine and Storage. Copies of action plans drawn may also be sent to TMOP&M.

- xi. The Extension Functionaries should closely supervise these demonstrations and provide requisite technical advise to farmers regularly. Scientists from local research stations/extension centres of SAUs, KVKs etc., should be closely involved in conduct of demonstrations and farmers training.
- xii. Results will be analysed and evaluated and given wide publicity through distribution of leaflets and other mass communication media. A consolidated report of demonstrations (district-wise) conducted, results obtained and their impact will be furnished by SDAs to TMOP&M and concerned Director etc. For kharif season report may be sent by the first week of February and for the rabi season by the first week of July. Impact evaluation studies should be taken up in subsequent crop seasons / years to assess to what extent technology demonstrated is actually adopted by the farmers- beneficiary. If not, the reasons and measures needed to remove constraints/ bottlenecks may be analysed and adopted.

2.9 OTHER COMPONENTS

2.9.1 PLANT PROTECTION CHEMICALS

The assistance for P.P. chemicals/weedicides to the extent of 50% of the cost of chemical limited to Rs.500/- ha. has been provided to control any out break of pests and diseases above ETL levels.

2.9.2 PLANT PROTECTION EQUIPMENT

The assistance on plant protection equipment is available under the Scheme @ 50% of the cost of equipment subject to maximum limit of Rs.800/- per equipment for manually operated and Rs.2000/- per equipment for power operated sprays and hand dusters.

2.9.3 WEEDICIDES

District/region-wise specific areas for specific weeds identified by the state will also be tested by laying out the trials and accordingly the component will be applicable to maximum weed (monocotyledons/dicotyledons) prone areas. The assistance for weedicides to the extent of 50% of the cost of chemical or Rs.500/- per ha. whichever is less will be given.

2.9.4 NUCLEAR POLYHEDROSIS VIRUS (NPV)

To arrest the pod borer (*Helicoverpa armigera*) menace in gram and arhar, HaNPV @ 350 LE per ha in arhar and 250 LE per ha. in gram sprayed at 10-15 days interval during early stage of life cycle (I & II instar) have exhibited to increase production by 37% and 24.3% respectively.

2.9.5 INTEGRATED NUTRIENT MANAGEMENT

Farmers have been using mostly urea being a cheapest fertilizer which helps in foliage formation, thereby inviting insect/pest problems. Therefore, it becomes necessary to use balanced fertilizers with organic manures for better seed setting and improved oil content and its quality. However deficiencies of secondary nutrients like

calcium and sulphur in groundnut, sulphur in other oilseeds and pulses and maize and that of micronutrients in all these crops also affects their productivity adversely. Similarly, in upland areas soil acidity and in low lying and water logging prone areas soil alkalinity/ salinity affects adversely growth and yields of these crops. Assistance has therefore been provided under ISOPOM for supply of following critical inputs to the farmers:

i. Gypsum/Pyrite/Liming/Dolomite Distribution [\(modified w.e.f. 21.08.2007\)](#)

- a. Gypsum/Pyrites/Rock Phosphate are the cheapest sources of important secondary nutrients. Its application is known to increase both production and oil content in oilseed crops and yield and quality of pulses and maize. Gypsum application requires special attention and thrust because farmers are using mostly non-sulphur containing fertilizers like DAP and mixtures. High transport costs are stated to be one of the major constraints in making available Gypsum to farmers. Therefore, an assistance of Rs.500/- per ha. to meet the transport costs have been provided.
- b. It has been observed that supply of Gypsum in most of the States is inadequate. SDAs should, therefore, take up necessary steps for timely assessment of requirements, stocking at distribution points and also to launch campaigns to popularise its use.
- c. In acidic soils of uplands of A.P., Bihar, Chhattisgarh, Madhya Pradesh, Orissa, West Bengal, etc an assistance @ Rs.500/- per ha. is provided for application of liming agents like dolomite/ lime recommended to neutralise acidic effect to increase production. While application of gypsum/ pyrite is recommended for correction of soil alkalinity/ salinity observed in many parts of the ISOPOM states an assistance @ Rs.500/- per ha. is provided for application of liming agents like dolomite/ lime.
- d. However, the rate of assistance on gypsum in case of Maharashtra will be limited to Rs. 750/- per ha. as there is no production of gypsum in the state and it has to procure the same from other states involving higher transportation costs.

