



Manual of Catalytic Development Program

Vanya Sector



CHAPTER III

VANYA SECTOR

Introduction

The *Vanya* raw silk production during XI Plan period has witnessed a remarkable growth. The production which was around 1,950 MT in 2006-07 (end of X Plan) has increased to 4,788 MT during 2011-12 (end of XI Plan). *Vanya* silk has significantly contributed to the overall Indian silk production (record increase from 11.33% in 2007-08 to 20.76% in 2011-12). Augmentation of *Vanya* food plants, adoption of improved seed production and rearing technologies by the *Vanya* silk growers of whom majority are tribals and improvement in productivity have contributed to this record growth. Considering the good growth rate on the production of *Vanya* silk during XI Plan period, the XII Plan envisages ambitious *Vanya* raw silk production target of 9,000 MT.

Planning and executing systematic *Vanya* seed organization has posed the biggest challenge during earlier Plan periods for production and supply of required quantity of quality *Vanya* commercial seed. Therefore, considering the *Vanya* silk production target set for the XII Plan, proportionate quantity of quality commercial silkworm seed shall be produced by knitting well organized seed production, multiplication and supply system by CSB with state production units and private graineurs and seed producers.

Year-wise and variety-wise *Vanya* raw silk target and the estimated *Vanya* commercial seed requirement during the XII Plan period are enumerated below:

Variety	2012-13		2013-14		2014-15		2015-16		2016-17	
	Raw Silk (MT)	Dfls (Lakh No.)	Raw Silk (MT)	Dfls (Lakh No.)	Raw Silk (MT)	Dfls (Lakh No.)	Raw Silk (MT)	Dfls (Lakh No.)	Raw Silk (MT)	Dfls (Lakh No.)
Tasar	1830	439	2310	554	2785	668	3620	869	4562	1095
Muga	130	135	140	145	150	160	160	175	200	200
Eri	3160	496	3345	540	3590	586	3920	625	4238	662
Total	5120	1070	5795	1239	6525	1414	7700	1669	9000	1957

Nature has bestowed with enormous area of *Vanya* silkworm host plants. However, exploitation of natural food plant resources for commercial venture has not yielded desired results. The efficiency of the rearer shall yield better results when rearing is conducted in systematic plantation. Realizing the importance of raising systematic plantations, 20,441 ha of

tropical tasar, 538 ha of oak tasar, 46,351 acre of eri and 11,220 acre of muga silkworm host plants have been raised in farmers' own lands, forest reserve areas and government lands etc., during XI Plan period, which helped to increase the production. It is, therefore, necessary to continue all *Vanya* sector ongoing components during XII Plan also with necessary modifications.

Implementation of *Vanya* sector components during XI Plan has further emphasized need for proper intervention in critical areas for attaining better results. In order to achieve the desired results and optimum utilization of infrastructure already established during X and XI Plans, it is necessary to implement the innovative and proven technologies so as to achieve the ambitious target of 9,000 MT by the end of XII Plan. It is proposed to intervene and assist in the following areas to enhance the production:

- Enhancement of seed production and multiplication activities to cater to the need of increase in raw silk production target.
- Productivity improvement through maintenance of existing *Vanya* host plants and augmentation of new plantation by dovetailing programs under RKVY, MGNREGA, ATMA, Border Area Development Plan etc.
- Community building for the integrated development of *Vanya* silk by improving the group activity/capacity building.
- Disease monitoring and control through disinfection squads.
- Conservation and utilization of tasar eco-races.
- Introduction of 4 tier seed multiplication system in eri sector.

The sector-wise component details are as follows:

I. *Vanya* seed

1) Assistance to private tasar graineurs

a) Brief description:

Production of commercial tasar seed in private sector as a rural enterprise has been well received in the field for meeting the requirement of quality silkworm seed by the commercial rearers during X and XI Plan. The private graineur concept has been demonstrated successfully as a village level micro-enterprise model and as a financially viable and technically feasible activity in private sector through CDP scheme, UNDP project, special SGSY projects, NABARD assisted TDF projects etc. It helps in bridging the gap between demand and supply of tasar seed. Continuation of the scheme with necessary modifications during XII Plan helps in promotion of systematic tasar seed organization in the country. The focus of Basic Tasar Silkworm Seed Organization (BTSSO) has now been shifted towards supply of nucleus seed and steps are taken to encourage the DOSs/CBOs to produce tasar basic seed in tribal villages. Hence, the promotion of the private graineurs shall play a major role in tasar sector.

Under the component, unemployed tribal and rural youth shall be identified and trained on grainage technology to impart technical and managerial skills for production of commercial dfls as per the norms fixed by the research institutes of CSB. Beneficiary selection shall be made involving DOS, local CSB units and NGO, if any. The training shall be imparted by the Basic Seed Multiplication and Training Centres (BSMTC) of CSB, and the expenditure shall be charged to the training component. After the training, the graineurs shall be assisted with necessary technical support, construction of grainage building, procurement of grainage equipment, consumables and working capital for purchase of seed cocoons, insurance coverage, etc., to enable the graineurs to process 20,000 seed cocoons and produce 5,000 dfls per grainage operation. The scheme shall be flexible and the implementing agency shall have the choice to extend assistance covering any other desired item under the sub-component. The Project Monitoring Committee (PMC) shall decide the type of assistance required within the unit cost for the beneficiary depending upon the requirement of graineurs in a particular locality. Beneficiary share shall be met by contributing required land and locally available material and labour for construction of grainage building besides meeting the margin money requirement for availing the working capital.

b) Technical specifications/operational guidelines:

- The component shall be extended only to the registered seed producers (private graineurs) who have tie-up with

seed rearers in isolated areas. It is mandatory to obtain training in cocoon processing, production of disease free layings and disease monitoring from BSMTCS, state units, NGOs, CBOs etc. The private graineurs shall provide an undertaking in the form of an agreement that the grainage activities shall be continued at least for a five year period.

- The implementing agencies shall monitor maintenance of working capital in non-erodable form for sustenance of the activity, besides ensuring beneficiary share and credit mobilisation. Further, the details of assistance extended along with production particulars during each operation shall be entered in the beneficiary passbook provided to them and duly certified.
- Procurement of grainage equipment shall be made as per technical specifications from reputed firms with AMC on rate contract for the entire Plan period to avoid delay by constituting purchase committee at state or district level, as the case may be. The implementing agency shall meticulously follow the relevant points of general guidelines of CDP for XII Plan, while implementing the component.
- List of empanelled moth testers and Community Resource Persons (CRP) shall be provided by the implementing agency to the graineurs well in advance to avail their services.
- The resource persons shall obtain training through structured programs like Integrated Skill Development Scheme (ISDS) of CSB and those promoted under MORD/NABARD assisted projects.
- The performance of private graineurs shall be monitored by concerned BSMTCS and Pilot Project Centres (PPC) to ensure production of dfis as per norms fixed by CSB.

The activities required under the component along with its cost break-up details are indicated in the unit cost (refer Unit Cost book) of the component.

c) Physical targets and financial projections:

The details of sharing pattern, unit cost, physical targets and financial projections are given below:

Sharing Pattern	State Category	CSB	State	Beneficiary
	General Category	60%	20%	20%
	Special Category	80%	10%	10%

Zone	Unit Cost (Rs.)	Physical Target	Financial Projections (Rs. in crore)			
			CSB	State	Beneficiary	Total
Applicable to all zones	2,32,000	1,500 graineurs	25.52	4.64	4.64	34.80

1A) Assistance to existing tasar graineurs for up-gradation of seed production capacity

a) Brief description:

To meet the demand and supply of the most critical input in pre-cocoon sector, viz., tasar silkworm seed and supplement the efforts of BSMTCS, BTSSO under CSB and PPCs under DOSs of tasar producing states, the private graineurs were promoted since X Plan under the CDP and UNDP assisted projects. It was, however, observed that only limited support was provided in the beginning. The private graineur concept could not be sustained due to lack of effective linkages, non-availability of working capital for purchase of seed cocoons, partial involvement of CBOs/NGOs and non-utilisation of infrastructure created under the component. Further, there was no provision of separate space for ovi-position, moth examination and egg washing in earlier Plans. Hence, focus shall be to provide the same during XII Plan period.

In order to utilise the expertise of the private graineurs and ensure optimum utilisation of infrastructure created during earlier Plan periods, it is proposed to extend financial assistance to the existing private tasar graineurs towards repair of grainage building, servicing/purchase of grainage equipment, besides working capital and hiring of moth testers during the peak period of the grainage operation. While provisions are indicative, the implementing agency may decide on the actual requirement based on the merit of each case, subject to approval by the designated committee.

besides meeting the margin money requirement for availing the working capital.

b) Technical specifications/operational guidelines:

- Based on the assessment of the joint inspection committee comprising members from CSB and state, assistance shall be extended to the RSPs (private graineurs) who are actively engaged in seed production for last three years and obtained assistance under CDP prior to XI Plan period. Assistance shall be provided to existing tasar private graineurs after obtaining an undertaking in the form of an agreement from the private graineurs to the effect that they would produce 5,000 dfls per operation and continue the grainage activity for at least five years period.
- The implementing agency shall ensure the backward linkages with seed rearers for seed cocoon procurement. The DOS shall also organise refresher training to the private graineurs at BSMTCs/state units/NGOs, besides ensuring disposal of the commercial dfls produced.
- The implementing agency, besides ensuring beneficiary share and credit mobilisation shall monitor maintenance of non-eroding working capital for sustenance of the activity and shall also enter the details of assistance extended along with production particulars during each operation in the beneficiary pass books provided to them and duly certify each of the entries.
- Procurement of grainage equipment shall be made as per technical specifications from reputed firms with AMC on rate contract for the entire Plan period to avoid delay by constituting purchase committee at state/district level, as the case may be. The implementing agency shall meticulously follow the relevant points of general guidelines of CDP for XII Plan while implementing the component.
- The implementing agency shall support the private graineurs in providing moth testers during the peak period of grainage and maintain the details of production, dfl recovery and performance of commercial dfls level etc., in beneficiary passbook to assess the performance and impact of the scheme.

The activities required under the component along with its cost break-up details are indicated in the unit cost (refer Unit Cost book) of the component.

c) Physical targets and financial projections:

The details of sharing pattern, unit cost, physical targets and financial projections are given below:

Sharing Pattern	State Category	CSB	State	Beneficiary
	General Category	60%	20%	20%
	Special Category	80%	10%	10%

Zone	Unit Cost (Rs.)	Physical Target	Financial Projections (Rs. in crore)			
			CSB	State	Beneficiary	Total
Applicable to all zones	42,000	1,000 graineurs	3.02	0.59	0.59	4.20

2) Assistance for strengthening of tasar seed multiplication infrastructure (Tropical tasar)

a) Brief description:

BTSSO under CSB alone has been meeting the major requirement of tasar basic seed in the country for further production and supply of commercial dfls to the rearers. Due to initiation of ambitious tasar developmental plans by tasar producing states, and by attracting investments from other funding agencies, requirement of nucleus and basic seed has increased manifold. In order to broad base the supply source and augment the production of tasar basic seed to cater to its growing demand, there is a need to strengthen the state multiplication units to gear up the basic seed production under their control or through NGOs/societies, CBOs/SHGs, producer groups etc.

Under these circumstances, it is proposed to establish new units and also strengthen the existing tasar silkworm

seed multiplication infrastructure with DOSs. The component envisages provision for construction/renovation of existing building, supply of grainage equipment, grainage house, insurance, buildings, maintenance, etc., based on the report of a joint committee comprising DOS and BTSSO units in the state. Besides, lumpsum provision towards procurement of nucleus seed cocoons and operational cost for preservation of cocoons for over 6 months has been made under the component.

b) Technical specifications/operational guidelines:

- Assistance shall be provided to the PPCs or basic seed grainage units with a capacity to preserve 1.5 lakh cocoons and produce 25,000 tasar basic seed. The implementing agency shall ensure proper linkages with nucleus seed rearers, undertake joint disease monitoring involving CTR&TI/BTSSO/NGOs in the area during seed crop rearing, proper preservation and processing of seed cocoons during grainage operation.
- Working capital and operational costs shall be deposited in separate special savings account with arrangements to flow back the sale proceeds of basic seed and pierced cocoons to keep it non-eroding and make the activity independent during subsequent years.
- The implementing agency shall undertake and furnish the performance report of the unit, status of the working capital and operational cost during the Plan period on yearly basis.
- Though details of the unit cost are indicated, provisions are flexible and to be decided by a joint technical committee, except for working capital and operational cost.
- A joint survey team shall visit the unit and suggest the requirement after assessing available infrastructure, plantation, equipment etc.

The activities required under the component along with its cost break-up details are indicated in the unit cost (refer Unit Cost book) of the component.

c) Physical targets and financial projections:

The details of sharing pattern, unit cost, physical targets and financial projections are given below:

Sharing Pattern	State Category	CSB	State	Beneficiary
	General Category	50%	50%	–
	Special Category	90%	10%	–

Zone	Unit Cost (Rs.)	Physical Target	Financial Projections (Rs. in crore)			
			CSB	State	Beneficiary	Total
Applicable to all zones	5,00,000	30 PPCs	1.11	0.39	–	1.50

2A) Establishment of basic seed production unit (by SHGs/Co-operatives/NGOs)

a) Brief description:

In view of the increasing demand for tasar silkworm seed in the country, BTSSO, Central Silk Board had to shift its focus from production of tasar basic seed to augmentation of nucleus seed. Tasar producing states are yet to attain their capabilities to produce tasar basic seed despite support extended to strengthen their PPCs during X & XI Plan periods. It may be practically difficult for the states to meet the entire basic seed demand in view of the shortage in extension staff for managing longer preservation of seed cocoons during unfavourable climatic conditions and lack of mechanism for effective linkages.

In the mean time, CSB in collaboration with PRADAN, an NGO had successfully introduced nucleus seed rearing in tasar block plantations, established basic seed production units and organized production of quality basic seed involving CBOs under the special SGSY and NABARD-TDF projects in Bihar and Jharkhand during XI Plan period. Further, the effective linkages with ASRs for nucleus seed rearing and basic seed rearing in isolated patches helped these basic seed production units to sustain their activities beyond project period. As the MORD, Govt. of India and other agencies have been funding for establishment of such units under various projects including MKSP, to be

The beneficiary share shall be mainly towards locally available material and labour for repair of the grainage building implemented by NGOs involving Societies/CBOs/SHGs and producer groups, it is proposed to promote establishment of basic seed production unit by dovetailing funds from CDP with assistance however limited to 25% of the unit cost, with or without state share during XII Plan.

b) Technical specifications/operational guidelines:

- Based on the assessment of the joint inspection committee comprising members from CSB and state, assistance shall be extended to the RSPs (private graineurs) who are actively engaged in seed production for last three years and obtained assistance under CDP prior to XI Plan period.
- Assistance shall be provided to existing tasar private graineurs after obtaining an undertaking in the form of an agreement from the private graineurs to the effect that they would produce 5,000 dfls per operation and continue the grainage activity for at least five years period.
- The implementing agency shall ensure the backward linkages with seed rearers for seed cocoon procurement. The DOS shall also organise refresher training to the private graineurs at BSMTCS/state units/NGOs, besides ensuring disposal of the commercial dfls produced.
- The implementing agency, besides ensuring beneficiary share and credit mobilisation shall monitor maintenance of non-eroding working capital for sustenance of the activity and shall also enter the details of assistance extended along with production particulars during each operation in the beneficiary passbooks provided to them and duly certify each of the entries.
- Procurement of grainage equipment shall be made as per technical specifications from reputed firms with AMC on rate contract for the entire Plan period to avoid delay by constituting purchase committee at state/district level, as the case may be. The implementing agency shall meticulously follow the relevant points of general guidelines of CDP for XII Plan while implementing the component.
- The implementing agency shall support the private graineur in providing moth testers during the peak period of grainage and maintain the details of production, dfl recovery and performance of commercial dfls level etc., in beneficiary passbook to assess the performance and impact of the scheme.

