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# Scheme for Promoting Usage of Agro-textiles in North East Region & Implementation Guidelines



**Ministry of Textiles  
Government of India  
Udyog Bhavan  
New Delhi**



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#### MESSAGE

I am happy to release the operational guidelines prepared by Ministry of Textiles, Centre of Excellence for Agrotech and the North East State Governments for the "Scheme for Promoting Usage and Application of Agrotexiles in North Eastern Region". The scheme is designed with a focus on demonstrating the effectiveness of technical textiles in maximizing agricultural potential of the region and to improve the socio-economic and industrial conditions of the region, which in turn would benefit the entire nation.

I am proud that the joint and tireless efforts of the stakeholders are coming to fruition, and hope that these guidelines will result in generating the necessary momentum to drive growth in both the technical textiles and agricultural sectors in India. I hope that interactions throughout the technical textiles value chain will intensify and will result in stronger partnerships between government agencies and other stakeholders.

I wish this scheme all success.

( Dr. K.S. RAO )

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### Message

Agrotextiles have been demonstrated to be successful world over in not only protecting crops from many external factors, but also in improving agricultural yield.

I, therefore, take great pleasure in operationalising, the **“Scheme for Promoting Usage and application of Agrotextiles in North Eastern Region of India.”** Given the prominence of agricultural activities in the North Eastern Region, and the significant contribution of this region to the national agriculture sector, this region presents clear and significant opportunities for applying scientifically-proven agrotextile technology and benefitting from the improved productivity and quality of agriculture produce.

The ultimate objective of this scheme is to provide both the country's technical textile industry and primary sector necessary impetus to realize their potential and to harness the opportunities presented by global economic recovery. Through this scheme, we aim to translate the benefits that have been witnessed in international field trials and accelerate activity in the domestic agrotextile sector.

By the end of the next five years, I hope not only the Northeast Region, but the country as a whole will have witnessed and benefitted from the use of agrotextiles, and realised encouraging results.

India is headed towards making a significant place for itself in the global technical textiles market. I look forward to greater cooperation with all of the stakeholders, as we jointly strive towards realizing this scheme's success and objectives.

  
(Zohra Chatterji)

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# CONTENTS

<b>Sr. No</b>	<b>Title</b>	<b>Page No</b>
	<b>OVERVIEW OF SCHEME FOR PROMOTING USAGE OF AGROTEXTILES IN NORTH EAST REGION</b>	1
1.	Introduction	1
2.	Scheme Components	3
3.	Targets for the Scheme Components	5
4.	Implementation of the Scheme	6
5.	Fund Allocation	6
6.	Total Cost of the scheme	8
	<b>OPERATIONAL GUIDELINES FOR SCHEME FOR PROMOTING USAGE OF AGROTEXTILES IN NORTH EAST REGION</b>	9
7.	Scheme Implementation and Monitoring Authorities	9
8.	Scheme Components	11
9.	Independent Midterm and End-term evaluation of scheme	27
10.	Hiring of Project Coordinating Agency (PCA):	28
11.	Roles and Responsibilities of other Agencies involved in the scheme	29
12.	Glossary of Abbreviations Used	30

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# OVERVIEW OF SCHEME FOR PROMOTING USAGE OF AGROTEXTILES IN NORTH EAST REGION

## 1. INTRODUCTION

The North Eastern Region (NER) of India is composed of eight states: Arunachal Pradesh, Assam, Manipur, Meghalaya, Mizoram, Nagaland, Sikkim and Tripura. The region occupies about 5.6% of the total geographical area of the country. The varied climate, altitude, edaphic conditions, etc. lead to enriched biodiversity and formation of salubrious cultural and social environments in the region. NER can be further subdivided into three geographic regions: plain valley, medium hills and higher elevation, which house vast environment and social diversity.

A large number of horticultural crops are grown in the north eastern region; crops like banana, mango, and a large number of citrus and floral species are native to this region. NER contributed nearly 4% of the country's horticulture production in 2010-11, and is collectively the leading producer of fruits, supplying nearly 12% of India's litchis, 47% of pineapple, and nearly 7% of the country's citrus fruits. NER is also a leading producer of vegetables, like cabbage, cauliflower, and sweet potato, in India. Among the states of the NER, in terms of fruit production and area, Assam occupies maximum followed by Arunachal Pradesh and Tripura. Similarly in vegetable production Assam has occupied maximum in production and covered area under the crop.