ii. Rhizobium Culture and Phosphate Solubilising Bacteria (PSB)

Rhizobium Culture is one of the cheapest inputs in increasing production of leguminous crops like. Treatment of seed with culture helps in fixation of atmospheric Nitrogen through its symbiotic activity. The treatment is particularly, beneficial in areas where groundnut and soybean are cultivated as new introduction. Phosphate Solubilising Bacteria has a capacity to release Phosphorus and has been recommended as one of the low cost inputs for all crops. It helps to reduce nearly 20% of phosphatic fertilizer input to crops. Following precautions are necessary while recommending the treatment of seed with these cultures:

- a. Reliability of source, viability of culture (check for expiry date) and needs BIS specifications etc.
- b. Culture should be well protected from heat and light during transportation and storage.
- c. It should not be stored in places contaminated with either pesticides or fertilizers.
- d. Culture strain specific to crop.

- e. Culture treatment should be done on the same day or the night previous to day of sowing.
- f. Most pesticides are toxic to culture. Thiram is the least toxic fungicide and dieldrin least toxic insecticide. If these chemicals are used, culture treatment (slurry-inoculate) be given to seed (after pesticide treatment) with double the normal dose. In groundnut, seed-bed application is recommended whenever pesticides are used
- g. Slurry-inoculated with *Rhizobium* Culture should never be mixed with super-phosphate as this is acidic and will kill the bacteria. In case of PSB, in acidic or alkaline soils, treated seed may be sown after coating with calcium carbonate or gypsum.
- h. SDAs may also take action for production and popularisation of some efficient strains of *Rhizobium* and PSB.
- i. PSB can be mixed with *Rhizobium*. The bio-fertilizer should be mixed in equal quantity and applied as mentioned above. The response to PSB is very good in acidic soils.
- j. An assistance of 50% subject to a maximum of Rs.50/- per ha. has been provided for supply of *Rhizobium*/PSB culture to farmers. ([modified w.e.f. 21.08.2007](#))

2.9.6 DISTRIBUTION OF SPRINKLER SETS ([modified w.e.f. 21.08.2007](#))

The oilseed, pulses and maize crops are being grown mostly under rainfed conditions and, as a result, are likely to suffer from vagaries of weather. With a view to use the available water judiciously/economically to cover maximum area, and to provide irrigation atleast at critical crop growth stage, the sprinkler mode of irrigation has been introduced in oilseeds crops. This is the ideal mode of irrigation for undulated topography where flow irrigation is not possible. It also helps in controlling several pests/diseases and damage due to frost bites. Keeping in view the growing demand for sprinkler sets, the financial norms have been changed for the current year. Accordingly, the revised rates of assistance are given as under:-

- i. 50% of the cost or Rs.15000/- whichever is less to small and marginal farmers, Scheduled Caste/Tribes and Woman farmers.
- ii. 33% of the cost or Rs.10000/- whichever is less to other categories of farmers.
- iii. The States are at liberty to prescribe lower rates of assistance, as is being done in the State of Rajasthan to cover more number of farmers thereby bringing larger area under the system.
- iv. Strict quality control - based on latest BIS standards prescribed for various components of the sprinkler sets, must be observed.

2.9.7 TRAINING OF FARMERS

- i. Training is an effective tool for speedy transfer of technology to the farmers. Funds have been provided under ISOPOM for organising farmers training programmes @ Rs.15,000/- per batch of 50 farmers per training.
- ii. States may link up these training programmes with the demonstration and seed village programmes also. In seed related trainings the representative from **Seed Certification Agency** (Rogueing Inspector) has to be invariably represented to deliver lecture and discussions with farmers during field visit.

- iii. The number of trainings to be organised in each district may be decided on the basis of oilseed, pulse and maize crops grown in different seasons, area under them and the exposure of the farming community to technology.
- iv. Scientists from Research Centres of ICAR, SAUs, KVKs may be closely involved in these training programmes. Printed literature may also be provided to farmers in regional language on the improved production technology being disseminated.
- v. To ensure farmers participation in requisite number, advance publicity may be given to such training programmes in local newspapers, AIR, farm Bulletins and on TV.
- vi. SDAs may organize these training programmers in association with ICAR Institutes, SAUs, KVKs, NGOs etc. on oilseeds, pulses and maize.