The activities required under the component along with its cost break-up details are indicated in the unit cost (refer Unit Cost book) of the component.

c) Physical targets and financial projections:

The details of sharing pattern, unit cost, physical targets and financial projections are given below:

Sharing Pattern	State Category	CSB	State	Beneficiary
	General Category	60%	20%	20%
	Special Category	80%	10%	10%

Zone	Unit Cost (Rs.)	Physical Target	Financial Projections (Rs. in crore)			
			CSB	State	Beneficiary	Total
Applicable to all zones	43,00,000*	7 Seed production units	0.54	0.11	0.10	0.75
			Other Assistance			
			MORD/NABARD/TWC/RKVY	State	Beneficiary	Total
Grand Total			2.80	0.11	0.10	3.01

* Only 25% of the unit cost shall be considered under CDP scheme.

3) Assistance for strengthening of seed multiplication infrastructure (Oak tasar)

a) Brief description:

The absence of systematic seed organization and non-availability of quality/disease free silkworm seed are the major factors responsible for stagnancy in oak tasar silk production. The infrastructure and equipment for seed cocoon preservation and processing available with the states are quite old and obsolete. Further, such seed multiplication units could not create desired impact during the implementation of similar schemes during XI Plan mainly due to paucity of fund for procurement of seed cocoons, lack of modern seed testing facilities, erratic power supply and their location in the remote areas.

Considering the need for augmenting and streamlining the seed production in the states, it is proposed to establish/strengthen the existing oak tasar silkworm seed multiplication infrastructure with DOSs, NGOs, societies, SHGs etc., during XII Plan. Under the component, assistance shall be provided for construction/repair/extension of grainage building to accommodate facilities for seed cocoon preservation, coupling, oviposition, moth testing, incubation etc., along with running water supply, grainage equipment/consumables and standby source of power for seed production. Also one time assistance of Rs.1.5 lakh is proposed as working capital for procurement of seed cocoons during the first year of operation.

b) Technical specifications/operational guidelines:

- Assistance shall be extended for construction/repair/extension of grainage buildings/equipment.
- The component shall be implemented on the following lines:
 - Selection of government farm/CBOs/NGOs by a joint inspection committee comprising officers from DOS and CSB.
 - State departments/NGOs/societies/SHGs of the oak tasar producing states of North-eastern and North-western regions are eligible for assistance. Existing seed production units may also avail assistance for specific work, like repair of existing building, extension of building and equipment on pro-rata basis.
 - Construction of grainage buildings measuring 40' x 25' with 6' verandah all sides, with brick cement walls, concrete floor and roof with CGI sheet/zinc sheet rested on wooden frame and false ceiling and electrification of building.
 - Facilities for seed cocoon preservation, coupling, oviposition, moth testing and incubation, etc.
 - Facilities for running water supply for grainage operation or alternate water sources, power supply and septic tank, etc.
 - Procurement and installation of equipment/appliances for seed cocoon preservation, processing and testing including Fujiwara method of pebrine detection as per specification given in unit cost.
 - Commissioning of the facility and utilization of installed capacity. Each unit to preserve 1.5 lakh seed cocoons and to produce 30,000 dfls/year.
- The field officer of DOS concerned shall certify the works undertaken based on her/his visit before and after implementing the program. It shall also to be certified that the state/agency has not availed assistance for the same work from other programs of government or other agencies. States shall support backward and forward linkages for sourcing basic seed, seed rearers and commercial rearers.
- The NGOs/societies/SHGs availing support under CDP shall submit an undertaking to continue grainage activity for a minimum period of 5 years, failing which government shall have right to recover the subsidy disbursed to them. If any of the stakeholders fails to implement the scheme as per the scheme modalities or fail to utilize the funds provided by the CSB and DOS for the purpose for which it is intended, the government shall have the right to recover the subsidy/grant provided to him. DOSs shall develop a suitable recourse

mechanism through legally valid agreements/MOUs to deal with such instances and make them essential part of the implementation for CDP.

- Working capital provided to stakeholders for seed cocoon purchase shall have to be maintained in a bank account and essentially be flowed back after completion of each cycle of the grainage activity to the account of stakeholder. States shall institute a monitoring mechanism to verify the flow of working capital and its utilization and maintenance for the purpose for which it is intended in the scheme on half-yearly/annual basis as deemed fit.
- The performance of the unit shall be monitored by DOS on regular basis as per yearly target and maintenance of records of seed production and supply.

The activities required under the component along with its cost break-up details are indicated in the unit cost (refer Unit Cost book) of the component.

c) Physical targets and financial projections:

The details of sharing pattern, unit cost, physical targets and financial projections are given below:

Sharing Pattern	State Category	CSB	S state	Beneficiary
	General Category	50%	50%	-
	Special Category	90%	10%	-

Zone	Unit Cost (Rs.)	Physical Target	Financial Projections (Rs. in crore)			
			CSB	State	Beneficiary	Total
Applicable to all zones	15,00,000	6 grainages	0.81	0.09	-	0.90

4) Assistance for tropical tasar rearers

a) Brief description:

Prior to X Plan period, most of the tasar silkworm rearing was conducted utilizing natural tasar host flora. However, considerable area was brought under block plantation during X and XI Plan periods with assistance from CDP, projects under special SGSY, NABARD-TDF, TWC, MGNREGS, RKVY etc. Further, as tasar plantations are raised in degraded waste lands under rain-fed conditions, soil treatment is required periodically to maintain soil health and moisture conservation for obtaining quality leaf. During XII Plan, the requirement of tasar basic seed has been much higher and as such, there is a need to utilize these plantations effectively for nucleus and basic seed rearing and obtain higher productivity. Also, some of the technologies evolved by CTR&TI, Ranchi need to be transferred to increase quality leaf yield and enhance cocoon productivity.

It is, therefore, proposed to assist both seed and commercial tasar rearers in general and seed rearers in particular with the necessary rearing equipment, fertilizer and technology inputs for host plant maintenance to produce quality seed cocoons, tasar silkworm rearing including prophylactic measures. The implementing agency shall ensure that utmost care be taken to cover tasar nucleus (during commercial crop season) and basic seed (during seed crop season) rearers linked to basic seed production units under the states, BSMTCs and NGOs/CBOs to strengthen seed augmentation efforts.

b) Technical specifications/operational guidelines:

- Registered tasar seed rearers with 0.7 acres willing to take up 200 dfls rearing of nucleus and basic seed to supply seed cocoons to PPCs/BSM&TCs/basic seed production units, for a minimum period of three years shall be assisted. The implementing agency shall ensure entering into agreement to this effect. Details of assistance extended and the crop details are to be entered in the beneficiary passbook provided by the implementing agency.
- Commercial rearers with 1.0 ha block plantation of tasar silkworm host plants and rearing capacity of 400 dfls are eligible to receive all assistance except the cost of tasar silkworm dfls, which shall be given only to seed rearers. However, the priority shall be for seed rearers who have backward and forward linkages for

- production of basic or commercial seed.
- Beneficiary share shall be met through supply of locally available material like bamboo and labour component.
- The implementing agency may arrange to supply a sprayer for a group of 10 tasar rearers or provide hiring charges of sprayer at individual level and shall also ensure that the beneficiaries continue the activity at least for a period of three years, besides devising operational modalities for using common assets like sprayer etc.
- The implementing agency shall meticulously follow the relevant points of general guidelines of CDP for XII Plan while implementing the component.
- Care shall be taken for technology inputs as per recommendations of CTR&TI, Ranchi.
- While type and dosage of fertilizers can be based on soil type and cultural operations, the soil treatments shall include staggered trenches, 30'x40' models etc., based on soil slope.
- The implementing agency shall ensure supply of all required inputs at major production clusters to facilitate their procurement and usage.

The activities required under the component along with its cost break-up details are indicated in the unit cost (refer Unit Cost book) of the component.

c) Physical targets and financial projections:

The details of sharing pattern, unit cost, physical targets and financial projections are given below:

Sharing Pattern	State Category	CSB	State	Beneficiary
	General Category	60%	20%	20%
	Special Category	80%	10%	10%

Zone	Unit Cost (Rs.)	Physical Target	Financial Projections (Rs. in crore)			
			CSB	State	Beneficiary	Total
Applicable to all zones	20,000	2,500 rearers	3.60	0.70	0.70	5.00

4A) Assistance for oak tasar seed rearers

a) Brief description:

Considering the oak tasar silk production target set for the XII Plan, there is a need to develop seed production chain by involving seed rearers for production of targeted quantity of commercial seed through state production units/CBOs/NGOs. Under the component, it is proposed to promote integrated package of seed crop rearing developed by the research institutes of CSB. The seed rearers shall be assisted with necessary rearing equipment and tools to produce quality seed cocoons required for commercial seed production.

b) Technical specifications/operational guidelines

- Assistance shall be provided to new and also existing seed rearers based on the actual assessment/needs of the seed rearers.
- The components shall be implemented on the following lines:
 - Eligible seed rearers selected by DOSs/NGOs/societies/SHGs of the oak tasar producing states of north-eastern and north-western regions for production of oak tasar seed cocoons.
 - Seed rearers having one hectare systematic plantation of *Quercus serrata* or with allotment order or permission to use natural plantation in forest shall be identified by the field units of DOSs/NGOs/societies.
 - Erection of poly house with four polythene sheets measuring 30'x18' for each rearing unit for the North-western zone to support rearing of 200 dfis/crop under semi-domesticated conditions.

- Erection of polythene/tarpaulin tent measuring 20' x 20' for storage of equipment during rearing season in north-western zone.
 - DOS shall collect beneficiary share and procure the equipment as per specification given in the unit cost by following the due procedures in vogue in their department and supply to beneficiary.
 - 50% shaded plastic nets shall be provided for aeration in the poly houses.
 - Nylon net of 3 mm mesh size (15' x 15' x 9') for outdoor silkworm rearing for north-eastern zone to support rearing of 200 dfls/crop.
 - Procurement of equipment and appliances shall be as per specifications indicated in the unit cost.
 - The stakeholder shall get registered for certification towards seed cocoon production and to claim assistance.
 - Each seed rearer shall rear 200 dfls (2 g each dfl) per crop and the productivity of seed cocoon shall be of 60 cocoons per dfl.
- DOSs shall coordinate backward and forward linkages for sourcing basic seed and supply to seed rearers and sale of seed cocoons to graineurs.
 - The field officer of concerned DOS shall certify the supply and use of equipment and also certify that the seed rearers have not availed assistance for the same equipment from other programs of government or other agencies.
 - Equipment shall be supplied against an undertaking from the seed rearers /NGOs/societies/SHGs that the seed rearer shall produce seed cocoons for a period of 5 years after availing subsidy under the component. Failing to implement the scheme as per the scheme modalities or utilize the funds provided by the CSB and DOS for the purpose for which it is intended, the government shall have the right to recover the subsidy/grant provided to him. DOSs shall develop a suitable recourse mechanism through legally valid agreements/MOUs to deal with such instances and make them essential part of the implementation for CDP.
 - The performance of the seed rearer shall be monitored by DOS on regular basis as per yearly target and maintain record of assistance provided and seed cocoon production/crop in the beneficiary passbook.

The activities required under the component along with its cost break-up details are indicated in the unit cost (refer Unit Cost book) of the component.

c) Physical targets and financial projections:

The details of sharing pattern, unit cost, physical targets and financial projections are given below:

Sharing Pattern	State Category	CSB	State	Beneficiary
	General Category	60%	20%	20%
	Special Category	80%	10%	10%

Zone	Unit Cost (Rs.)	Physical Target	Financial Projections (Rs. in crore)			
			CSB	State	Beneficiary	Total
North-western	19,000	200 rearers	0.29	0.03	0.03	0.35
North-eastern	17,500					

4B) Assistance for mobile testing facility for disease monitoring and seed cocoon testing

a) Brief description:

During XII Plan, it is proposed to augment tasar silkworm seed multiplication involving various agencies viz., state PPCs, basic seed production units managed by NGOs/CBOs/SHGs/societies/producer groups/private graineurs. Further, successful efforts were also made by BTSSO to produce nucleus seed in isolated patches of block plantations involving CBOs/NGOs on pilot scale during XI Plan. Also, a joint disease monitoring team was constituted involving

representatives from CTR&TI, BTSSO, CBOs/NGOs and DOSs to ensure disease free tasar silkworm seed production. The initiative has in turn paved a way in containing the disease effectively in the production clusters. However, efforts were limited to the identified project areas and there exists no definite composition of monitoring team and schedule in other tasar growing areas where crop failures are noticed.

In view of the experience gained and shortcomings in the present system, it is proposed to have a uniform composition of disease monitoring team representing CTR&TI, BTSSO, DOS, NGOs/CBOs, producer groups etc., with clearly drawn schedules for quality Bivoltine/Trivoltine seed cocoon production. The joint disease monitoring team constituted shall visit the seed areas as per schedule to examine disease incidence during seed rearing, seed cocoon procurement/preservation/processing, seed production in the tasar producing states to contain disease incidence. This would mean improvement in commercial crop performance and enhancement of income among the tribals. To facilitate this activity, it is proposed to provide a mobile pick-up van for easy movement of disease monitoring team as per schedule without linking up to routine extension work.

b) Technical specifications/operational guidelines:

- Mobile van shall be under the ownership/control of BTSSO field unit in the concerned state. A log book with all particulars of the movement and maintenance shall be maintained regarding its utility.
- The mobile van and equipment shall be owned and maintained initially by BTSSO for 2 years to stabilize system establishment.
- On empowering the state agencies, the facilities with assets shall be transferred under an agreement for further maintenance and operation with an undertaking that the same shall be in force at least for a period of five years.
- Moth testers trained under ISDS or any other program shall be engaged from the local production clusters from the empanelled lists and the same composition shall continue for nucleus, basic and commercial seed production monitoring.
- The decision of joint disease monitoring team shall be final in ensuring the disease freeness and in continuing the effective seed processing.
- BTSSO shall keep the balance funds after purchase of vehicle and testing equipment, if any in a separate bank account which can earn a higher interest for taking up the activity. Besides, BTSSO shall make necessary budgetary provisions towards engaging driver to meet fuel charges and maintenance, incidental charges etc., for the unit concerned.
- The implementing agency shall devise a mechanism to maintain the available funds towards fuel charges and maintenance as non-eroding corpus and may charge nominally for the services once the beneficiaries are educated on the importance of disease monitoring.
- The implementing agency shall meticulously follow the relevant points in general guidelines of CDP for XII Plan while implementing the component.