Given the prominence of agricultural activities in the North Eastern Region, and the significant contribution of this region to the national agriculture sector, this region will greatly benefit from the application of agrotextile technology. While agricultural activities are mostly dependent on natural conditions such as sunlight, water, climate (wind, hail, humidity), external factors (birds, weeds, insects, etc.) and post-harvest handling of produce, absence of control factors expose the region's agricultural sector to risks of unsatisfactory yield, marred quality of produce, damages to the produce, regional limitation on cultivation, and seasonal limitation on cultivation.



Figure 1: Different product mix representation in the NER

Agrotextiles are used in farming, animal husbandry, sericulture and horticulture to control the hazardous influences of environmental and climactic factors on crop production and cattle breeding, regulate nutrient level intake of plants, silk worm rearing and assist in process and post-harvest operations. Agrotextiles have been demonstrated to be successful world over in not only protecting the crops from any external factors, but also in improving agricultural yield. Researchers in developed countries have proven the advantages of agrotextiles in improving per hectare productivity and quality of produce, specifically for horticulture and floriculture crops, through numerous studies and onsite trials. Field trials and pilot studies have demonstrated the following benefits of usage of agrotextiles:

- 
- Increased productivity (50-80%, depending upon the nature of crop)
  - Premium quality of produce (increased income by 50- 60%)
  - All season and any region cultivation of crops
  - Early and even ripening of produce (more harvest cycles per year)
  - Reduced water consumption (10-15%)
  - Minimised use of fertilizers and pesticides (25-30%)
  - Prevention of damages owing to birds, insects, hail, sunburns, falling off of ripened fruits (100% protection)
  - Weed control, etc.

As a result, the use of Agrotextiles is increasing daily on a global level, with farmers in industrial and developed countries using agrotech products to reduce sunburn damage to crops and evaporation of irrigation water, as well as, the menace from birds and pests. Presently, common Agrotextile products like mulch mats, shade nets, soil covers, and protective nets are being used all over the world.

While the cultivation of horticultural crops and floriculture crops can be further enhanced with use of protective Agrotextiles, their inclusion in the XIIth Five Year Plan is of vital importance to the national economy and agriculture sectors. Nonetheless, the north-eastern region in particular is yet to adopt this innovative technology on a larger scale. It is therefore worthwhile to promote Agrotextiles in India's north-eastern states for introducing modern cost effective technology in the NER and also to boost the economy of the states in this region. The widely used agrotextile shade net house is represented in the figure 2 below.



**Figure 2: Pictorial representation of shade net house module**

The aim is to utilize Agrotextiles in improving the horticulture and floricultural produce of the NER states. With increasing acceptability of Agrotextiles, entrepreneurship in the area of agrotextiles production in the country will get an impetus. The growth of usage of Agrotextile products in the country will thus benefit both agriculturists as well as textile entrepreneurs in the country.

In order to promote and increase the usage of Agrotextiles, in agriculture, horticulture/floriculture, sericulture and allied activities in the North Eastern Region, Ministry of Textiles has formulated a Scheme for Promotion of Usage of Agrotextiles in the North Eastern Region, with two components for a period of five years at a cost of Rs 55 crores.

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## 2. SCHEME COMPONENTS

The scheme components are as under:

**Component I. Creating awareness, setting-up of Demonstration Centres and developing capacities**

**Component II. Provide/disburse agrotextile kits in the NER states**

### 2.1. COMPONENT I: CREATING AWARENESS, SETTING-UP OF DEMONSTRATION CENTRES AND DEVELOPING CAPACITIES

2.1.1. This Component will have two sub-components:

- a. Creating awareness on usage of Agrotextile products in the North-East region of the country through a series of awareness programmes and media publicity.
- b. Creating demonstration set-up for demonstrating the benefit of usage of Agrotextile products suitable for the region and building local capacities in collaboration with the agrotextile manufacturers and relevant State Agriculture bodies, Agriculture Universities, Krishi Vigyan Kendras (KVK), NGOs, etc.