2.9.8 STAFF AND CONTINGENCIES

- i. Financial assistance to the states for the special staff sanctioned for implementation of Oilseeds Production Programme (OPP), National Pulses Development Project (NPDP) and Accelerated Maize Development Programme (AMDP) earlier by Government of India and continued during the Ninth Plan period and first two years of the Tenth Plan will be continued during the remaining period of the Tenth Plan. No new posts will be added to this sanctioned strength. While no purchase of new vehicles will be admissible under ISOPOM, keeping in view the constraint in mobility of the functionaries at different levels, states could seek funds for hiring of vehicles for implementation and monitoring of ISOPOM in the Districts and Field Level under contingencies.
- ii. The Officers identified as nodal officers/ Project Directors for the implementation and monitoring of ISOPOM crops will be directly responsible for submission of field level report, monitoring and monthly appraisal etc. to the TMOP&M and its Directorates. The Nodal Officer/ Project Director will be responsible to formulate **Monitoring Team** having a representative from Crops Development Directorate assigned the State for periodic field visits for monitoring of Component- implementation.
- iii. The Nodal Officers/ Project Directors will also represent the State in the Annual Research Workshops/conference on ISOPOM crops.

2.9.9 CONCURRENT EVALUATION OF ISOPOM

At the end of the Tenth Plan an impact evaluation of ISOPOM scheme will be done by an independent agency to be nominated for the purpose by the Department.

2.9.10 NEW COMPONENTS

- i. **Pipes For Carrying Water From Water Source To The Field** ([modified w.e.f. 21.08.2007](#))
 - a. a provision for distribution of pipes of 75 mm HDPE have been included under ISOPOM as part of the existing sprinkler distribution component to carry the irrigation water from one place to other, eliminate conveyance losses as requested by some of the states.

- b. a beneficiary will be provided to the maximum extent of a length of 210 meters (35 Units of 6 meter each of 75 mm diameter of IS-2786-1989 or IS-14151-1(1994), HDPE Pipes.
- c. the rate of assistance is as below:
 - 50% cost or Rs.15000/- whichever is less to SC/ST, small and marginal, women farmers.
 - 33% of the cost or Rs.10,000/- whichever is less to other categories of farmers.

ii. Officers Training

- a. To improve the extension system at field level, training to the Officers/ Extension workers of the State Department of Agriculture, TMOP Head Quarters and Directorates of Oilseeds and Pulses Development etc. is included in ISOPOM. About 30 officers will be trained for 2 days. A total assistance @ Rs. 16,000/- per training will be provided.
- b. the programme contents, selection of trainees will be done by TMOP&M in consultation with its Crops Development Directorates (CDDs), Extension Division of the DAC, SDAs. and Institute where training is to be imparted. The training shall be organized at ICAR Institutes/SAUs etc. on various aspects of cultivation/PHT/value addition etc. in oilseeds, pulses, maize and oil palm crops.

iii. Foreign Training Of Officials

With a view to improve knowledge level of officers and keep them abreast with latest development in oilseeds and pulses globally, a lumpsum provision of Rs. 2.50 Crores has been made for Tenth Plan period for foreign visits and attending international conferences/training programme concerning oilseeds, pulses, maize and oil palm crops, study development programmes in foreign countries etc. This will be 100 % funded by the Government of India.

iv. Publicity

- a. To establish linkage between farmers & agriculture experts and to facilitate quick spread of latest technologies to farmers, a publicity component has been included under ISOPOM which will be 100 % funded by GOI. Rs. 2.00 lakh per state will be given.
- b. Component will have the provision for organization of Seminar/Workshop/Printing of latest technological packages in vernacular language and other publicity material for dissemination through mass media including radio and TV broadcasts.

v. Involvement of Private Sector

- a. To strengthen the existing input supply system and extension support, which has weakened during last few years in the wake of downsizing of the Government and public sector agencies involved in these activities and also to have active participation of private sector, a provision has been made under ISOPOM for involvement of private sector agencies, including NGOs, farmer societies and Self Help Groups in implementation of ISOPOM programmes, particularly in the following activities:
 - Seed Production.

- Extension support.
- Conduct of frontline and block demonstrations, IPM demonstrations.
- b. A cap of 15% of the allocation for each component has been kept in this regard. This ceiling could be increased after a mid term review by the DAC.
- c. States Govts. and ICAR may identify the suitable agencies and organize the programmes through them within the approved frame work of ISOPOM.