The activities required under the component along with its cost break-up details are indicated in the unit cost (refer Unit Cost book) of the component.

c) Physical targets and financial projections:

The details of sharing pattern, unit cost, physical targets and financial projections are given below:

Sharing Pattern	State Category	CSB	State	Beneficiary
	General Category	50%	50%	–
	Special Category	90%	10%	–

Zone	Unit Cost (Rs.)	Physical Target	Financial Projections (Rs. in crore)			
			CSB	State	Beneficiary	Total
Applicable to all zones	6,10,000	20 No.	0.98	0.24	–	1.22

5) Assistance to state departments for strengthening of eri farm-cum-grainages

a) Brief description:

Though required assistance has been provided towards strengthening of state owned seed multiplication infrastructure during X and XI Plan periods, the demand for eri basic and commercial seed has been consistently increasing over last one decade. The state departments are not equipped to meet the entire demand for want of sufficient facilities for seed crop rearing and grainage operations. The infrastructure and equipment required for preservation, processing and testing have become quite old and obsolete. Further, such seed multiplication units have paucity of funds for procurement of seed cocoons and are lacking modern tools for seed testing and alternate source of power for successful grainage operation successfully. Considering the need for augmenting and streamlining the seed production in the states, it is proposed to continue the existing scheme during XII Plan also. State eri farm-cum-grainage shall be strengthened with basic facilities/amenities like augmentation or replacement of old block plantations, construction of new buildings, repair/extension of rearing/grainage building to create desired facilities for seed cocoon preservation, coupling, oviposition, moth testing, incubation etc., along with running water supply, grainage equipment/consumables, standby power source and one time assistance of Rs.1.60 lakh is also proposed as revolving capital for procurement of seed cocoons during the first year of operation for seed production.

b) Technical specifications/operational guidelines:

- Assistance shall be used for raising plantation, construction/repair/extension of grainage buildings/procurement of rearing, grainage and testing equipment.
- The component shall be implemented on the following lines:
 - Selection of government farm/CBOs/NGOs by a joint inspection committee comprising officers of DOS and CSB.
 - DOSs, NGOs, SHGs and societies associated with the multiplication of eri basic seed are eligible for assistance under the component. Existing seed production units may also avail assistance for specific works like repair of existing building, extension of building and additional essential equipments on pro-rata basis.
 - Construction of rearing-cum-grainage building (28' x 22') with 6' verandah all sides, with brick walls, concrete floor and roof with CGI sheet/zinc sheet rested on wooden frame and false ceiling.
 - Demarcation of facilities for seed cocoon preservation, coupling, oviposition, moth testing incubation and development of facilities for running water supply, generator, etc.
 - Procurement of equipment for seed cocoon preservation, processing and testing as per specification in the unit cost.
 - Institutionalization of facility for Fujiwara method of pebrine detection.
 - Each unit shall have an installed capacity to process 4.0 lakh seed cocoons for grainage to produce 100,000 dfls/year in four crops @ 25,000 dfls per crop.
- The field officer shall certify that the desired works have been undertaken as specified and the state/agency has not availed assistance for the same work from other programs of government or other agencies. DOSs shall coordinate for backward and forward linkages for sourcing basic seed, seed rearers and commercial rearers.
- The NGO/SHGs/societies availing support under CDP shall submit an undertaking to continue grainage activity for a minimum period of 5 years, failing which the government shall recover the subsidy disbursed to them. Similarly, if any of the stakeholders fails to implement the component or utilize the funds provided by the CSB and DOS for the purpose for which it is intended, the government shall have the right to recover the subsidy/grant provided to him. DOSs shall develop a suitable recourse mechanism through legally valid agreements/MOUs to deal with such instances and make them essential part of the implementation for CDP.
- Working capital provided to stakeholders for seed cocoon purchase shall have to be maintained in a bank

account and essentially be flowed back after completion of each cycle of the grainage activity to the account of stakeholder. DOS shall institute a monitoring mechanism to verify the flow of working capital and its utilization and maintenance for the purpose for which it is intended in the scheme on half-yearly/annual basis as deemed fit.

- The performance of the unit shall be monitored by DOS on regular basis as per yearly target and maintain records of seed production and supply to the beneficiaries.

The activities required under the component along with its cost break-up details are indicated in the unit cost (refer Unit Cost book) of the component.

c) Physical targets and financial projections:

The details of sharing pattern, unit cost, physical targets and financial projections are given below:

Sharing Pattern	State Category	CSB	State	Beneficiary
	General Category	50%	50%	-
	Special Category	90%	10%	-

Zone	Unit Cost (Rs.)	Physical Target	Financial Projections (Rs. in crore)			
			CSB	State	Beneficiary	Total
Applicable to all zones	12,48,000	12 farm-cum grainages	1.20	0.30	-	1.50

5A) Assistance to eri private graineurs

a) Brief description:

During XI Plan, the production and supply of eri silkworm seed was largely confined to state farm-cum-grainages, which were unable to cater to the entire requirement of quality commercial seed in the country. As a matter of fact the production of eri seed by a large number of farmers was unscientific and unhygienic. The practice had a bad impact on disease containment in the field and resulted in low productivity. It is, therefore, essential to involve private graineurs in the seed production chain to strengthen the eri seed multiplication system in the country.

The objective of the component is to organize the production of eri commercial seed by training and equipping the rural entrepreneurs to produce quality eri seed by following scientific procedure under the supervision of qualified and trained personnel of DOS/CBOs/NGOs. Eri private graineurs shall be linked with the adopted seed rearers for quality seed cocoons and the commercial cocoon producers for sale of F1 seed. The graineurs shall be assisted with necessary technical support, grainage building, improved moth testing facility (Fujiwara method) and consumables to produce 5,000 dfls/grainage operation.

b) Technical specifications/operational guidelines:

- Assistance for setting up of eri private grainages shall be provided to the trained entrepreneurs in grainage activities.
- Eligible to trained entrepreneurs selected by DOSs/NGOs/societies/SHGs both in north-eastern and outside north-eastern regions.
- The component shall be implemented on the following lines:
 - The grainage building of 30' x 12' with 5' verandah on two sides shall have walls built of local bricks and mortar, cemented floor, roof with thatched or zinc sheet material supported with false ceiling to maintain hygiene inside the grainage.
 - Building shall have a minimum of three rooms, one each for cocoon preservation, oviposition and microscopic examination with provision for egg washing and incubation. Equipment to preserve seed cocoons, coupling, oviposition, incubation, disinfection, microscopic examination etc., as per specification indicated in unit cost.
 - DOS shall collect beneficiary share and procure the equipment as per specifications given in the unit cost by following due procedures in vogue in their department and supply to beneficiary.

- The stakeholder shall get registered for certification towards seed production and to claim assistance.
 - Purchase of seed cocoons from certified ASRs is a must as specified by the CSB (A) Act, 2006.
 - One time assistance for working capital of Rs 8,000 shall be provided for purchase of seed cocoons from seed rearers.
 - Each private graineur shall produce 5000 dfls/cycle and 20000 dfls/year with seed cocoon: dfl ratio of 4:1. The production shall reach the targeted level in the second year of commencement of assistance. The production and distribution shall be reported and monitored for each crop by a committee constituted by DOS.
- The field officer shall certify the development of infrastructure as per plan/specification, erection and use of equipment and shall also certify that the private graineur has not availed assistance for the same building/equipment from other programs of government or agencies. DOS shall support for backward and forward linkages for sourcing basic seed, generation of seed cocoons by seed rearers and supply of seed to commercial rearers.
 - The NGO/SHGs, societies and stakeholders availing support under CDP shall submit an undertaking to continue grainage activity for a minimum period of 5 years, failing which government shall recover the element of subsidy disbursed to them. If any of the stakeholders fails to implement the scheme or utilize the funds provided by the CSB and DOS, the government shall have the right to recover the subsidy/grant provided to him. DOS shall develop a suitable recourse mechanism through legally valid agreements/MOUs to deal such instances and make them essential part of the implementation for CDP.
 - Working capital provided to stakeholders for seed cocoon purchase shall have to be maintained in a bank account and essentially be flowed back after completion of each cycle of the grainage activity to the account of stakeholder. DOSs shall institute a monitoring mechanism to verify the flow of working capital and its utilization and maintenance for the purpose for which it is intended in the scheme on half yearly /annual basis as deemed fit.
 - The performance of the private graineurs shall be monitored by DOS on regular basis as per yearly target and the records of assistance provided; seed production activities and the coverage of beneficiaries shall be maintained in the beneficiary passbook.

The activities required under the component along with its cost break-up details are indicated in the unit cost (refer Unit Cost book) of the component.

c) Physical targets and financial projections:

The details of sharing pattern, unit cost, physical targets and financial projections are given below:

Sharing Pattern	State Category	CSB	State	Beneficiary		
	General Category	60%	20%	20%		
	Special Category	80%	10%	10%		

Zone	Unit Cost (Rs.)	Physical Target	Financial Projections (Rs. in crore)			
			CSB	State	Beneficiary	Total
Outside North-East	2,33,000	170 private graineurs	3.00	0.52	0.52	4.04
North-East	2,40,000					

5B) Assistance to eri adopted seed rearers

a) Brief description:

The demand of eri silkworm seed has been increasing consistently. The seed multiplication infrastructure in the states alone is not sufficient to cater to the increasing demand for quality seed due to paucity of infrastructure, manpower and other resources. Under these conditions, farmers themselves are producing major quantity of the commercial seed in an unhygienic manner resulting in very low cocoon yield. Considering this, it is proposed to extend assistance to ASRs linking them with the state eri farm-cum-grainages and the private graineurs for supply of quality

seed cocoons. The involvement of adopted seed rearers in the seed production chain shall strengthen the three tier system of eri parental seed multiplication system in the country. Under the component, the seed rearers shall be assisted with necessary rearing equipments and tools to produce quality seed cocoons required for production of eri commercial seed.

b) Technical specifications/operational guidelines:

- Seed rearers supported by DOSs/NGOs/societies/SHGs both in north-eastern and outside north-eastern region are eligible for assistance. Rearers having systematic plantation of kesseru (450 plants/acre) or castor/tapioca (4000 plants/acre) shall be selected.
- Assistance shall be provided to the farmers selected in demarcated seed zones/areas only and linked with specific Eri farm-cum-grainages and the private graineurs for production of quality seed cocoons. The component shall be implemented on the following lines :
 - Maintenance of perennial plants for one acre in North-eastern region and castor/tapioca in non-traditional states with necessary inputs for maintenance of plantations to increase foliage yield.
 - DOS shall collect beneficiary share and procure the equipment as per specification given in the unit cost by following the due procedures in vogue in their department and supply to beneficiary.
 - Procurement of plastic trays (3' x 2' size) for incubation, black boxing and chawki rearing.
 - Erection of hooks and G.I. wire in rearing houses for adult stage bunch rearing in north-eastern states.
 - Procurement of equipment required for adult silkworm rearing of 50 dfls/crop in non-traditional states outside the North-eastern zone.
 - Regular disinfection and supply of bed disinfectants to minimize disease incidence and improve productivity.
 - Procurement of equipment and tools as per specifications in the unit cost.
 - The stakeholder shall get registered for certification towards seed cocoon production and to claim assistance.
 - Each seed rearer shall rear 50 dfls/crop.
- The field officer of DOS/implementing agency shall certify the utilization of plantations, supply and use of equipment after her/his visit to the beneficiary and also certify that the seed rearer has not availed assistance for the same equipment/purpose from other programs of government or other agencies.
- Equipment shall be supplied against an undertaking from the seed rearers/NGO/societies/SHGs about the continuation of seed cocoon production for a minimum period of 5 years after availing subsidy under the program failing which the government shall recover the subsidy disbursed to them. If any of the stakeholders fails to implement the scheme as per the scheme modalities or utilize the funds provided by the CSB/DOS for the purpose for which is intended, the government shall recover the subsidy/grant provided to him. DOSs shall deal with such instances legally through valid agreements/MOUs and make them essential part of the implementation for CDP.
- The performance of the seed rearer shall be monitored by DOS on regular basis as per yearly target and record assistance provided, rearing conducted/seed cocoon produced/crop and the agencies to whom sold in the beneficiary passbook.

The activities required under the component along with its cost break-up details are indicated in the unit cost (refer Unit Cost book) of the component.

c) Physical targets and financial projections:

The details of sharing pattern, unit cost, physical targets and financial projections are given below:

Sharing Pattern	State Category	CSB	State	Beneficiary
	General Category	60%	20%	20%
	Special Category	80%	10%	10%

Zone	Unit Cost (Rs.)	Physical Target	Financial Projections (Rs. in crore)			
			CSB	State	Beneficiary	Total
Applicable to all zones	16,000	2,000 rearers	2.46	0.37	0.37	3.20

5C) Up-gradation of state eri basic seed farm-cum-grainages

a) Brief description:

Systematic eri seed production and multiplication in the country can be achieved through involvement and upgrading of state units for the basic seed multiplication. Therefore, during XII Plan, it is proposed to upgrade some of the state farm-cum-grainages into full-fledged basic seed farm-cum-grainages (P2) to meet the much required P1 dfls. These units shall receive the nucleus seed (for rearing at P2 level) from CSB and undertake P1 seed production and supply to state farm-cum-grainages/ASRs for the generation of seed cocoons required for commercial (F1) seed production units like private graineurs. Considering the above, it is proposed to upgrade the existing state eri farm-cum-grainages to eri basic seed farm-cum-grainages (P2 level) with basic facilities like augmentation or replacement of old block plantations of food plants, repair/renovation /extension of rearing and grainage buildings equipped with facilities for seed cocoon preservation, coupling, oviposition, moth testing and incubation etc., along with running water supply, rearing and grainage equipments, consumables and standby source of power for basic seed production.

b) Technical specifications/operational guidelines:

- Existing state eri farm-cum-grainages only are eligible. DOSs can avail support for all or any of the sub-components envisaged in the scheme as per need, based on the report of joint inspection committee having representatives from CSB and DOS.
- Assistance shall be extended for construction of new building/repair or extension of existing buildings/need based rearing/grainage equipment for up-gradation to basic seed farm-cum-grainages.
- The component shall be implemented on the following lines:
 - Raising of systematic plantation of eri food plants in 4 acres by following package of practices developed by research institutes of CSB.
 - Repairing/renovation of two rearing houses as per plan, each with a capacity to rear 100 P2 dfls/crop.
 - Renovation/extension of existing grainage houses as per Plan along with running water supply, generator room, septic tank, electricity etc., to process 40,000 seed cocoons/cycle and produce 8000 basic (P1) dfls/cycle.
 - Demarcation of facilities for seed cocoon preservation, coupling, oviposition, moth testing, incubation etc.
 - Creation of facility for Fujiwara method of pebrine detection for ensuring production and supply of disease free basic seed.
 - Procurement of rearing and grainage equipment/appliances/consumables as per specifications in unit cost.
 - Each unit shall have an installed capacity to rear 800 P2 dfls /year @ 200 P2 dfls/crop. Thus, each unit can produce 8000 to have installed capacity to produce 8000 P1 dfls/crop and 32000 dfls/year.
- State shall develop backward and forward linkage for utilizing the services of the unit to cater to the requirement for P1 dfls of seed rearers linked to state farm-cum-grainages and private graineurs.
- The field officer shall certify that the works were undertaken as per the Plan/specification and also the state /agency has not availed assistance for the same work from other programs of government or other agencies.