2.1.2. The first sub-component will be addressed through following interventions:

- i. Organizing seminars/workshops for farmers and other beneficiary stakeholders
- ii. Publication of articles on advantages of usage of agrotextile products in local magazines, new publications focused towards agriculture
- iii. Promotion of usage of Agrotextiles by participation in agricultural and allied exhibitions by Indian manufacturers and suppliers of agrotextile products
- iv. Publicity via radio channels in local language
- v. Publicity via television programmes focused on cultivators.
- vi. Any other activity related to the above objectives.

2.1.3. The second sub-component is for creating demonstration set-up to demonstrate the benefit of usage of Agrotextile products suitable for the region, in collaboration with agrotextile manufacturers and relevant State Agriculture bodies/universities, Krishi Vigyan Kendras (KVK), NGOs, etc with technical support from the COE. The demonstration centers will be established to demonstrate the individual application of agrotextile products with different combinations as per the requirement and produce of the region. Such demo centers may consist of the following indicative list of agrotextile products:

- i. Shade net house
- ii. Ground Cover
- iii. Hail protection nets
- iv. Bird protection house
- v. Vermicompost bed
- vi. Fencing nets
- vii. Wind-breaking nets
- viii. Low tunnel for crop protection



**Figure 3: Representation of low Tunnel /Crop Cover**



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2.1.4. This sub-component-I will comprise of the following activities:

- a. Identification of State Agriculture/sericulture bodies/universities, KVKs, NGOs, etc. with expertise in protective cultivation in the region by the concerned State Govt.s that would provide land and premises for creating demonstration centers: State Agriculture bodies, KVKs, NGOs, etc.
- b. Identification of suppliers of relevant agrotexile products and installation thereof: The manufacturers of relevant agrotexile products with the capacity to install and maintain the demonstration centers will be eligible for establishing demonstration centers. They will empanelled by Centre of Excellence for Agrotextiles, SASMIRA, COE Agrotech through an open-tender process based on certain criteria to be defined in the corresponding Request for Proposal;
- c. The demo centre shall be jointly run by the of State Agriculture bodies/universities, KVKs, NGOs who provide the land and the supplier/installer of the demo-centre. They will also be jointly responsible for capacity building programmes for the farmers and other stakeholders in the region.
- d. Planning and layout for installation of the products: Technical design and layout of the demonstration centers would be provided by COE: Agrotech in consultation with agriculture experts, Agriculture Universities, KVKs, etc. to suit the regional and crop needs;
- e. Installation of facilities at the demonstration center: On the basis of the design, layout and specification provided by COE Agrotech, the supplier/installer shall carryout the installation of relevant agrotexile and associated material;
- f. Monitoring the performance in terms of crop growth, quality of produce and yield parameters: State Agriculture bodies, KVKs, Agriculture Universities/COE Agrotech, etc. will monitor the performance and efficacy of the use of Agrotech products and submit reports/ data and other inputs, for evaluation of the scheme from time to time. MIS formats to be prepared by COE with agrotexile experts

2.1.5. Apart from the above further interventions; developmental activities and R&D efforts to be undertaken by COE Agrotech under the scheme are as follows:

- a. Based on the demonstration trials, as at 2.1.3 above in these demonstration centres, the specifications of the products suitable for the NER would be developed to enable their manufacturing in the country and will be recommended to BIS and other standards-monitoring agencies, as necessary.
- b. Apart from demonstration set-up, further extrapolation of suitability of Agrotextiles to other crops in the NER would be carried out based on laboratory simulation studies by COE Agrotech. Study on the performance of various types of Agrotextiles laboratory tests and simulation modeling for their influence on control of environmental factors like soil, temperature, heat and light and also the plant growth will be carried out.

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- c. After establishment of the improvement in the yield in qualitative and quantitative terms, COE Agrotech will perform the cost – benefit analysis of the agrotextile products to find economic viability of use of these products in agriculture, sericulture, horticulture and allied areas.
  - d. COE Agrotech would assist in preparation of the standard specification for the Agrotextile products to be used for the NER to be approved by appropriate authorities. The Centre of Excellence will also assist in development and certification of Agrotextile products.
  - e. Schemes for appropriate incentives to be worked out in consultation with State Agriculture Departments so as to popularize the usage of Agrotextiles in the NER.
  - f. Develop Capacities amongst the State Governments and other agencies like Krishi Vigyan Kendras and dissemination of project results to the end users and the stakeholders. Continued dissemination of information with awareness programmes as well as buyer-sellers meet would empower the region with protective cultivation practices. The farmers would be assisted through trainings/ workshops on proper cultivation practices on usage of Agrotextile products.
  - g. Facilitating backward-forward market linkages for demand and supply of agrotextile products to ensure availability, access and adequate consumption of agrotextile products in NER, while promoting the growth of entrepreneurs and support systems in this segment.