2.10 OPERATIONAL GUIDELINES FOR IMPLEMENTATION OF OIL PALM DEVELOPMENT PROGRAMME (OPDP)

1. Central/State Share in the Programme

The programmes will be implemented on 75:25 sharing basis between Government of India and the concerned State Government, except for the component of drip irrigation under which sharing is on 90:10 basis between Govt. of India and concerned State Government. For North-Eastern States the entire cost on installation of drip irrigation system in oil palm plantation would be met by centre. For components like training, testing of genotypes, etc. being implemented by ICAR, entire funds will be provided by the Central Government.

2. SC/ST Components

A minimum of 25% of the funds allocated for implementing beneficiary oriented components, viz., planting material, cultivation, training and drip irrigation will be earmarked by State Government for utilization of the farmers belonging to Scheduled Castes (17%) and Scheduled Tribes (8%).

3. Component-wise Rate of Assistance

- **Assistance for Planting Material:** 75% of cost with a ceiling of Rs.7,500/- per ha for entire land holding of the farmer.
- **Assistance for Cultivation Cost:** 50% of the cost during the gestation period of 4 years with a ceiling of Rs.15,500/- per ha admissible upto 15 ha for individual farmer. This may vary from state to state, according to the Land Ceiling Act of a particular State. Illustrative phasing of cultivation assistance during gestation period is indicated below:

Year	Maximum Cultivation Subsidy per ha (Rs.)
I Year	4600
II Year	3300
III Year	3500
IV Year	4100
Total	15500

- **Assistance for Drip Irrigation:** 50% of the cost for Small, Marginal, SC, ST and Women farmers with a ceiling ranging from Rs.7400/- to 9300/- and 35% for other categories with a ceiling of Rs.5200/- to Rs.6500/- assistance will be provided for a maximum of 4 ha per beneficiary.
- **Training, Extension & Publicity, Establishment & Staff and other ongoing Components:** Need based support would be provided as per requirement for training, extension & publicity, establishment & staff and other

ongoing components such as seed gardens, leaf analysis lab, training of staff/officers and testing of genotype, etc.

- **Demonstrations:** In block where new oil palm plantations of 500 ha or above are being taken up on farmer's field, 20 demonstration of one ha each will be taken up with a view to demonstrate cultivation and management practices, plant protection measures and potential yield of oil palm to the farmers. Under oil palm demonstrations entire expenditure subject to the maximum of Rs.10000/- per ha for planting material and maximum of Rs.30950/- per ha for cultivation during gestation period of 4-5 years will be provided. Balance cost, if any, on planting material, cultivation and other expenditures may be met either by the farmers or State Government. Demonstration plots must be taken up in new areas to induce new farmers. If blocks of 500 ha plantation is not available demonstration could be arranged for lesser area also keeping in view availability and suitability of the area.
- **Assistance for Diesel Pump Sets:** 50% cost to a maximum limit of Rs.10000/- per set, at least to those farmers who take up 2 ha and more of oil palm plantation. Pattern of admissible assistance would be kept at par with other schemes of Department of Agriculture & Cooperation for installation of diesel pumpsets.
- **Wasteland Development:** 15% of fund will be available for development of wasteland owned by farmers or Government land/wasteland owned by the corporations of the states and Central Government or Cooperatives. Out of this 15%, 25% funds will be provided for creating infrastructure irrigation facilities for development of wastelands.

4. General Guidelines for Implementation of Oil Palm Programmes

1. State Government should issue administrative approval for implementation of OPDP during remaining period of the Tenth Five Year Plan after taking into account total availability of funds including the unspent balances (Central Share) available at the end of each financial year.
2. A copy of the State level administrative approval may be endorsed to this department for necessary action. In the absence of state level administrative approval, the department will not be in a position to release further funds.
3. At least 70% of total utilization of funds under oil palm should be on area expansion activities and drip irrigation i.e. raising of seedling, assistance to farmers towards planting material, cultivation inputs and installation of drip irrigation system.
4. Expenditure on 'Establishment & Staff' should not exceed 10% of total expenditure. The expenditure for above purpose would mean actual amount utilized on the programme during a year. The upper limit on expenditure on 'Establishment & Staff' would be 15% of the total expenditure for states having annual allocation (including state's share) of less than 1.00 crore. In case expenditure on 'Establishment & Staff' can not be maintained within these limits and temporary relaxation in this respect is considered in the interest of the programmes, a proposal would be sent to TMOP&M for prior approval.
5. Expenditure on maintenance of Seed Gardens in Andhra Pradesh, Karnataka and Kerala, Leaf Analysis Laboratory in Andhra Pradesh and Karnataka, Maintenance of Front Line Demonstration at Bheemankolli and sub-schemes of

NRC-Oil Palm would be met as per requirement but only on items of expenditure approved under the schemes.