- The NGO/societies/SHGs availing support under CDP shall submit an undertaking to continue grainage activity for a minimum period of 5 years, failing which government shall have right to recover the subsidy disbursed to them. If any of the stakeholders fails to implement the scheme as per the scheme modalities or utilize the funds provided by the CSB/DOS for the purpose for which is intended, the government shall recover the subsidy/grant provided to them. DOSs shall deal with such instances legally through valid agreements/MOUs and make them essential part of the implementation for CDP.
- The performance of the unit shall be monitored by DOS on regular basis as per yearly target and maintain records of seed production and supply to linked units/beneficiaries.

The activities required under the component along with its cost break-up details are indicated in the unit cost (refer Unit Cost book) of the component.

c) Physical targets and financial projections:

The details of sharing pattern, unit cost, physical targets and financial projections are given below:

Sharing Pattern	State Category	CSB	State	Beneficiary
	General Category	50%	50%	–
	Special Category	90%	10%	–

Zone	Unit Cost (Rs.)	Physical Target	Financial Projections (Rs. in crore)			
			CSB	State	Beneficiary	Total
Applicable to all zones	12,38,000	10 farm-cum grainages	0.97	0.27	–	1.24

5D) Assistance for establishment of self-help eri grainage (SHEG) units

a) Brief description:

A large quantity of eri silkworm seed is produced in private sector in an unhygienic manner resulting in low productivity. To develop organized eri seed supply system, it is proposed to utilize the skill of the rearers and organize them at village level into SHEGs. Each SHEG shall have 20 eri farmers and act as a local grainage facility. Such 20 SHEGs shall be linked to state eri seed farm-cum-grainages for training on technical support, disease monitoring and other assistance.

The development of SHEGs at village level shall strengthen the seed production network in the country. Each SHEG unit shall be assisted for group formation, capacity building, equipment, tools and working capital to produce 4000 dfis/year to cater to the annual requirement of seed for the group.

b) Technical specifications/operational guidelines:

- Assistance shall be provided to the SHEGs only.
- SHEGs selected and trained by DOSs/NGOs/societies/SHGs only are eligible for production of eri seed in North-eastern states.
- The component shall be implemented on the following lines:
 - Self Help Group formation of selected eri rearers to be done based on established model of NABARD guidelines.
 - Group of 20 eri rearers to form a SHEG as per norms to produce commercial seed to cater their requirement.
 - SHEG shall avail specific training for eri seed production under Beneficiary Empowerment Program or other similar training programs.
 - Equipment and tools shall be procured by SHEG as per specification in the unit cost under the direct supervision of local sericulture officer linked to SHEG.
 - State farm-cum-grainages/CBOs/NGOs shall support organization of SHEGs, train them in seed production processes, supply P1 seed/seed cocoons & grainage equipments and assist them in moth examination for disease monitoring.

- One time assistance of Rs. 2000 shall be extended to SHEG as working capital for purchase of seed cocoons from seed rearers. Account shall be maintained and monitored as per SHG guidelines.
- Each SHEG shall produce 1000 dfls /crop and 4000 dfls /annum to meet the requirement of the group members.
- DOS shall develop backward and forward linkage for utilizing the services of the SHEG to cater requirement for P1 dfls of seed rearers linked to SHEG and disease monitoring.
- The field officer of DOS shall certify that supply and use of equipment has been done as per specification/guidelines and also shall certify that the SHEGs have not availed any assistance for the same purpose/equipment from other programs of government or other agencies.
- Support shall be extended against an undertaking from the SHEGs /NGO/societies for the continuation of commercial seed production for a minimum period of 5 years after availing subsidy under the program failing which government shall have right to recover the subsidy disbursed to them. If any of the SHEGs fails to implement the scheme as per the scheme modalities or fails to utilize the funds provided by the CSB/DOS for the purpose for which is intended, the government shall recover the subsidy/grant provided to them. DOSs shall deal with such instances legally through valid agreements/MOUs and make them essential part of the implementation for CDP.
- The performance of the SHEGs shall be monitored by linked state farm-cum-grainages on regular basis as per yearly target and maintain record of assistance provided, seed production/cycle and the utilization.

The activities required under the component along with its cost break-up details are indicated in the unit cost (refer Unit Cost book) of the component.

c) Physical targets and financial projections:

The details of sharing pattern, unit cost, physical targets and financial projections are given below:

Sharing Pattern	State Category	CSB	State	Beneficiary
	General Category	60%	20%	20%
	Special Category	80%	10%	10%

Zone	Unit Cost (Rs.)	Physical Target	Financial Projections (Rs. in crore)			
			CSB	State	Beneficiary	Total
Applicable to all zones	8,400	250 SHEGs	0.16	0.03	0.02	0.21

5E) Mobile testing and certification units

a) Brief description:

Majority of the eri silkworm seed is produced in private sector. It is necessary to undertake surveillance of eri silkworm seed production to ensure disease freeness of seed cocoons and seed produced by them. To undertake this task, mobile testing and certification units shall be necessary for helping in disease surveillance and monitoring the existing grainage facilities in seed areas or likely to be established in the government/private sector both in the muga and eri sectors during XII Plan.

The mobile testing and certification units shall be operated by CBOs/NGOs trained for the purpose and shall function under the guidance and monitoring of the muga/eri silkworm seed organization (MSSO/ESSO). The units shall be supported with a customized pick-up van having all necessary equipment/facilities for disease management and identification using Fujiwara method of testing.

b) Technical specifications/operational guidelines:

- The mobile van and equipment shall be owned and maintained initially by MSSO/ESSO for 2 years to stabilize system establishment.
- On empowering the state agencies, the facilities with assets shall be transferred under an agreement for

- further maintenance and operation for a minimum period of 5 years.
- CBOs/NGOs selected and trained by DOS/MSSO only are eligible.
 - The component shall be implemented on the following lines:
 - CBOs/NGOs shall be intensively trained by the MSSO/ESSO in disease management and identification.
 - Pick-up van shall be purchased and customized to accommodate all testing equipment/consumables along with sitting arrangement (four seater) as per specification in unit cost. Testing equipment, chemicals, glass ware, consumables etc., shall be procured in line with basic seed production units (BSPU).
 - DOSs/CBOs/NGOs shall select moth testers and train them at MSSO units under beneficiary empowerment program or others.
 - Fuel charges, maintenance and incidental charges (engaging driver) shall be borne from the seed organization component of MSSO/ESSO.
 - MSSO units shall guide and regulate use of mobile testing and certification units for disease monitoring based on the on-going programs for seed crop rearing and grainage operations in the field in association with respective DOSs.
 - The joint monitoring team comprising representatives from MSSO, CMERTI, DOSs shall inspect the assistance and functioning.
 - The field officers of DOS and MSSO shall certify that the supply and use of mobile testing and certification units is undertaken as per the specification/guidelines and shall also certify that the CBOs/NGOs have not availed assistance for the same purpose/equipment from other programs of government or other agencies.
 - Mobile testing and certification units shall be handed over to selected NGO/CBOs against an undertaking for the continuation of disease surveillance/monitoring for a minimum period of 5 years failing which government shall have right to recover the subsidy disbursed to them. If any of the stakeholders fails to implement the scheme as per the scheme modalities or utilize the funds provided by the CSB/DOS for the purpose for which is intended, the government shall recover the subsidy/grant provided to him. DOSs shall deal with such instances legally through valid agreements/MOUs and make them essential part of the implementation for CDP.
 - The performance of the mobile testing and certification units shall be monitored by MSSO/DOS on regular basis during seed crops and grainage operations and the record of samples collected and tested shall be maintained.

The activities required under the component along with its cost break-up details are indicated in the unit cost (refer Unit Cost book) of the component.

c) Physical targets and financial projections:

The details of sharing pattern, unit cost, physical targets and financial projections are given below:

Sharing Pattern	State Category	CSB	State	Beneficiary
	General Category	60%	20%	20%
	Special Category	80%	10%	10%

Zone	Unit Cost (Rs.)	Physical Target	Financial Projections (Rs. in crore)			
			CSB	State	Beneficiary	Total
Applicable to all zones	6,70,000	23 No.	1.24	0.15	0.15	1.54

6) Assistance to muga private graineurs

a) Brief description:

Global warming resulted in climate variation and increased level of pollution has posed the toughest challenge in the process of muga seed multiplication. Hence there is a need for focused approach in muga seed multiplication to achieve the desired quality and quantity of muga seed in time so as to reach the XII Plan target of 200 MT. Muga seed production is basically an entrepreneurial activity with over 1782 private graineurs and the overall production capacity is 133.65 lakh dfls/year. With the present production less than 120 lakh dfls/year and is running at 85% of envisaged target with production of 115 lakh dfls/year. Increased seed demand of 200 lakh/year and need for quality and disease free seed production has been addressed through quality inputs like well planned building, equipment and support facilities including working capital.

During XII Plan, it is proposed to continue the scheme with a prime objective to produce quality and disease free seed under private sector. The component proposes to enhance the production base of muga seed in the organized sector to additional 25 lakh dfls/year at 10000 dfls/unit as a major step towards expanding the seed multiplication network under quality multiplication system in a phased manner. Emphasis has been made to provide the latest testing and certification tools for commercial seed producers backed by training and follow-up for checking pebrine disease.

b) Technical specifications/operational guidelines:

- Identification of stakeholders for assistance shall be solely need based and location specific and suitability shall be decided by a committee comprising officers of MSSO and CMERTI on pre-determined conditions based on demand and production capacity in the region where commercial seed is required and facilities for quality and disease free seed cocoon generation is available.
- The stakeholder shall get registered for certification towards seed production and to claim assistance.
- Preference shall be given to an experienced ASRs with good record of successful rearing performance and Pebrine freeness. Few private sector farms like CBO/SHGs may be considered for assistance subject to meeting all the requirements.
- Selected beneficiary shall ensure hassle free seed production in the needy commercial season which is mandatory.
- Water supply, electricity connection shall be ensured by the beneficiary.
- Construction of the building shall be the responsibility of the seed producer as per the design and specifications.
- Beneficiaries shall have to purchase the seed cocoons from certified ASRs adhering to all the conditions as specified by the CSB (A) Act, 2006.
- Working capital shall be provided through banks only and book of accounts shall be maintained and produced when demanded.
- An action plan for seed cocoon generation, seed production and distribution shall be in place at the time of seeking assistance.
- Any post-cocoon activity like reeling and weaving or other sector (mulberry, eri and tasar) activity shall not be taken up in the vicinity or premises.
- Equipment status and additional needs shall be supported as per the list.
- DOS shall collect beneficiary share and procure the equipment as per specification given in the unit cost by following the due procedures in vogue in their department and supply to beneficiary.
- Working capital provided to stakeholders for seed cocoon purchase shall have to be maintained in a bank account and essentially be flowed back after completion of each cycle of the grainage activity to the account of stakeholder. DOSs shall institute a monitoring mechanism to verify the flow of working capital and its utilization and maintenance for the purpose for which it is intended in the scheme on half-yearly/annual basis as deemed fit.

- Maintenance of hygiene and quality food plant shall get top priority.
- From the second year of commencement of assistance, the production shall reach the targeted level. Production and distribution shall be reported and monitored for each crop by a committee.
- All types of assistance shall be extended after executing tripartite agreement/MOU where the rights of assets and materials supplied shall be vested with the government till such time as specified by the committee.

The activities required under the component along with its cost break-up details are indicated in the unit cost (refer Unit Cost book) of the component.

c) Physical targets and financial projections:

The details of sharing pattern, unit cost, physical targets and financial projections are given below:

Sharing Pattern	State Category	CSB	State	Beneficiary
	General Category	60%	20%	20%
	Special Category	80%	10%	10%

Zone	Unit Cost (Rs.)	Physical Target	Financial Projections (Rs. in crore)			
			CSB	State	Beneficiary	Total
Applicable to all zones	2,55,000	140 graineurs	2.79	0.39	0.39	3.57

6A) Assistance to existing muga private graineurs for up-gradation of seed production capacity

a) Brief description:

Muga culture is unique and pride of India; however, there is a serious threat to continuance of this exclusive culture. Variation in climate and increased level of pollution have posed the toughest challenge in the process of muga seed multiplication. Hence there is a need for focused approach in muga seed multiplication to achieve the desired quality and quantity of muga seed in time so as to reach the XII Plan target of 200 MT. Muga seed production is basically an entrepreneur activity with over 1782 private graineurs in the field with CDP assistance and the overall production capacity is 133.65 lakh dfls/year. The present seed production is operating at 85% of envisaged target with the production of 115-120 lakh dfls/year.

Due to increased demand for seed at 200 lakh per year by the end of XII Plan, there is a need to ensure enhanced production of quality and disease free seed and to ensure production to full capacity. These requirements have been addressed through quality inputs for up-keeping the building with need based modifications, testing and certification equipment and support facilities including working capital.

This innovative scheme is aimed to assist private sector to produce quality and disease free certified seed. The component proposes to improve quality of muga seed in the organized sector by optimizing seed production to full capacity by assisting 350 units as a major step towards expanding the seed multiplication network under quality multiplication system in a phased manner. Emphasis has been made to provide the latest testing and certification tools for commercial seed producers backed by training and follow-up for checking Pebrine disease.

b) Technical specifications/operational guidelines:

- Identification of graineurs for assistance/strengthening shall be based on ‘active seed production and distribution’ records and certified by the respective local officers followed by endorsement from an independent committee constituted for the purpose.
- The beneficiary shall get registered for seed production certification and for claiming the assistance.
- Preference shall be given to experienced seed producer who has undergone training in the latest seed production techniques and certification methodology.
- Selected beneficiary shall ensure hassle free seed production in the needy commercial season.

- Water supply and electricity connection shall be ensured by the beneficiary.
- Construction/modification of the building shall be the responsibility of the seed producer as per the approved design and specifications.
- Purchase of seed cocoons must be from certified ASRs adhering to all the conditions as specified by the CSB (A) Act, 2006. Working capital shall be provided through banks only and subject to proper maintenance of accounts.
- Working capital provided to stakeholders for seed cocoon purchase shall be maintained in a bank account and essentially be flowed back after completion of each cycle of the grainage activity to the account of stakeholder. States shall institute a monitoring mechanism to verify the flow of working capital and its utilization and maintenance for the purpose for which it is intended in the scheme on half-yearly/annual basis as deemed fit.
- An action plan for seed cocoon generation, seed production and distribution shall be in place for verification at the time of seeking assistance.
- Any post-cocoon activity like reeling and weaving or other sector (mulberry, eri and tasar) activity shall not be taken up in the vicinity or premises.
- Equipment status and additional needs as per the list only shall be supported.
- DOS shall collect beneficiary share and procure the equipment as per specification given in the unit cost by following the due procedures in vogue in their department and supply to beneficiary.
- Hygiene and quality shall get top priority.
- From second year of commencement of assistance, the production shall reach the targeted level. Production and distribution list shall have to be submitted for monitoring by a committee.
- All types of assistance extended after executing a tripartite agreement /MOU where the rights of assets and materials supplied shall be vested with the government till such time as specified by the committee.