## **2.2.COMPONENT II: DISTRIBUTION OF AGRO-TEXTILE KITS IN THE NER STATES:**

2.2.1.This Component envisages:

- a. Providing ready agrotextile kits to beneficiary farmers containing the material, instructions, right methods and practices when using agrotextile products;
- b. Installation of the kits
- c. Handholding support in usage of agriculture kits.

## **3.TARGETS FOR THE SCHEME COMPONENTS**

### **3.1.COMPONENT I: CREATING AWARENESS, SETTING–UP OF DEMONSTRATION CENTRES AND DEVELOPING CAPACITIES:**

Within the overall allocation of funds, the scheme is likely to support the following indicative number of demo centres in all 8 NER states:

- a. Number of demonstration centers per State:3 to 4
- b. Total number of demonstration centers to be established: 24 to 32

### **3.2.COMPONENT II: DISTRIBUTION OF AGROTEXTILE KITS IN THE NER STATES:**

Agrotextile kits will be disbursed to the beneficiaries (local farmers/sericulturists/horticulturists etc). Central Government will bear 90% of the costs of the kits, and the remaining 10% will be borne by the beneficiary. The beneficiaries may be encouraged to avail items in the kit in various combinations to yield maximum benefits, or any single item as per the requirement, based on actual expenditure subject to the overall ceiling of Rs 5 Lakhs per beneficiary. The supplied agrotextile

products will be BIS Standards compliant (if available) or would be certified by COE- Agrotech. At least 700 kits may be disbursed to the farmers in 8 states during the period.

Dovetailing with existing State Government schemes may also be considered by AMC for supporting expense of 10% of cost for agrotexile kits to be borne by beneficiaries.



**Figure 4: Vermicomposting under shade net house module**

#### **4. IMPLEMENTATION OF THE SCHEME**

Textiles Commissioner, Mumbai, will be the nodal officer directly in charge for the scheme and OTXC will act as the Implementing Agency (IA) for the Project.

#### **5. FUND ALLOCATION**

##### **5.1. COMPONENT-I: CREATING AWARENESS, SETTING-UP OF DEMONSTRATION CENTRES AND DEVELOPING CAPACITIES**

Indicative costs for establishment and operation per demonstration center:

<b>S. No.</b>	<b>Description</b>	<b>Estimated Costs (in Lakhs)</b>
<b>Cost for creating awareness and other costs for soft interventions for five years</b>		
1	Workshops / Seminars / Promotional efforts, etc.	226.00
2	Market studies / User Manual/ Publications material, etc.	80.00
3	Market Development Support	50.00
4	Hiring of experts / consultants	150.00
5	Testing, products customization, simulation modeling, R&D activities, etc.	100.00
6	Independent Evaluation (midterm and end term) of entire scheme	50.00
Sub Total A		656.00
<b>Setting-up of demonstration centres in all 8 NER states for three years</b>		
1	Establishment and maintenance of demonstration center (including cost of agricultural material, manpower and utility and labour for 3 years)	
2	Capacity building of farmers and other stakeholders	
Sub Total B: Approximate Cost of Demonstration centers		944.00
<b>Total (A+B)</b>		<b>1600.00</b>

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### 5.1.1. Demonstration centre Modules

A typical demonstration centre may have the following combination of agrotexiles product demonstration depending upon the agro-climatic condition and agro-product mix targeted in the demonstration center. The cost of each demo-centre may, therefore, vary depending upon the modules being demonstrated in that particular centre and the size of the centre within the overall scheme budget.