6. Central allocation would be released against the proposal of the State Government/Organization on the basis of progress of the utilization of funds already available. Release proposal may be sent to TMOP&M as soon as unspent/available funds become less than the anticipated requirement of funds for implementation of OPDP during next 3 months.
7. In case of States, which fail to claim their allocation or part of their allocation due to poor progress of the utilization and anticipated requirements, remaining allocation would be treated as savings. These savings would be re-allocated to the States, which seek additional allocation on the basis of the good progress of the scheme.
8. States Government implementing oil palm programmes will have to constitute Project Management Committee (P.M.C) under the chairmanship of secretary Horticulture/ Agriculture of the state. Oil Palm Commissioner would be designated by State Government separately to look after the Oil Palm development in the State. Oil Palm commissioner would also Chair Price Fixation Committee, constituted for fixation of oil palm (F.F.B's) Prices in the State from time to time.
9. A Project Management Committee (PMC) of the States will have full financial and administrative powers including those of sanctioning expenditure including assistance, laying guide-lines for appointment of staff, accepting tenders, etc.
10. Information on unspent balance (Central and State share separately) available with the implementing agencies/State Government need to be furnished to TMOP&M, at the end of each month & at the end of the year.
11. Revalidation of unspent balances would be considered only after receiving a specific proposal to this effect from the respective State Government, giving reasons for non-utilization of funds and concrete measures initiated to ensure the utilization of these unspent balances.
12. Flexibility to the states for introducing innovative measures or any special component to the extent of 10% of financial allocation would be allowed.
13. Flexibility for inter-component diversion of funds upto 20% for non-seed components would be allowed.
14. Project for wasteland development would be considered and approved in this Department by a screening committee consisting of the following officers
 1. Special Secretary/Additional Secretary--
--In-charge of (TMOP&M) Chairman
 2. Joint Secretary (TMOP&M): Member Secretary
 3. Director (TMOP&M): Member
 4. Sr. Analyst/Technical Officer: Member
 5. Representative of State Government: Member
15. The project proposals formulated by the State Government would be forwarded to TMOP&M for approval. Central share for implementation of the above component would be released only after the project is approved by the screening committee mentioned above.

16. Responsibility of monitoring the project and submission of periodical physical and financial progress lie with the State Government. Possibility of integrating/dovetailing the wasteland development scheme with other irrigation schemes of state Govt. should be explored to create irrigation facilities in addition to the facilities being provided under the scheme during 10th Five Year Plan.

2.11 SC/ ST SUB-PLAN UNDER ISOPOM

As envisaged under the ongoing schemes, small and marginal farmers and SC/ST and Women farmers, involved in cultivation of oilseeds, pulses, maize and oil palm, will be given priority in providing benefits and support under ISOPOM too. It also stipulates that 22.5% of the outlays for input supply and support services provided by the states to farmers as also under Frontline demonstrations are ear-marked to benefit SC and ST farmers.

2.12 CONTRACT RESEARCH BY ICAR ([modified w.e.f. 21.08.2007](#))

An amount of 5% of the allocation for seed component under ISOPOM will be allocated to ICAR for contract research for development of drought resistant varieties of oilseeds and pulses, particularly of groundnut, soybean, rapeseed and mustard. Specific new problems hampering cultivation of these crops needing immediate remedies could also be suggested by states for study under this component for taking up by ICAR with approval of the Government of India.

3. ANNUAL STATE WORK PLANS

- 3.1 An area specific project approach should be adopted for the implementation of the scheme. Each project should have a time frame, budget and clearly defined targets. The project should be implemented on the basis of annual work plans. Responsibility of different implementing agencies should be clearly defined.
- 3.2 To streamline the production and to promote the crop – diversification as also to achieve the ambitious targeted production, states have to adopt a pragmatic approach deviating from the past routine implementation of the programme.
- 3.3 The state action plan should include detail information on: -
 - i. Critical analysis of the present status of crop-wise oilseeds, pulses, oil palm and maize production in the state.
 - ii. Potential in the state for promotion of oilseeds, pulses, oil palm and maize, crop-wise.
 - iii. In view of the potential, crop-wise targets for area coverage, production and yield of these commodities.
 - iv. Details of the strategies and production technologies to be adopted by the State Governments in achieving these crop-wise projections.
 - v. Assessment of resources/inputs and projection of requirement.
 - vi. Component-wise physical and financial targets under ISOPOM with full justification.
 - vii. The new innovations to be introduced by the State Govt. for achieving projections.
 - viii. The areas and components in which involvement of private sector has been envisaged for implementation of the scheme.