The activities required under the component along with its cost break-up details are indicated in the unit cost (refer Unit Cost book) of the component.

c) Physical targets and financial projections:

The details of sharing pattern, unit cost, physical targets and financial projections are given below:

Sharing Pattern	State Category	CSB	State	Beneficiary
	General Category	60%	20%	20%
	Special Category	80%	10%	10%

Zone	Unit Cost (Rs.)	Physical Target	Financial Projections (Rs. in crore)			
			CSB	State	Beneficiary	Total
Applicable to all zones	82,000	225 graineurs	1.41	0.22	0.22	1.85

7) Assistance to state departments for strengthening of muga seed multiplication infrastructure (P2)

a) Brief description:

Muga culture is unique and pride of India; however, there is a serious threat for continuance of this exclusive culture. Muga seed multiplication is passing through the toughest challenge of the century with climate change and pollution being the main factors. Therefore, there is a need for a focused approach to get the desired quality seed. P2 level rearings in summer (Aherua: June - July) are severely affected due to high temperature and high humidity and in winter seasons (Jarua: November - January) due to extreme low temperature. Hence, there is a need to focus on the controlled rearings in selected locations by improving overall infrastructure. P2 level basic seed rearing is the vital link

which meets the basic seed requirement by the end of XII Plan period. It is proposed to continue this component with a renewed specific mandate of rearing P2 level crops. The scheme is aimed to produce P1 dfls for summer link (Bhodia) and winter link (Chotua). The component aims to enhance production of P1 basic seed from organized government sector to at least 9.00 lakh dfls at 60000/unit as a major initiative towards bringing the basic seed multiplication under quality multiplication system.

Considering the dire necessity for infrastructure improvements in state government farms, the component is planning to provide overall support to improve the farm plantation for rearing including new plantation/replacement with high yielding variety. Support is also extended to meet the additional facilities for the basic seed production, equipment and also one time capital assistance.

b) Technical specifications/operational guidelines:

- Identification of farm/unit for assistance/strengthening shall be solely based on ideal location to ensure successful summer and winter P2 crops and decided by a committee comprising representatives of MSSO, CMERTI, DOS and a lead ASR with vast experience in muga rearing. In exceptional cases, private sector units like CBO shall be considered for assistance.
- Present status of plantation, past rearing performance, seed production activity, disease freeness and details of future expansion/development of surrounding areas that may cause pollution shall be the criteria for selection of farm for assistance.
- DOS shall ensure posting of required staff and supporting workers for continuing the activity.
- Minimum 4 acre muga food plantation and sufficient place for construction of operational buildings shall be ensured. Farm shall have the capacity to rear 800 P2 dfls (from MSSO), to produce 50000 cocoons and to process 40000 seed cocoons.
- Additional requirement of 1.1 lakh seed cocoons for full capacity (1.5 lakh) season production shall be sourced from nearby selected ASRs to whom the CDP support shall be extended under ASR assistance component. An action plan for seed cocoon generation, seed production and distribution shall be in place at the time of seeking assistance.
- Any post-cocoon activity like reeling and weaving or other sector (mulberry, eri and tasar) activity shall be discontinued before identification.
- Present status of operational buildings, their repairs, need for new buildings (as per the minimal requirement) and estimated cost shall be vetted by the committee.
- Equipment status and additional needs as per the list only shall be supported.
- P2 rearing and subsequent P1 seed production only shall be taken up.
- Water and power supply shall be ensured by the DOS.
- From third year of commencement of assistance, the production shall reach the targeted level. Production and quality shall be reported and monitored by a committee.

The activities required under the component along with its cost break-up details are indicated in the (refer Unit Cost book) of the component.

C) Physical targets and financial projections:

The details of sharing pattern, unit cost, physical targets and financial projections are given below:

Sharing Pattern	States Category	CSB	State	Beneficiary
	General Category	50%	50%	–
	Special Category	90%	10%	–

Zone	Unit Cost (Rs.)	Physical Target	Financial Projections (Rs. in crore)			
			CSB	State	Beneficiary	Total
Applicable to all zones	30,99,000	10 farm-cum grainages	2.54	0.56	–	3.10

7A) Assistance for establishment of muga P3 basic seed production units

a) Brief description:

Muga seed multiplication is facing the toughest challenges with variation in climate and pollution being the main factors, thus requiring a focused approach to get the desired quality seed in time. With increased silk production target of 200 MT envisaged for XII Plan, quantum of P3 dfls rearing has increased. MSSO which was taking till today full responsibility to rear P3 and produce the required P2 dfls, has now felt that there is a need to shift the responsibility partially to other players viz., state government and selected farmer consortiums etc., to meet the demand.

The innovative scheme is aimed to produce quality P2 dfls for summer link (Aherua) and winter link (Jarua) and supply to selected P2 centres and ASRs. Selected state farms/private farmers shall be elevated to P3 level basic seed rearing. The assistance to few farms is to meet the basic seed production by the end of XII Plan period. This component is proposed with a specific mandate for rearing P3 level crops to produce quality and disease free P2 seed. The component aims to enhance production of P2 basic seed in the organized government sector to at least 2 lakh dfls at 20000/unit as a major step towards expanding the basic seed multiplication network under quality multiplication system in a phased manner.

Considering the need for infrastructure improvements in selected state farms, the component is to provide overall support to improve the farm plantation and rearing including new plantation/replacement with high yielding variety. Support is also extended to meet the additional basic seed production facilities, equipment for quality seed production.

b) Technical specifications/operational guidelines:

- Assistance shall be extended to state farms and selected farmer consortiums.
- The farmer consortium shall have own land with required plantation. Identification of farms/unit for assistance/strengthening shall be solely based on successful P3 crops and suitability shall be decided by a committee comprising officers of MSSO, CMERTI and respective state representative on predetermined factors for quality and disease free seed cocoon generation. Few private sector farms like CBO units may be considered for assistance subject to meeting all the requirements.
- An undertaking shall be executed among DOS, farmer consortium and CSB on rearing and seed production as per the plan of action of MSSO.
- Only good record of successful rearing performance and pebrine free record is mandatory.
- Present status of plantation, past rearing performance, seed production activity, disease freeness and details of future expansion/development of surrounding areas that may cause pollution shall be the criteria for selection of farm for assistance.
- DOS shall ensure posting of required staff and supporting workers for continuing the activity. Complete protection, water and electricity supply etc., shall be ensured by the DOS.
- Minimum of 2 acre good muga food plantation and sufficient place for construction of operational buildings shall be ensured. Farms shall have to rear 500 P3 dfls/crop (from MSSO) to produce 30000 cocoons and select 20000 for production of 5000 P2 seed. Annual production shall be 10000 P2 dfls/unit.
- An action plan for seed cocoon generation, seed production and distribution shall be in place at the time of seeking assistance.
- Any post-cocoon activity like reeling and weaving or other sector (mulberry, eri and tasar) activity shall not be taken up in the near vicinity.
- Plantation needs limiting to Rs.31,000/acre shall be accessed and recommended by the committee based on request from DOS.
- Present status of operational buildings, repairs, need for new buildings and estimated cost shall be vetted by the committee.
- Equipment status and additional needs shall be supported as per the list.

- P3 rearing and subsequent P2 seed production only shall be taken up. No commercial and miscellaneous activities shall be introduced in between.
- Hygiene and quality food plant maintenance shall be of top priority.
- From 3rd year of commencement of assistance, the production shall reach the targeted level. Production and quality shall be reported and monitored for each crop by a committee.

The activities required under the component along with its cost break-up details are indicated in the unit cost (refer Unit Cost book) of the component.

c) Physical targets and financial projections:

The details of sharing pattern, unit cost, physical targets and financial projections are given below:

Sharing Pattern	State Category	CSB	State	Beneficiary		
	General Category	60%	20%	20%		
	Special Category	80%	10%	10%		

Zone	Unit Cost (Rs.)	Physical Target	Financial Projections (Rs. in crore)			
			CSB	State	Beneficiary	Total
Applicable to all zones	20,35,000	6 P3 units	0.90	0.16	0.16	1.22

7B) Assistance to muga adopted seed rearers

a) Brief description:

Muga seed multiplication is passing through the toughest challenge of the century with climate change and pollution. These are the main factors in disarranging the seed mechanism and thus there is a need for focused approach to get the desired quality seed in time. With increased silk production target of 200 MT envisaged for XII Plan, muga seed production is dependent on private graineurs and the overall production quality of seed is not meeting the required standards. The basic input, *i.e.*, seed cocoon and its proper linkage and coordination with seed crop rearer and seed producer needs to be strengthened.

The need for quality seed cocoon can be ensured by carefully identifying the seed crop rearer and supporting the core needs such as inputs, facilities and right linkage to seed producer. The need for quality and disease free seed cocoon production can be addressed through quality inputs like well planned mounting hall to ensure proper protection and ideal spinning, equipment for securing rearing, farm inputs and disinfectant support.

The component during XII Plan is innovative aiming at assisting large number of ASRs, enhancing production base of muga seed cocoon covering an area of 4500 acres rearing of 18.00 lakh basic seed and generating 180-200 lakh dfls; a major step towards expanding the seed multiplication network under quality multiplication system in one go.

b) Technical specifications/operational guidelines:

- Identification of stakeholder for assistance shall be solely need based and location specific and eligibility decided by a committee comprising MSSO and CMERTI on predetermined conditions based on demand and production capacity in the region where commercial seed is required and where facilities for quality and disease free seed cocoon generation is available.
- The stake holder shall get registered for certification towards seed production and to claim assistance.
- Preference shall be given to experienced ASR with good record of successful rearing performance and Pebrine freeness. Few private sector farms like CBO/SHGs may be considered for assistance subject to meeting all the requirements.
- Selected beneficiary shall ensure hassle free seed production in the needy commercial season which is mandatory.
- Water supply, electricity connection shall be ensured by the beneficiary.

- Construction of the building shall be the responsibility of the seed producer as per the design and specifications.
- The seed cocoons shall have to be purchased from certified ASRs adhering to all the conditions as specified by the CSB (A) Act, 2006. Working capital shall be provided through banks only and books of account shall be maintained and produced when demanded.
- An Action Plan for seed cocoon generation, seed production and distribution shall be in place at the time of seeking assistance.
- Any post-cocoon activity like reeling and weaving or other sector (mulberry, eri and tasar) activity shall not be taken up in the vicinity.
- Equipment status and additional needs shall be supported as per the list.
- DOS shall collect beneficiary share and procure the equipments as per specification given in the unit cost by following the due procedures in vogue in their department and supply to beneficiary
- Hygiene and quality food plant maintenance shall get top priority.
- From 2nd year of commencement of assistance, the production shall reach the targeted level. Production and distribution list shall be reported and monitored for each crop by a committee.
- All types of assistance extended after executing tripartite agreement /MOU where the rights of assets and materials supplied shall be vested with the government till such time as specified by the committee.

The activities required under the component along with its cost break-up details are indicated in the unit cost (refer Unit Cost book) of the component.

c) Physical Targets and financial projections

The details of sharing pattern, unit cost, physical targets and financial projections are given below:

Sharing Pattern	State Category	CSB	State	Beneficiary
	General Category	60%	20%	20%
	Special Category	80%	10%	10%

Zone	Unit Cost (Rs.)	Physical Target	Financial Projections (Rs. in crore)			
			CSB	State	Beneficiary	Total
Applicable to all zones	74,500	2,900 rearers	16.98	2.32	2.31	21.61

II Vanya cocoon

1) Support to rearers for augmentation of tasar host plantation

a) Brief description:

Augmentation of tasar host plants is a major tool to increase the productivity and it has been found that the efficiency of rearer in block plantation rearing shall lead to better results. The program of raising block plantation for tasar host plants in private and govt. waste lands and its successful demonstration during XI Plan through CDP and other development initiatives viz., Special SGSY, NABARD-TDF, and TWC projects has promoted the tribal areas to take up tasar rearing with remunerative returns. The augmentation of tasar host plantation has helped to conduct seed rearing in isolated clusters thereby augmenting tasar silkworm seed production too. The successful raising and maintenance of systematic tasar block plantation by the tribals when compared to their dependency on natural plantation has motivated more tribal youth to involve in tasar culture.

Besides the individual tasar rearers, SHGs, women groups, VSSs, TVSS etc., shall also be encouraged to raise 1.0 ha of new systematic plantation of food plants for tasar silkworms in private and govt. waste lands with 10% area reserved for chawki rearing to improve the cocoon yield. When systematic plantations are raised in forest lands, joint forest management group shall be involved in decision-making. Under the component, each beneficiary or SHG

shall be assisted with supply of seedlings, cost for plantation development, inputs, soil conservation measures etc. It has been found that 10' x 6' or 8' x 8' spacing shall facilitate inter-cultural operations with power tiller or tractor and also intercropping shall improve soil health besides additional income during the gestation period of tasar food plants. Application of inputs viz., vermi-compost, soil moisture conservation through staggered trenching and adoption of 30' x 40' models and protecting plantation by digging cattle proof trenches as also engaging cattle guard shall result in improving the leaf quality.

b) Technical specifications/operational guidelines:

- Assistance shall be extended preferably to the tasar rearers with more than 1.0 ha land and implementing agency shall take care to select rearers so as to raise plantations in contiguous patches of at least 12-15 ha. As far as possible, the rearers shall be member/s of SHG to build in maintenance modalities effectively.
- The implementing agencies shall have the flexibility of selecting rearers with more than 0.75 ha and up to 1.50 ha in order to raise block plantations in clusters of about 25 ha to suit requirement of seed rearing. Utmost care needs to be taken by the implementing agency for raising seedlings in nearby area to reduce the transplantation loss and transportation costs. The agency may decide on the composition of fertilizers based on soil analysis and quality, besides raising suitable intercrop as per the recommendations of CTR&TI, Ranchi.
- Assistance shall be extended under the scheme subject to undertaking from the identified tasar rearers that they shall take up silkworm rearing as per the requirement (either seed or commercial seed) at least for five years. Beneficiary share shall be their labour contribution in the activity.
- The implementing agency shall make all entries related to the assistance extended, crop particulars, production, productivity, returns etc in the beneficiary passbooks provided by them to the beneficiary from time to time.
- The implementing agency shall meticulously follow the relevant points of general guidelines of CDP for XII Plan while implementing the component. The implementing agency shall also coordinate with the relevant line departments viz., soil conservation, agriculture to introduce intercropping and soil treatments etc, to sustain the rearer's interest on during the gestation period.

The activities required under the component along with its cost break-up details are indicated in the unit cost (refer Unit Cost book) of the component.

c) Physical targets and financial projections:

The details of sharing pattern, unit cost, physical targets and financial projections are given below:

Sharing Pattern	State Category	CSB	State	Beneficiary
	General Category	60%	20%	20%
	Special Category	80%	10%	10%

Zone	Unit Cost (Rs.)	Physical Target	Financial Projections (Rs. in crore)			
			CSB	State	Beneficiary	Total
Applicable to all zones	40,000	12,000 ha	34.56	6.72	6.72	48.00

1A) Assistance to beneficiaries for raising tasar food plant seedlings (kisan nurseries)

a) Brief description:

While CDP scheme and other development initiatives viz., special SGSY, NABARD-TDF, TWC projects helped to raise block plantation of tasar host plants in private and govt. waste lands, no specific system is employed to raise the seedlings of tasar host plants following the recommended technologies, which would have helped better survival and reduction in gestation period. Further, as raising seedlings of tasar host plants at individual level may not be

economical, the same needs to be raised at cluster level to make it an independent and manageable enterprise. At the same time, care needs to be taken that cost of transportation of seedlings is kept to the minimum.