- a. Shade net + Ground Cover + Crop covers
- b. Ground cover + Shade net + Bird protection nets
- c. Shade net + Vermicompost bed + Anti-hail Net
- d. Ground Cover + Crop covers + Vermicompost bed
- e. Bird protection nets + Ground Cover + Crop covers
- f. Anti-hail Net + Ground Cover + Crop covers



### 5.1.2. Duration of operation and support under the scheme

Each demonstration centre so established under this scheme shall be financially and technologically supported for a period of 3 years under this scheme. Thereafter, the pilot demonstration centers are expected to achieve self-sufficiency. The State Governments will be encouraged to work out a legacy plan to continue the demonstration centres through the owners of the centres. The support to the demonstration center may, however, be continued beyond the 3-year under the scheme if found to be useful, whereby new technologies could be attempted to be showcased as a permanent working exhibitions for agrotech products.



**Figure 5: Representation of Ground cover module**

## 5.2. COMPONENT II: PROVIDE/DISBURSE AGROTEXTILE KITS IN THE NER STATES

To supplement the technology demonstration through the establishment of demonstration centres in each state in the NER agrotexiles kits shall also be distributed to eligible farmers/horticulturists/sericulturists etc. during the 5 year period of the scheme at a total cost of Rs 36.50 Cr. The kits will consist of any one or more of the agrotexiles material listed at para 2.1.3 above along with its accessories/structural material depending upon the local conditions. However, total cost of agrotexiles kits to be distributed to a beneficiary under the scheme shall not exceed Rs 5.0 lakhs per beneficiary. The GOI will bear 90% of the cost of the kit and the beneficiary will bear the remaining 10% of the cost. However, concerned State government entities may support the beneficiary to bear the beneficiary's cost share of the agrotextile kit as they deem fit under their own schemes/programs.

### 5.3. PROJECT COORDINATING AGENCY (PCA)

A Project Coordinating Agency (PCA) will be engaged for the scheme who will do the onsite monitoring and ensure co-ordination among all partners and stakeholders of the scheme.

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## 6. TOTAL COST OF THE SCHEME

Cost of Component –I :	Rs 16.00 Crs
Cost of Component- II:	Rs 36.50 Crs
Total Cost of Component-I & II:	Rs 52.50 Crs
Administrative Cost @4.5% of project cost:	Rs 2.50 Crs
Total Cost of the Scheme:	Rs 55.00 Crs

### 6.1. PROJECT ADMINISTRATION CHARGES

Project administration charges will include administrative/ concurrent Monitoring such as fee of engaging PCA, meeting expenses, local travel expenses, TA/DA expenses to COE Agrotech, etc. A total of Rs 250 lakhs is estimated to be provisioned for administration expenses, at 4.5% of the total project cost of Rs 55 crores.

### 6.2. YEAR-WISE COSTS OF THE SCHEME

The estimated duration of the project is 5 years with effect from the date of inception of the project.

#### Year-wise schedule for financial costs to be incurred

	Year 1	Year 2	Year 3	Year 4	Year 5	Total (Rs in Lakhs)
Component 1	78	802	515	125	80	1,600.00
Component 2		275	695	1230	1450	3,650.00
Administrative cost		100	50	50	50	250.00
<b>Total</b>	<b>78</b>	<b>1177</b>	<b>1260</b>	<b>1405</b>	<b>1580</b>	<b>5,500.00</b>

The bulk of the expenses under this scheme are expected to be non-recurring expenses, committed towards the establishment of the demonstration centers (Component – I) and distribution of Agrotexiles kit (Component – II). Approximately 20% of the expenses will be expected to be recurring expenses that will fund the maintenance and continual operation of the demonstration centers under the NER Agrotech scheme.

The above-mentioned year-wise cost estimation for individual activities and components of the scheme are indicative and can be re-appropriated within the overall approved budget based on experience gained subject to approval from Empowered Committee.

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## OPERATIONAL GUIDELINES FOR SCHEME FOR PROMOTING USAGE OF AGROTEXTILES IN NORTH EAST REGION

*The following operational guidelines shall be followed for implementation of the scheme:*

### 7. SCHEME IMPLEMENTATION AND MONITORING AUTHORITIES

7.1. The scheme will be implemented by the Govt. of India in coordination with the respective State Governments in the NER, Nodal Ministries in the Centre, North East Council, DONER, and Technical partners like the Centres of Excellence (COE) under Technology Mission on Technical Textiles (TMTT), Technical and Agriculture institutes and Universities in the North East, Krishi Vigyan Kendra (KVK), Farmer clubs, and Manufacturers and suppliers of Agro-textiles materials and other agencies as may be required from time to time.