- ix. The programme should be implemented on project approach basis on compact area approach and thin spread of resources be avoided.
- 3.4 The action plan should specify and quantify the possibilities and targets in respect of following thrust areas for each agro-ecology and cropping situation.
- a. **Area expansion through:**
 - Crop diversification, improvement in cropping intensity, relay-cropping, inter-cropping.
 - Inter-crop adjustments between oilseeds, pulses and maize based on their comparative economic advantage and also diversification of persistently low productivity areas of these crops to other crops/cropping systems, which have better advantage, sustainability and compatibility with the eco-system.
 - Extension of crops in irrigated areas through localisation of area from high water demanding crops to low water demanding crops like oilseeds, pulses and maize.
 - Adoption of improved irrigation methods and equipments.
 - b. **Productivity enhancement** through adoption of improved agronomic practices, identifying the thrust areas for each agro ecological/cropping situation and technological and productivity gaps in farmers practices and improved production technologies to be adopted.
- 3.5 Dovetailing with other Development Programme.
- The action plans may also ensure linkages with the following Centrally Sponsored/ Central schemes and programmes under Macro-management in Agriculture in the states to supplement the crop development under ISOPOM.
- a. National Watershed Development Programme for Rainfed Areas (NWDPA) /Watershed Development Programme (WDP).
 - b. Reclamation of saline/alkaline soils programmes.
 - c. River Valley and Flood Prone River Area Programme.
 - d. Integrated Nutrient Management and Organic Farming, Soil Testing, Bio Gas etc.
- 3.6 **Other details**
- 1) Varietal replacement giving present status of varieties, their yield level, varieties/hybrids to be introduced and their advantage in terms of yield and production.
 - 2) Seed production and supply plans to achieve the targeted Varietal and seed replacement.
 - 3) Measures to improve the seed production and supply system.
 - 4) Thrust areas and input support planned for;
 - integrated nutrient management
 - integrated pest, management, identifying the important pests, diseases, weeds and their impact on production.

- technology transfer through demonstrations, training of farmers and extension workers and publicity (including campaigns through mass media like TV, radio, etc.).
- 5) Agencies identified for implementation of the programmes and specific responsibilities entrusted to them, targets set out.
 - 6) Involvement of Private Sector Agencies/NGO's etc. in implementation of the programmes, specific activities and targets set out for them together with modalities for providing financial support to them and contractual obligations prescribed.
 - 7) Pilot project could also be drawn for specific thrust areas involving both public and private sector agencies in areas like
 - a) Production of HPS ground nut, cuscutea free niger, confectionary quality sesamum, sunflower, groundnut for export and domestic consumption.
 - b) Production of baby corn, sweet corn, pop corn, Quality Protein Maize, high starch and high oil maize etc.
 - c) Extension of specific oilseeds, pulses and maize crops in new areas.
 - d) Specific crop diversification programmes etc.
 - e) On strengthening of farmers, contact centres and supportive systems contractual help, consultancy, private sector participation agri-clinics, agri-business centres, KVKs, development of computer networking for extension.
 - 8) Human Resource Development Programme: Training and skill upgradation of various stake holders in agriculture, including women participating in agriculture production.
 - 9) Application of Information Technology: Strengthening of computer networking and its application for betterment of dissemination of information on various aspects of crop production, processing, marketing, utilization etc. including DACNET and similar other projects of the Ministry of Agriculture.

3.7 Involvement of Panchyats.

State may develop mechanism for involvement of village panchayats in the formulation and implementation of the programme at grass root level.