In view of the successful interventions on pilot scale by some tribal youth under special SGSY and NABARD-TDF projects in raising seedlings on mass scale, it is proposed to replicate similar models during XII Plan with CDP assistance. For the purpose, interested tasar rearers, SHGs, women groups, VSSs, TVSSs etc., shall be encouraged to plant about 70,000 seeds in 100 beds, to raise about 55,000 seedlings. Since it is envisaged to raise block plantations in clusters so as to utilize the same for rearing seed crops, 55000 seedlings would be sufficient to raise 25 ha at 3.0 m x 1.8 m spacing including 10% mortality during transplantation and establishment.

b) Technical specifications/operational guidelines:

- Each nursery unit shall be raised in the area of coverage for all the related activities.
- Priority shall be to identify unemployed, educated tribal youth or women SHGs or TVSSs for the said activity. They shall contribute the beneficiary share mainly through meeting locally available material and also the labour.
- The implementing agency shall make all entries related to the assistance extended, crop particulars, production, productivity, returns etc., in the beneficiary passbooks provided by them to the beneficiary from time to time.
- The implementing agency shall meticulously follow the relevant points of general guidelines of CDP for XII Plan while implementing the component.
- The implementing agencies shall ensure selection of sites with irrigation facility to water seedlings as per schedule. The implementing agency shall take necessary care for raising seedlings at suitable locations so as to reduce the transplantation loss and transportation costs. Assistance shall be extended subject to undertaking from the beneficiary to the effect that the activity shall be undertaken for the entire Plan period of 5 years, with one time assistance. However, implementing agency shall ensure sale of seedlings by linking it with augmentation of tasar host plants under various schemes including CDP.
- Implementation agency shall also ensure that the beneficiary shall follow the requirements of growing medium, collection of seed from plus trees, minimum 80% germination, provisions for gap filling, so as to achieve optimum survival after transplantation.

The activities required under the component along with its cost break-up details are indicated in the unit cost (refer Unit Cost book) of the component.

c) Physical targets and financial projection:

The details of sharing pattern, unit cost, physical targets and financial projections are given below:

Sharing Pattern	State Category	CSB	State	Beneficiary
	General Category	60%	20%	20%
	Special Category	80%	10%	10%

Zone	Unit Cost (Rs.)	Physical Target	Financial Projections (Rs. in crore)			
			CSB	State	Beneficiary	Total
Applicable to all zones	80,000	300 nursery units	1.73	0.33	0.34	2.40

1B) Assistance to tasar commercial rearers for development of chawki garden

a) Brief description:

Though raising block plantation of tasar host plants in private and govt. waste lands was taken up to cater needs of seed rearings partially, commercial rearers have to however depend on natural host flora in the fringe forest areas or in the rejuvenated patches or on the bund trees in the paddy field. In these areas, tasar silkworm rearing is carried mostly on trees of 12-15’ height or more. Though these plantations are suitable for late age rearing, the leaf quality may not be suitable to young age silkworm rearing. Further, these plantations are mostly away from the dwellings of tasar

rearers and rearing from brushing onwards shall involve more labour besides larval mortality. In addition, block plantations also raised under other schemes/projects viz., MGNREGS, RKVY etc., in few states with wider spacing is suitable for late age silkworm rearing. Based on recommendations of CTR&TI, Ranchi it is advisable to rear young age tasar silkworms in exclusive chawki garden under nylon nets for better ERR, cocoon quality and rearing management.

It is, therefore, proposed to assist tasar commercial rearers to establish chawki gardens at 0.1 ha per rearer with 1.8 m x 1.8 m spacing suitable for young age silkworm rearing under nylon nets. Chawki gardens shall be raised together by a group of farmers in govt. waste land or community land close to natural host flora. This shall facilitate young age rearing in chawki gardens followed by late age rearing in grown up trees. Besides the individual tasar rearers, SHGs, women groups, VSSs, TVSSs etc., shall be encouraged for taking up the activity with necessary linkages.

When systematic plantations are raised in forest lands, the joint forest management group shall be involved in decision making. Each beneficiary or SHG shall be assisted with supply of seedlings, cost for plantation development, inputs, soil conservation measures etc. Intercropping to improve soil health and to earn additional income during the gestation period shall also be part of the component. Other practices, as in case of block plantations shall be followed while raising chawki gardens.

b) Technical specifications/operational guidelines:

- The implementing agencies shall have the flexibility of selecting land belonging to individual rearers, community land, govt. waste land or forest land based on the requirement near to the vicinity of natural host flora. The implementing agency shall take care to select rearers so as to raise plantations in contiguous patches of at least 2-4 ha. As far as possible, the rearers shall be member/s of SHG to build in maintenance modalities effectively.
- The implementing agency shall ensure raising of seedlings in nearby area of natural plantation to reduce the transplantation loss and transportation costs. They shall also ensure adherence to the recommendations of CSB regarding package of practices.
- Each unit of chawki garden shall support young age silkworm rearing of 300 dfls. Beneficiary share shall be their labour contribution in the activity.
- The implementing agency shall make all entries related to the assistance extended, crop particulars, production, productivity, returns etc., in the beneficiary passbooks provided by them to the beneficiary from time to time.
- The implementing agency shall meticulously follow the relevant points of general guidelines of CDP for XII Plan while implementing the component.

The activities required under the component along with its cost break-up details are indicated in the unit cost (refer Unit Cost book) of the component.

c) Physical Targets and financial projections

The details of sharing pattern, unit cost, physical targets and financial projections are given below:

Sharing Pattern	State Category	CSB	State	Beneficiary
	General Category	60%	20%	20%
	Special Category	80%	10%	10%

Zone	Unit Cost (Rs.)	Physical Target	Financial Projections (Rs. in crore)			
			CSB	State	Beneficiary	Total
Applicable to all zones	6,300	4,000 rearers	1.81	0.36	0.35	2.52

1C) Assistance to tasar rearers for maintenance of existing chawki plantation

a) Brief description:

Chawki gardens of tasar host plants were raised in private and govt. waste lands under CDP scheme during XI Plan and also under other development initiatives. These chawki gardens shall help in better utilization of natural host

flora during late age rearing besides improving quality and cocoon yield. Rearing on these chawki gardens attain importance more in case of seed crop rearings. However, these chawki gardens need to be maintained as per recommended package of practices and also technology inputs from CTR&TI, Ranchi for better results.

In view of shortage of farm yard manure in tribal area and preference of low lands for tasar plantations, provision has been made to undertake intercultural and soil conservation operations, supply of vermi-compost, inputs for managing termites and fungal attack on host plants besides application of required fertilizers, neem based insecticides and other technology inputs like Leaf Surface Microbes recommended by CTR&TI, Ranchi, to educate tasar rearers the importance of this package for better chawki garden management.

b) Technical specifications/operational guidelines:

- Assistance under the scheme shall be extended to block plantations raised during earlier Plan periods and also during XII Plan shall be assisted for maintenance for a maximum of two years. The implementing agency shall extend assistance subject to number of plants survived and brushing capacity assessed by a suitable joint technical committee.
- Soil conservation methods shall include correction of cattle proof trenches and staggered trenches for better soil and moisture conservation.
- Priority shall be given to the tasar rearers taking up seed rearing. The implementing agency shall make all entries related to the assistance extended, crop particulars, production, productivity, returns etc., in the beneficiary passbooks provided by them to the beneficiary from time to time.
- The implementing agency shall meticulously follow the relevant points of general guidelines of CDP for XII Plan while implementing the component.
- The implementing agency shall decide on the composition of fertilizers based on soil analysis and quality, besides the suitable intercrop based on the recommendations of CTR&TI, Ranchi.
- Assistance shall be extended under the scheme subject to undertaking from the tasar rearers that they shall take up silkworm rearing at least for five years.

The activities required under the component along with its cost break-up details are indicated in the unit cost (refer Unit Cost book) of the component.

c) Physical targets and financial projections:

The details of sharing pattern, unit cost, physical targets and financial projections are given below:

Sharing Pattern	State Category	CSB	State	Beneficiary
	General Category	60%	20%	20%
	Special Category	80%	10%	10%

Zone	Unit Cost (Rs.)	Physical Target	Financial Projections (Rs. in crore)			
			CSB	State	Beneficiary	Total
Applicable to all zones	1,400	2,400 rearers	0.24	0.05	0.05	0.34

1D) Assistance to tasar rearers for maintenance of existing tasar plantation

a) Brief description:

Block plantations of tasar host plants was raised in private and govt. waste lands under CDP Scheme during XI Plan and also under other development initiatives viz., special SGSY, NABARD-TDF, TWC projects etc. These block plantations are very handy for taking up seed crop rearings, in view of increased demand for tasar silkworm seed. However, these block plantations need to be maintained as per recommended package of practices of CTR&TI, Ranchi for better results. Also, soil conservation methods need to be practiced as the tasar block plantations are rain-fed.

Since there is only one commercial/seed crop per year practiced by the rearers in tasar sector, rearers tend to apply farm yard manure generated by them mostly for paddy cultivation. Hence, in order to educate them, the

importance of maintenance of plantations following package of practices and soil conservation methods, provision has been made to undertake intercultural operations, supply of vermi-compost, inputs for managing termites and fungal attack on host plants besides application of required fertilizers, neem based insecticides and other technology inputs as recommended by CTR&TI, Ranchi.

b) Technical specifications/operational guidelines:

- Assistance under the component shall be extended to block plantations raised during earlier Plan periods and also during XII Plan towards maintenance for maximum of two years for better survival. The implementing agency shall not extend similar assistance to the same beneficiary under different components viz., assistance to tasar rearers (both seed and commercial rearers).
- The implementing agency shall extend assistance based on number of plants survived and brushing capacity assessed by a technical committee.
- Soil conservation practices include correcting cattle proof trench and staggered trenches for better soil and moisture conservation.
- Priority shall be given to the tasar seed rearers. The implementing agencies shall have the flexibility of selecting beneficiaries possessing land of 0.75 ha up to 1.50 ha to form clusters of about 10 ha each to suit requirements of seed rearing, though it is not mandatory. The implementing agency shall make all entries related to the assistance extended, crop particulars, production, productivity, returns etc in the beneficiary passbooks provided by them to the beneficiary from time to time.
- The implementing agency shall meticulously follow the relevant points of general guidelines of CDP for XII Plan while implementing the component.
- The implementing agency shall decide on the composition of fertilizers based on soil analysis and quality, besides raising of suitable intercrop on the recommendations of CTR&TI, Ranchi.
- Assistance shall be extended under the scheme subject to undertaking from the tasar rearers that they shall take up silkworm rearing at least for five years.

The activities required under the component along with its cost break-up details are indicated in the unit cost (refer Unit Cost book) of the component.

c) Physical targets and financial projections:

The details of sharing pattern, unit cost, physical targets and financial projections are given below:

Sharing Pattern	State Category	CSB	State	Beneficiary
	General Category	60%	20%	20%
	Special Category	80%	10%	10%

Zone	Unit Cost (Rs.)	Physical Target	Financial Projections (Rs. in crore)			
			CSB	State	Beneficiary	Total
Applicable to all zones	17,000	1,200 ha	1.47	0.29	0.28	2.04

1E) Conservation and utilization of sal based tasar eco-races

a) Brief description:

Though, the country has focused on the conservation of several wild species, the economic silk insect is yet to attain its focus in spite of its known role in alleviating the rural/tribal poverty and employment generation potential. The promising sal (*Shorea robusta*) based eco-races of tropical tasar silkworm are available in Chhattisgarh (Raily), Odisha (Modal) and Jharkhand (Laria, Sarihan, Modia). Though farmers are utilizing some of the local eco-races mostly for commercial crop, their populations in nature are decreasing day by day. For their optimal proliferation and sustainable utilization of the races, they need to be conserved, as the characters of these eco-races deteriorate drastically under ex situ under laboratory condition.

Under this backdrop and to focus the need of silk insect conservation, its potential economic value and income generation, it is proposed to take up conservation program of local eco-races by sustainable utilization of available sal flora in the tasar producing states. It is proposed to generate 108 MT of tasar raw silk through the conservation program by the fifth year of XII Plan period (2016-17). The year-wise break-up of the targets and conservation clusters required to be set up are given below.

Components	2012 -13	2013-14	2014-15	2015-16	2016-17
Cumulative raw silk production (MT)@ 2 MT/cluster	20	44	72	108	108
Cumulative cocoon production /collection (crores)@ 0.2 crore/cluster	2	4.4	7.2	10.8	10.8
No. of conservation clusters (cumulative)	10	22	36	54	54
No. of locations @10 locations/cluster (cumulative)	100	220	360	540	540
Tentative budget (Crore Rs.) @ Rs.17.24 lakh per cluster	3.17	5.21	6.13	7.69	2.54
CSB share (25%)	0.79	1.30	1.53	1.92	0.63
State share (75%)	2.38	3.91	4.60	5.76	1.90

b) Technical specifications/operational guidelines:

- An area of 50’ x 25’ of existing sal plantation in the selected forest area shall be covered under conservation net. A total of 20 nets are to be raised as one unit to accommodate a quantity of 100 dfls of eco-race for their optimal proliferation under net in the natural habitat. Thus, each conservation cluster would accommodate 10 such units. To facilitate quick availability of the nets, the respective DOS would develop local entrepreneur(s) to manufacture the nets.
- Support shall be provided to the groups as far as possible. Green shed shall be developed in the land provided by forest department or in the land owned by the group.
- The implementing agency shall make all entries related to the assistance extended, crop particulars, production, productivity, returns etc in the beneficiary passbooks provided by them to the beneficiary from time to time.
- The implementing agency shall meticulously follow the relevant points of general guidelines of CDP for XII Plan while implementing the component.