7.2. The main implementing agency of the scheme will be Office of Textiles Commissioner (OTXC), Mumbai.

- Textiles Commissioner will act as a nodal officer and Implementing Agency (IA) for the scheme.
- COE Agrotech will provide technical inputs and carry out other functions as indicated in respective scheme components hereunder.
- A Project Coordinating Agency (PCA) will be engaged for the scheme who will do the onsite monitoring and ensure coordination among all partners and stakeholders of the scheme
- The technical institutes/international consultants may be involved as and when required for providing technical guidance, including establishment of agrotextile demonstration centres.

7.3. The project will be managed and monitored through a two-level appraisal and approval process as under

#### 7.3.1.State-level Project Monitoring and Implementation Committee

A State-level Project Monitoring and Implementation Committee shall be constituted in each State under the Chairmanship of Secretary/ Commissioner, Agriculture department of the respective State Governments along with representatives from concerned departments as may be suggested by State Governments concerned. The composition of the Project monitoring and Implementation Committee shall be as follows:

1.	Secretary / Commissioner level officer as nominated by State Government concerned	Chairman
2.	Representatives from State Agriculture / Horticulture / Sericulture Departments of the State concerned	Member
3.	Representative from OTXC	Member
4.	Field level Officers of the State Govt.s concerned responsible for implementation of the scheme	Member

5.	Director, SASMIRA (COE Agrotech)	Member
6.	Dean, Agriculture University or any other institute within the State to be recommended by the State Govt. concerned	Member
7.	Representative of the Demo centre once the demo-centre is identified/established	Member
8.	Executive of the PCA in charge of the State concerned	Member
9.	Representatives from State Agriculture / Horticulture Department as nominated by chairperson	Member Secretary

The chairman may co-opt the Subject Matter specialist from industry/academics as per requirement.

Terms of Reference of the State Level Project Monitoring and Implementation Committee (PMIC) will be as follows:

- I. PMIC will evaluate and select the suitable site for establishing the Demonstration Center and recommend it to Apex Monitoring Committee for approval.
- ii. PMIC will also mobilize KVKs and Farmer Club to identify and recommend beneficiaries for agrotexile kits. The PMIC will scrutinize the proposal and approve the agriculture kit/package for assistance.
- iii. Other roles & responsibilities of the PMIC as specified in the detailed operational guidelines.

### **7.3.2. Apex Monitoring Committee (AMC)**

The powers for approval of various components under the scheme and monitoring thereof shall rest with the Apex Monitoring Committee in the Ministry of Textiles. The composition of the Committee shall be as under:

1.	Joint Secretary, Technical Textiles, Ministry of Textiles	Chairman
2.	Textiles Commissioner	Member
3.	Representatives from State Agriculture/ Horticulture department (where the scheme is implemented) not below the rank of Secretary/ Commissioner	Member
4.	Director, Technical Textiles, Ministry of Textiles	Member
5.	Representative of IFW, Ministry of Textiles	Member
6.	Director, SASMIRA (COE Agrotech)	Member
7.	Representatives from OTXC of the rank of Jt. Textile Commissioner	Member Secretary

The chairman may co-opt the Subject Matter specialist from industry / academics as per requirement. Terms of Reference of the Apex Monitoring Committee (AMC) are as follows:

- i. The Committee will approve the proposal for establishment of demonstration centers, monitor the progress of project at each stage against the set targets/ deliverables
- ii. The Committee will approve the release of funds to various agencies on successful completion of targets/ deliverables, as required.
- iii. Other roles & responsibilities as specified in the operational guidelines.