3.8 MONITORING

a) NATIONAL LEVEL

- i. There will be close monitoring of the programme during Tenth Plan. Half yearly reviews with the State Governments and other implementing agencies like ICAR, NSC, SFCE, etc will be done by the Department of Agriculture & Cooperation/ TMOP & M, where the representative from the Planning Commission will also be invited. The half yearly reviews will be done before the National Conferences on Agricultural Production for Kharif and Rabi Seasons.
- ii. In addition, TMOP&M may also take review to address specific problems in implementation of ISOPOM. Similarly it may also constitute Special Monitoring Teams to address and monitor the specific problems/implementation aspects of ISOPOM drawing personnel/experts

from Development Directorates/ICAR/Concerned States Department of Agriculture, etc.

- iii. Field monitoring for the implementation of the ISOPOM in the states will be continued to be done by its Crops Development Directorates in their assigned states.

b) STATE LEVEL

- i. Experiences in the past revealed that most of the State Governments held up the allocated/released funds of the Govt. of India besides non-accordance of sanction for the state matching grant in time. Delayed/non-issuance of states' administrative approvals well before each sowing season hamper the programme implementation. States would therefore, ensure issuing of sanctions in time. Inordinate delay/non-utilization of budget may result in non-release of the due installments as also diversion of the same to best performing states.
- ii. Constitution of State Level Sanctioning Committee (SLSC), holding of Meeting and endorsement of minutes to the TMOP and concerned Directorate will be mandatory for the ISOPOM states. The SLSC will meet at least twice in a year, once before the onset of Kharif and again before Rabi seasons. A representative from Commodity Development Directorates (CDDs) of DAC, Government of India will be invited to participate/interact in the meeting.
- iii. Systematic and result-oriented (concurrent/monthly) monitoring is necessary for effective implementation of this Programme. The Monthly Progress Report has to be submitted by the SDAs regularly to the TMOP Head quarter and to the concerned Directorate. The Project Director/JDA under the project provision will regularly furnish the weekly crop scenario for Weekly Weather Watch report to the DOD, Hyderabad/DPD, Bhopal.

4. Guidelines for Seed Production and Seed Distribution

Under the ISOPOM, subsidy on production of foundation/certified seeds and distribution of certified seed of pulses and oilseeds is provided to make the improved varieties of seed available to the farmers at reasonable rates. Further, to popularize newly released varieties of oilseeds and pulses, the seed minikits distribution is undertaken for which 100 per cent cost is borne by the Department of Agriculture and Corporation. Seed production programmes are undertaken by NSC, SFCI, KRIBHCO etc. NSC and SFCI are the nodal agencies for distribution of seed minikits. To streamline the implementation of these components and for effective monitoring thereof, the following guidelines are laid down:-

- (i) Foundation/certified seed producing agencies will submit annual action plan for the production programmes to be undertaken by them by 1st march of every financial year
- (ii) The annual action plan will contain details about the resources available with these agencies and arrangements made for production of the foundation/certified seeds of the various varieties crop-wise.
- (iii) On receipt of the annual action plan, TMOP Division will examine the proposals in view of the demands of the seeds of different crop/varieties by

the state governments. TMOP Division will also indicate newly released varieties, if any, to be incorporated in the seeds production programmes.

- (iv) The annual action plan will be approved by the Division by 1st April of every financial year with modifications, if any
- (v) Implementation of the programme will be reviewed by the Division with these agencies periodically during the production season and while reviewing programmes test checks may also be made by the officers of the Division jointly or separately.
- (vi) NSC and SFCI will formulate a 5 years rolling plan for production and distribution of seed indicating crop and variety wise programme for each year, drawn in consultation with ISOPOM states, ICAR, TMOP, etc
- (vii) Based on the rolling plan, detailed annual production and distribution plans will be drawn each year for the different crop seasons indicating crop, variety, state and location wise production and state and district wise distribution programme. The Annual Action Plan will also contain details about the resources available with these agencies.
- (viii) NSC and SFCI which are nodal agencies for distribution of seed minikits will submit their detailed programmes of distribution well in advance to the Division.
- (ix) The state governments will distribute seed minikits in a clusters of beneficiaries in a compact area. This will help in monitoring of the programmes effectively. A test check of seed minikits distribution will be carried out by the officers of the Department, its Crop Development Directorates and State Govt.
- (x) NSC, SFCI will also communicate their crop and variety wise certified/TL seed distribution programme through their own sale net work for which they are claiming subsidy for each state in the beginning of a season to TMOP Division and also to its Crop Development Directorates for random verification in their assigned states.
- (xi) The challan of delivery of seed minikits will be counter-signed by the Director of Agriculture of the concerned state government.