The activities required under the component along with its cost break-up details are indicated in the unit cost (refer Unit Cost book) of the component.

c) Physical targets and financial projections:

The details of sharing pattern, unit cost, physical targets and financial projections are given below:

Sharing Pattern	State Category	CSB	State	Beneficiary
	General Category	25%	75%	-
	Special Category	25%	75%	-

Zone	Unit Cost (Rs.)	Physical Target	Financial Projections (Rs. in crore)			
			CSB	State	Beneficiary	Total
Applicable to all zones	4,58,300	350 camps	4.01	12.03	-	16.4

2) Assistance for raising and maintenance of systematic oak tasar plantation

a) Brief description:

The natural plantations of oak tasar silkworm food plants in forestland of mountain regions are generally high and remained un-maintained. Conducting silkworm rearing in such plantations is cumbersome and cocoon yield is also very low. The concept of raising systematic plantations introduced during XI Plan is found to be very suitable for maintenance and to enhance the cocoon production and productivity. Hence, it is proposed to continue the scheme during XII Plan. Under the component, it is proposed to promote integrated package for plantation development developed by the research institutes of CSB. The scheme envisages assisting the individual rearer, SHGs, women groups, VSSs, etc, to raise systematic plantation of food plants at 1.8 m x 1.8 m spacing in private/community lands besides fostering cooperation with the forest department to facilitate utilization of forest waste lands. Each beneficiary or SHG shall be assisted with supply of seedlings, land development, cost of plantation development, inputs, plantation maintenance, etc. On completion of augmentation of plantation for seed rearers, there shall be enough seed availability for which the oak tasar commercial rearers require support from local or state plans for dovetailing the said component with other schemes

b) Technical specifications/operational guidelines:

- Assistance shall be provided to new farmers having one hectare of their own land as well as to government farms/ NGOs /societies/SHGs for raising systematic plantation on community land, govt. land, forest waste land etc.
- The activities shall be undertaken on the following lines:
 - Land husbandry and preparation of selected land. Digging of 3090 pits of 1' x 1' x1' size /ha at 1.8m x 1.8m spacing, anti-termite treatment and application of vermi-compost in the pits.
 - Procurement of quality seedlings from kisan nurseries of entrepreneurial groups and supply @ 3400 seedlings/hectare to each farmer for raising of plantation. This includes 10% transportation and transplantation mortality.
 - Planting of 3090 seedlings at 1.8 m x 1.8 m spacing in one hectare of land, cultural operation at regular intervals and maintenance.
 - Gap fillings and maintenance of plantations with improved package of practices developed by the research institutes of CSB and ensure 100% survival in systematic plantations.
 - Maintenance for two years in 2nd and 3rd year at Rs 3.0 per plant/year after verification of survival and maintenance of plants.
 - Farmer to conduct rearing of 250 dfls of 2 g each/year from 4th year onwards.
- Farmers supported by DOSs/NGOs/societies/SHGs of the oak tasar producing states of North-eastern and North-western regions only are eligible. Farmers having their own land, agencies obtained permission to use community/forest or govt. lands shall be identified by the field units of DOS/NGOs/societies.
- The field officer shall certify the completion of activity as per the component and also shall certify that the farmers have not availed assistance for the same purpose from other programs of government or other agencies. The implementing agency shall make all entries related to the assistance extended, crop particulars, production, productivity, returns etc in the beneficiary passbooks provided by them to the beneficiary from time to time.
- The implementing agency shall meticulously follow the relevant points of general guidelines of CDP for XII Plan while implementing the component.
- Maintenance assistance shall be released against inspection and satisfactory survival and maintenance of the systematic plantation.

The activities required under the component along with its cost break-up details are indicated in the unit cost (refer Unit Cost book) of the component.

C) Physical targets and financial projections:

The details of sharing pattern, unit cost, physical targets and financial projections are given below:

Sharing Pattern	State Category	CSB	State	Beneficiary
	General Category	60%	20%	20%
	Special Category	80%	10%	10%

Zone	Unit Cost (Rs.)	Physical Target	Financial Projections (Rs. in crore)			
			CSB	State	Beneficiary	Total
Applicable to all zones	49,000	200 ha	0.78	0.10	0.10	0.98

3) Assistance for construction of cocoon storage houses in tasar sector

a) Brief description:

Tasar rearers shall harvest only two commercial crops during the commercial rearing seasons. During the harvest seasons due to arrival of huge quantity of reeling cocoons, the prices fall down. Non-existence of organized marketing system often leads to exploitation by the mahajans who procure the cocoons at cheaper prices and the tribals are forced to sell their produce lesser than the market value. Since the reeling activity in tasar sector can be undertaken throughout the year, there is always demand for the tasar cocoons by the reelers.

The tasar cocoons are sold to the reelers at higher prices during the non-commercial seasons due to high demand. Since the tasar cocoons undergo long diapause for about 6 months the cocoons can be stored without stifling. Realizing the nature of the industry, a scheme component on the component was implemented during the XI Plan period. The component has been well received in the field and is therefore proposed to continue in all tasar producing states during XII Plan.

The temporary storage facilities in production clusters would help tasar rearers to preserve the reeling cocoons for at least 3-4 months after harvest of commercial crop, thereby avoid temporary glut and distress sale. The storage facility shall have a capacity to store around 50,000 cocoons and would ensure that the tasar rearers get remunerative price for their produce. The cocoon storage house is used as a common facility by the tasar rearers group.

b) Technical specifications/ operational guidelines:

- Land required for the construction of storage house would be provided by the tasar rearers, but would be property of the SHG/CBO. The implementing agency shall ensure that the cocoon storage house shall be maintained for at least five years and thereafter the facility may be utilized for organizing training programs etc. SHG/CBO shall collect nominal charges from tasar rearers for managing the storage and marketing of cocoons, which can be utilized for maintaining the storage house, in subsequent years.
- Cocoon storage houses shall be constructed in major production clusters, where rearers shall store at least of 50% of their produce for 3-4 months after commercial crop harvest, besides managing the stock till it is marketed. As far as possible, the SHG may be motivated and trained to manage the entire gamut of activities.
- The implementing agency shall make all entries related to the assistance extended, crop particulars, production, productivity, returns etc., in the beneficiary passbooks provided by them to the beneficiary from time to time.
- The implementing agency shall meticulously follow the relevant points of general guidelines of CDP for XII Plan while implementing the component.
- The implementing agencies shall nurture CBOs to help SHGs in managing the storage and marketing of cocoons besides establishing linkages with yarn producer groups or master weavers, as the case may be.

The activities required under the component along with its cost break-up details are indicated in the unit cost (refer Unit Cost book) of the component.

c) Physical targets and financial projections:

The details of sharing pattern, unit cost, physical targets and financial projections are given below:

Sharing Pattern	State Category	CSB	State	Beneficiary
	General Category	35%	35%	30%
	Special Category	80%	10%	10%

Zone	Unit Cost (Rs.)	Physical Target	Financial Projections (Rs. in crore)			
			CSB	State	Beneficiary	Total
Applicable to all zones	1,00,000	100 No.	0.69	0.16	0.15	1.00

3A) Assistance for construction of cocoon storage and stifling facilities for tasar rearers

a) Brief description of the component

Due to absence of organized marketing system, arrival of reeling cocoons in large quantities immediately after the harvest of the commercial crops results in glut in the market and distress sale among the poor tribal tasar rearers. The local mahajans exploit this situation to their advantage by advancing meager amounts during the commercial rearing and procure the entire lot of reeling cocoons at throw away prices. Though reeling cocoons are produced only during commercial crop seasons, reeling activity can be undertaken throughout the year. This resulted drastic fall in cocoon prices immediately after the commercial crop harvest. The subsequent demand for reeling cocoons paves the way for higher prices after 3-4 months of commercial crop harvest, depriving poor reelers of procuring reeling cocoons periodically. This cycle neither helps the poor tribal cocoon producers nor the reelers. Though pupal diapause of over six months helps preservation of reeling cocoons without stifling, their stifling would help the farmers to preserve the cocoons for longer periods so as to sustain the reeling activity.

In order to arrest exploitation by middleman and to increase producers' share in the tasar value chain, conversion of cocoons to yarn was introduced in the production clusters under special SGSY and NABARD-TDF projects during XI Plan. This important forward integration has produced encouraging results like women participation in yarn conversion, increasing family income, and assured marketing of cocoons at remunerative prices locally, empowerment of tribal women thereby improvement in socio-economic conditions. NGOs/societies/CBOs/SHGs, producer groups etc. shall be involved in establishing the linkages with commercial rearers, reelers, reeler groups and master weavers in the locality. It is proposed to promote such cocoon storage and stifling facilities for tasar rearers by dovetailing funds from CDP involving 25% share from CSB, especially with respect of projects assisted under MoRD, NABARD, TWC, RKVY etc.

b) Technical specifications/operational guidelines:

- Land in a suitable area shall be procured/gifted from the locals. The ownership shall be transferred in the name of CBO/co-operatives/SHG/producer groups.
- The implementing agency shall establish cocoon and storage facilities in major production clusters with required building on the land procured with ownership of CBO/Society/NGO. The proposed facility shall be provided with storage racks and material for training, as these facilities can also be utilised for conducting training under various programs including ISDS, MKSP etc. A joint committee comprising NGO, CTR&TI/DOS shall monitor record of the operation-wise details of source-wise cocoons procured, supply details, recover, damage during the storage, incidental charges collected, reeling performance etc., maintained by the NGO/society.
- An tripartite undertaking shall be executed between DOS, CBO and CSB that the entire infrastructure shall be maintained and used for the purpose for which the assistance provided besides the activity shall be carried out by the CBO/Co-operatives/SHG/producer groups. An NGO, if involved, shall only facilitate the establishment of the unit under CBO/Co-operatives/SHG/producer groups. Assistance provided towards working capital shall be maintained in a separate savings accounts with arrangements made to keep it non-eroding.

- The implementing agency shall ensure proper linkages with commercial rearers, reelers/reeler groups for procurement of cocoons, besides encouraging tribal women in reeling pockets to take up reeling and shall ensure that the activities are carried for a minimum period of five years and also submit periodical reports.
- The implementing agency shall meticulously follow the relevant points of general guidelines of CDP for XII Plan while implementing the component.
- The implementing agency shall undertake to furnish the performance report of the unit and that the facilities shall work minimum for a period of five years.

The activities required under the component along with its cost break-up details are indicated in the unit cost (refer Unit Cost book) of the component.

c) Physical targets and financial projections:

The details of sharing pattern, unit cost, physical targets and financial projections are given below:

Sharing Pattern	State Category	CSB	State	Beneficiary
	General Category	35%	35%	30%
	Special Category	80%	10%	10%

Zone	Unit Cost (Rs.)	Physical Target	Financial Projections (Rs. in crore)			
			CSB	State	Beneficiary	Total
Applicable to all zones	22,20,000*	30 No.	1.22	0.22	0.22	1.66
			Other Assistance			
			MORD /NABARD/ TWC/RKVY	State	Beneficiary	Total
			5.00	-	-	5.00
Grand Total			6.22	0.22	0.22	0.66

* Only 25% of the unit cost shall be considered under CDP scheme.

4) Support for castor/tapioca cultivators with start-up tools

a) Brief description:

Castor and tapioca is cultivated by large number of farmers for production of castor beans/tubers respectively as a regular agriculture crop in the states of Andhra Pradesh, Bihar, Gujarat, Karnataka, Kerala, Maharashtra, Madhya Pradesh, Rajasthan, Tamil Nadu, Uttar Pradesh, Uttarakhand, etc. It is well established that utilization of up to 30 % foliage of castor/tapioca plants for eri silkworm rearing does not affect the regular production. Hence, such farmers can earn additional income by practicing eri culture at regular intervals.

This concept was found to be very useful for enhancing the production of eri silk during XI Plan especially in non-traditional states. Keeping this in mind, it is proposed to continue the component during XII Plan. Under the component, it is proposed to support such castor/tapioca cultivators with land development, cost of castor seed, inputs and start-up tools.

b) Technical specifications/operational guidelines:

- Assistance shall be provided to farmers practicing castor/tapioca cultivation in 1.0 acre land of their own.
- The sequence of activities shall be undertaken on the following lines :
 - Identification of farmers practicing castor/tapioca cultivation as regular agricultural crop.
 - Training for judicious utilization of foliage (up to 30% of total foliage) for eri silkworm rearing.
 - Supply of rearing appliances/start-up tools procurement of quality silkworm seed and conduct of rearing.
 - Each farmer shall rear 50 dfls/crop using the foliage for 3-4 times a year.

- Farmers identified by DOSs/NGOs/societies/SHGs of castor/tapioca producing states are eligible. Farmers/government farms/agencies/CBOs/NGOs having their own land, or obtained permission to use community /forest or govt. wastelands are to be identified by the field units of DOS.
- Beneficiary shall maintain plantation and use by following with improved package of practices developed by the research institutes of CSB.
- The Field Officer shall certify the completion of activity as per the component and also certify that the farmers/agencies have not availed assistance for the same purpose from other programs of government or other agencies. The implementing agency shall make all entries related to the assistance extended, crop particulars, production, productivity, returns etc in the beneficiary passbooks provided by them to the beneficiary from time to time.
- The implementing agency shall meticulously follow the relevant points of general guidelines of CDP for XII Plan while implementing the component.
- The performance of the beneficiaries shall be monitored on a regular basis and the record of dfls brushed/ cocoons produced shall be maintained.

The activities required under the component along with its cost break-up details are indicated in the unit cost (refer Unit Cost book) of the component.

c) Physical targets and financial projections:

The details of sharing pattern, unit cost, physical targets and financial projections are given below:

Sharing Pattern	State Category	CSB	State	Beneficiary
	General Category	60%	20%	20%
	Special Category	80%	10%	10%

Zone	Unit Cost (Rs.)	Physical Target	Financial Projections (Rs. in crore)			
			CSB	State	Beneficiary	Total
Applicable to all zones	12,500	5,000 acres	4.69	0.78	0.78	6.25

5) Augmentation of perennial eri food plants with supply of start-up tools

a) Brief description:

Raising of systematic plantations of perennial eri silkworm food plants in traditional eri producing states has been successfully implemented during X and XI Plans. The plantation raised by following improved technologies has enhanced the income of traditional poor eri silkworm rearers, thereby the production and productivity of eri silk has increased during the past decade. It is therefore proposed to continue the component during XII Plan.

Under the component, support shall be extended to develop systematic perennial plantation by following integrated package developed by the research institutes of CSB. Under the scheme, farmers shall be assisted for raising one acre of systematic plantation of perennial food plants like Kesseru /Payam /Ailenthus and their maintenance to support rearing of 400 dfls/year in the fourth year of establishment. Each farmer shall be assisted with cost towards land development, cost of seedlings including 10% mortality, inputs, start-up tools and maintenance for 2nd and 3rd year.

b) Technical specifications/operational guidelines:

- Assistance shall be provided to farmers with one acre of own land identified government agencies, NGOs/ Societies/SHGs and also in community land, government land, forest waste land etc which can be utilized by farmers
- The sequence of activities shall be undertaken on the following lines:
 - Land husbandry and preparation of land, digging of cattle proof trench around the plot.
 - Digging of 450 pits of 1' x 1' x1' size /acre at 3 m x 3 m spacing and application of FYM /vermi-compost in the pits.

- Procurement of quality seedlings from kisan nurseries of entrepreneurial groups and supply @ 500 seedlings/acre to each farmer for raising of plantation. This includes 10% transportation and transplantation mortality.
 - Undertaking plantation of 450 seedlings in 1.0 acre of land, cultural operation at regular intervals and maintenance.
 - Plantation of Castor as intercrop during gestation period to start silkworm rearing and earn income from the first year itself. Undertaking the gap filling with seedlings of perennial food plants to ensure 100% survivability.
 - Maintenance of plantation in 2nd and 3rd year @ Rs 3.0 per plant/year basing on verification of survivability.
 - Farmer to conduct rearing of 400 dfls /year from the 4th year onwards.
- Farmers supported by DOSs/NGOs/societies/SHGs in the North-eastern region only are eligible. Farmers/government farms/agencies/CBOs/NGOs having their own land, or with written permission to use community/forest or wastelands shall be identified by the field units of DOS/NGOs/societies.
 - Farmers shall raise and maintain plantation with improved package of practices developed by the research institutes of CSB to ensure 100% survivability in systematic plantations.
 - The field officer shall certify the completion of activity based on the component and shall also certify that the farmers/agencies have not availed assistance for the same purpose from other programs of government or other agencies. The implementing agency shall make all entries related to the assistance extended, crop particulars, production, productivity, returns etc in the beneficiary passbooks provided by them to the beneficiary from time to time.
 - The implementing agency shall meticulously follow the relevant points of general guidelines of CDP for XII Plan while implementing the component.
 - The performance of the beneficiaries shall be monitored on a regular basis and maintain record of dfls brushed/cocoons produced.

The activities required under the component along with its cost break-up details are indicated in the unit cost (refer Unit Cost book) of the component.

c) Physical targets and financial projections:

The details of sharing pattern, unit cost, physical targets and financial projections are given below :

Sharing Pattern	Stae Category	CSB	State	Beneficiary
	General Category	60%	20%	20%
	Special Category	80%	10%	10%

Zone	Unit Cost (Rs.)	Physical Target	Financial Projections (Rs. in crore)			
			CSB	State	Beneficiary	Total
Applicable to all zones	31,000	7,000 acres	16.26	2.72	2.72	21.70

5A) Assistance for raising kesseru food plant nursery

a) Brief description:

During earlier Plan periods, the program on raising of systematic plantations of perennial food plants in traditional eri producing states has been demonstrated successfully. The concept of raising block plantations of perennial eri host plants is a major tool for augmenting the food plant base. However, to increase the survival rate of the plantations, it is necessary to raise the eri food plants nursery by following improved technologies recommended by research institutes of CSB with adequate care. The government farm shall alone not be in a position to produce the large quantity of quality seedlings required during XII Plan period owing to multiple supervisory roles they have to play and limited resources

available with them. It is therefore proposed to involve rural entrepreneurs for raising nurseries of perennial eri silkworm food plants (*i.ex.*, Kesseru). Under the component, assistance is extended towards cost of FYM, chemicals, tools and other inputs for raising the nursery sufficient for developing 40 acres of systematic plantation.

b) Technical specifications/operational guidelines:

- A nursery unit shall be raised covering an area of one acre consists of 27 beds (each measuring about 6m x 1.2m size). Assistance shall be provided to progressive farmers, entrepreneurs, SHGs, NGOs/CBOs etc.
- The sequence of activities shall be undertaken on the following lines:-
 - Land husbandry and preparation. Preparation of 27 beds, each of 6m x 1.2m size.
 - Application of FYM/vermi-compost in the beds.
 - Selection of seed, pre-conditioning of seed and sowing in the beds at a spacing of 15 cm x 10 cm.
 - Erection of shade roofs on the beds for protection from sun light.
 - Cultural operations, watering and maintenance.
 - Preparation of growing medium, filling of poly-bags (8" x 6" size) with media and transplantation of seedlings.
 - Cultural operations, watering and maintenance of seedlings for 6 to 9 months.
 - Production of 20,000 healthy seedlings in poly-bags per farmer or entrepreneur.
- Progressive farmers, entrepreneurs, SHGs, NGOs/CBOs etc., identified by the field units of DOS are eligible.
- Beneficiary shall raise and maintain nurseries with improved package of practices recommended by the research institutes of CSB to ensure 90% survivability.
- The field officer shall certify the completion of activity based on the component and shall also certify that the farmers, entrepreneurs/agencies have not availed assistance for the same purpose from other programs of government or other agencies. The implementing agency shall make all entries related to the assistance on nursery planting material produced and distribution in the beneficiary passbooks provided by them to the beneficiary from time to time.
- The implementing agency shall meticulously follow the relevant points of general guidelines of CDP for XII Plan while implementing the component.
- The performance of the beneficiaries shall be monitored on a regular basis and the record of seedlings produced and supplied to different farmers/agencies shall be maintained.

The activities required under the component along with its cost break-up details are indicated in the unit cost (refer Unit Cost book) of the component.

C) Physical targets and financial projections:

The details of sharing pattern, unit cost, physical targets and financial projections are given below:

Sharing Pattern	State Category	CSB	State	Beneficiary
	General Category	60%	20%	20%
	Special Category	80%	10%	10%

Zone	Unit Cost (Rs.)	Physical Target	Financial Projections (Rs. in crore)			
			CSB	State	Beneficiary	Total
Applicable to all zones	51,000	150 nursery units	0.57	0.10	0.10	0.77

6) Assistance for construction of eri rearing house

a) Brief description:

Eri culture has been gaining popularity in many states because of the rising demand for good quality eri yarn for production of diversified products. Farmers have started adopting new technologies and modern practices as the returns are good. Construction of separate rearing house is very essential to ensure hygienic conditions, prevent contamination during eri silkworm rearing and to increase production and productivity.

A separate rearing house with adequate rearing space and sufficient ventilation can significantly improve the cocoon productivity. Since there has been a very good response for this component from the states and also to increase the cocoon production, it is proposed to continue the program during XII Plan, with enhanced budgetary support to cover many eri culture farmers. Assistance shall be provided to the beneficiaries who have raised the required plantation. In case of castor/tapioca cultivators, assistance for rearing house shall be provided with an agreement that they shall continue eri culture for a minimum period of 5 years.

b) Technical specifications/operational guidelines:

- Assistance shall be provided to farmers who have raised the required plantation of Kessuru/Castor/Tapioca in one acre of their land.
- The sequence of activities shall be undertaken on the following lines:
 - Identification of farmers after inspection of plantation. The beneficiaries shall not have availed any assistance for construction of rearing houses in earlier Plan periods.
 - Selection of location for construction of rearing houses and digging of plinth as per size - 15' x 25' (including 5' verandah on two sides).
 - Plinth construction with brick, stones and cement for 2.5' height, followed by earth filling. Construction of 10' height wall with 3.5' brick width and cement: sand mortar and fixation of door/windows frames.
 - Construction of posts with RCC/brick for strength to walls. Beneficiary may choose wider walls also well within the unit cost. Erection of roof with CGI sheet/zinc sheet/stone (2' x 2'), thatching grass/hay or other similar material rested on wooden /bamboo frames in line with the locally available materials.
 - False ceiling of bamboo mesh/foam supported with wire mesh or asbestos on wooden/bamboo frame. Plastering of walls and cementing of floor for maintaining good hygiene and fixing of door (6' x 3.5') and windows (4' x 3').
 - Rearing house to have capacity of rearing 100 dfls per crop.
- Farmers having one acre of own plantation and sufficient land for construction of rearing houses both in traditional and non-traditional states shall be selected by the implementing agency.
- Beneficiaries desiring to construct bigger size of rearing house or wish to use better quality of material shall do so from their own share. The assistance shall not exceed the unit cost.
- Assistance for construction rearing house shall be provided to castor/tapioca cultivators with an agreement that they shall continue silkworm rearing for a minimum period of 5 years.
- The field officer shall certify the construction of rearing houses as per the component and shall also certify that the farmers have not availed assistance for the same purpose from other programs of government or other agencies.
- The implementing agency shall make all entries related to the assistance extended, crop particulars, production, productivity, returns etc., in the beneficiary passbooks provided by them to the beneficiary from time to time.
- The implementing agency shall meticulously follow the relevant points of general guidelines of CDP for XII Plan while implementing the component.
- The utilization of rearing houses shall be monitored on a regular basis and the record of dfls brushed/cocoons produced by the beneficiary shall be maintained.

The activities required under the component along with its cost break-up details are indicated in the unit cost (refer Unit Cost book) of the component.

c) Physical targets and financial projections:

The details of sharing pattern, unit cost, physical targets and financial projections are given below:

Sharing Pattern	State Category	CSB	State	Beneficiary
	General Category	35%	35%	30%
	Special Category	80%	10%	10%

Zone	Unit Cost (Rs.)	Physical Target	Financial Projections (Rs. in crore)			
			CSB	State	Beneficiary	Total
Applicable to all zones	1,00,000	11,600 No.	81.10	18.10	16.80	116.00

7) Augmentation and maintenance of muga food plants with start-up tools

a) Brief description:

Muga, the golden yellow silk endemic to North-eastern region has been passing through the toughest challenge of the century with urbanization, climate change and pollution. And, thus there is a need for a multifaceted approach to reach the desired cocoon production. Production of muga silk withstanding the nature’s fury every time is a daunting task and there is need to optimize the augmentation of muga food plantation in North-eastern region and other suitable locations of the country to maintain the present status of 125 MT of muga cocoon production and phase-wise production Plan to reach the XII Plan target of 200 MT.

This is a continued component with more focus on augmentation of muga food plants with a requirement for promotion of integrated package for muga plantation development concept recommended by research institute of CSB with intercropping plans during initial period of establishment. Raising of systematic plantation of muga food plants shall result in cocoon productivity to achieve 200 MT by end of XII Plan.

b) Technical specifications/operational guidelines:

- Identification of beneficiaries for assistance shall be solely based on potential locations. Assistance shall be extended to individual beneficiaries but Cluster Mode Approach shall be given priority. Proposals for CBO groups under cluster mode approach shall be preferred for assistance.
- Accessibility, communication and transport facilities, present status of surrounding areas shall be considered for selection of beneficiaries.
- DOS shall link the proposal in project mode approach for area expansion ensuring posting of required staff and supporting workers for continued activity. Maximum 2 acres of muga food plantation per family ensuring sufficient space for construction of operational buildings shall be considered. Action Plan for seed production and distribution shall be in place at the time of seeking assistance. DOS shall ensure the arrangements for seed supply (government or private sector) to the beneficiaries.
- Agreement shall be executed to the effect that the plantation shall be put to use for muga silkworm rearing at least for a period of 5 years. The implementing agency shall make all entries related to the assistance extended, crop particulars, production, productivity, returns etc in the beneficiary passbooks provided by them to the beneficiary from time to time.
- The implementing agency shall meticulously follow the relevant points of general guidelines of CDP for XII Plan while implementing the component.
- Muga cocoon production shall reach the targeted level from fourth year of assistance and activity continued and monitored by a committee.

The activities required under the component along with its cost break-up details are indicated in the unit cost (refer Unit Cost book) of the component.

c) Physical targets and financial projections

The details of sharing pattern, unit cost, physical targets and financial projections are given below:

Sharing Pattern	State Category	CSB	State	Beneficiary
	General Category	60%	20%	20%
	Special Category	80%	10%	10%

Zone	Unit Cost (Rs.)	Physical Target	Financial Projections (Rs. in crore)			
			CSB	State	Beneficiary	Total
Applicable to all zones	31,000	6,000 acres	14.51	2.05	2.04	18.60

7A) Assistance for raising muga food plant nursery

a) Brief description:

Establishment of a systematic muga food plantation is very much essential for conducting muga silkworm rearing as a sustainable economic activity. muga silkworm rearing requires only som and soalu plants. Som is the most preferred food plant. All efforts are needed to ensure expansion of muga food plantation base and sustainable economic entrepreneurship. One such basic step is the timely supply of nutritious and high yielding planting material/variety. During XII Plan, it is proposed to popularize the muga cultivation phase-wise in North-eastern region and other suitable locations of the country to achieve the targeted production of 200 MT. This is an innovative component with more focus on ensured supply of required seedlings of food plant in the nearby vicinity. Each unit ensures supply of planting material to nearly 40-45 acres and can be either a government venture or an entrepreneur activity.

b) Technical specifications /operational guidelines:

- A nursery unit shall be raised covering an area of one acre consists of 27 beds (each measuring about 6m x 1.2m size).
- Beneficiary selection shall be done in potential locations with forward linkage to the component support under augmentation of muga plantation. Proposals for CBO groups under ‘Cluster Mode Approach’ shall be preferred for assistance.
- Identification of beneficiary farm/unit for assistance shall be based on ideal location towards ensuring successful raising of muga food plantation.
- Accessibility, communication and transport facilities, present status of surrounding areas that may come for pollution hazards shall be considered for selection of farm.
- DOS shall ensure linking of the proposal with project mode approach for area expansion.
- Beneficiaries shall be well trained in scientific raising of saplings/seedlings.
- The beneficiary shall use the seed material organized by DOS.
- An agreement shall be in place from the beneficiary to the effect that all the facilities provided to him shall be put to use in raising of muga food plants and muga cocoon production activities are continued for at least 3 years.
- The implementing agency shall make all entries related to the assistance on nursery planting material produced and distribution in the beneficiary passbooks provided by them to the beneficiary from time to time.
- The implementing agency shall meticulously follow the relevant points of general guidelines of CDP for XII Plan while implementing the component.

The activities required under the component along with its cost break-up details are indicated in the unit cost (refer Unit Cost book) of the component.

c) **Physical targets and financial projections:**

The details of sharing pattern, unit cost, physical targets and financial projections are given below:

Sharing Pattern	State Category	CSB	State	Beneficiary
	General Category	60%	20%	20%
	Special Category	80%	10%	10%

Zone	Unit Cost (Rs.)	Physical Target	Financial Projections (Rs. in crore)			
			CSB	State	Beneficiary	Total
Applicable to all zones	52,500	120 nursery units	0.47	0.08	0.08	0.63

7B) **Assistance for maintenance of existing muga food plantation**a) **Brief description:**

Muga silk sector is passing through the challenge of the century with people practicing muga cultivation looking for other avenues for their livelihood. Lacking of interest in the younger generation, urbanization, change in climate and pollution are the main factors for stagnancy in muga culture and thus, there is need for a multi-faceted approach to get the desired cocoon production. Production of muga silk from existing food plantations raised without any assistance or from the plantations raised with assistance extended earlier in initial years of establishment which have become neglected for various reasons without replenishing the nutrients and timely care for optimizing leaf yield and quality. The component has been proposed to provide required fertilizer inputs, and plant protection measures for pest and disease prevention in food plant maintenance. It is also proposed to assist for water conservation techniques including cattle proof trenching and rain water harvesting for increasing soil moisture during non-rainy seasons of the year.

b) **Technical specifications /operational guidelines:**

- Assistance shall be extended to the beneficiaries assisted in X Plan or before or non-assisted potential muga rearers for ensuring successful muga rearing. Farmers showing interest in revival of muga rearing and those having poor yield history shall be selected.
- Based on recommendations of technical committee, the assistance shall be extended towards maintenance/revival.
- A system for ensuring the effective utilization of inputs during rearing activity and reporting progress shall be put in place by respective DOSs. Effect of inputs/assistance on improvement in quantity and quality shall be documented and reported to CSB.
- Necessary technical guidance shall be ensured. The implementing agency shall make all entries related to the assistance extended, crop particulars, production, productivity, returns etc in the beneficiary passbooks provided by them to the beneficiary from time to time.
- The implementing agency shall meticulously follow the relevant points of general guidelines of CDP for XII Plan while implementing the component.

The activities required under the component along with its cost break-up details are indicated in the unit cost (refer Unit Cost book) of the component.

c) **Physical Targets and financial projections:**

The details of sharing pattern, unit cost, physical targets and financial projections are given below:

Sharing Pattern	State Category	CSB	State	Beneficiary
	General Category	60%	20%	20%
	Special Category	80%	10%	10%

Zone	Unit Cost (Rs.)	Physical Target	Financial Projections (Rs. in crore)			
			CSB	State	Beneficiary	Total
Applicable to all zones	9,500	3000 acres	2.22	0.32	0.31	2.85