### 7.3.3. Empowered Committee

There will be an Empowered Committee (EC) headed by the Secretary Textiles which will have overall supervisory role for monitoring the implementation of the NER scheme. The Empowered Committee will have the powers to reallocate the costs between individual activities and scheme components within the overall allocation for the scheme. The composition of the Empowered Committee shall be as under:

1.	Secretary (Textile)	Chairman
2.	AS&FA, Ministry of Textiles	Member
3.	Joint Secretary, Ministry of Textiles (handling Technical Textiles)	Member
4.	Adviser, Planning Commission	Member
5.	Representatives from DONER (not below the rank of Joint Secretary)	Member
6.	Representatives from Ministry of Agriculture (not below the rank of Joint Secretary)	Member
7.	Representatives from Dept. of Expenditure, Ministry of Finance (not below the rank of Joint Secretary)	Member
8.	Director, SASMIRA	Member
9.	Textile Commissioner	Member Secretary

The Committee may meet from time to time to monitor the progress of the scheme and sort out inter ministerial/departmental issues, including funds reallocation between different scheme components and activities, and issue such direction to various implementing agencies as may be required.



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## 8. SCHEME COMPONENTS

### 8.1.COMPONENT-1(A): SOFT INTERVENTIONS: CREATING AWARENESS, SETTING-UP OF DEMONSTRATION CENTRES AND DEVELOPING CAPACITIES, ETC.

**8.1.1. Creating awareness on usage of Agrotextile products:** The aim of this sub-component of the scheme is to make the agricultural farmers/ horticulturists/ sericulturists and other potential users of the agro-textiles material in the NER about the beneficial use of the Agrotextile products. The awareness campaigns will be carried out by the following modes:

- a) Organization of road shows, workshops, seminars and exhibitions etc.
- b) Various programmes and talk shows that may be aired on Radio (e.g. All India Radio)/ Television (e.g. Krishi Darshan on Doordarshan).
- c) Various awareness programmes aided by the print media, which may include articles in magazines for farmers, vernacular newspapers, pamphlet distribution such as Kisan Ki Awaaz, Agriculture Today etc.
- d) Awareness campaigns may also be organized on the World Wide Web (internet) at various platforms such as [www.isapindia.org](http://www.isapindia.org), <http://farmnest.com/> etc.
- e) Other means for awareness creation may also be taken up on merits.

#### 8.1.1.1. Eligible Agencies

The following agencies will be eligible to take up the awareness campaigns under the scheme which will be funded from relevant heads under sub-component-(a) of Component-1:

- i Textile Research Associations, Centers of Excellences, Regional OTXC in the NER, Reputed Industry Associations assisting the industry in organisation of awareness campaigns such as FICCI, ICC, CII and ITTA etc.
- ii. Various agricultural universities and agriculture research organizations such as Assam Agricultural University, Navsar Agricultural University, Indian Council of Agricultural Research etc.
- iii. Various farmer clubs, KVKs, etc. across the NER

Any one or more such eligible agencies may submit a proposal with the theme and outline of the campaign to the Office of the Textiles Commissioner through the State level Programme Monitoring and Implementation Committee (PMIC) for consideration of the proposal subject to availability of funds and suitability of the campaign theme for the scheme.

#### 8.1.1.2. Operational Modalities

The operational modalities for organizing awareness campaigns shall be inter alia as follows:

- a) Modes of awareness campaigns to be adopted for a particular State and on global basis for the entire NER States will be finalised by the Implementing Agency (IA) in consultation with the State

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PMICs and other stakeholders from time to time.

- b) The calendar for these events/campaigns shall be finalised well in advance and publicized widely.
- c) Eligible agencies as at para 8.1.1.1 above will be asked to prepare a detailed proposal on the structure and contents of the awareness campaigns by the means of seminars/ workshops/ road shows/ exhibitions/ Radio/ Television/ print media and combinations thereof.
- d) Programme schedule along with all relevant details such as structure and contents of the awareness campaigns will be submitted to the OTXC (IA) for approval through the State level PMIC. After the approval the agency will be asked to execute the proposal submitted.
- e) Agencies will also be responsible for post event/campaign report, follow- up and feedback to the implementing agency on the effectiveness of the campaign.
- f) A schedule of activities will be prepared every year by the IA in consultation with PMIC and will be submitted to AMC for its consideration and approval.

#### 8.1.1.3. Eligible fund support

S. No.	Description	Estimated Costs (in Lakhs)
<b>Cost for creating awareness and other costs or soft interventions for five years</b>		
1	Workshops / Seminars / Promotional efforts, etc.	226.00

Funding under this activity would be used both centrally by Ministry of Textiles for media/publicity activities, as well as at the regional level. Funding to the eligible agencies for awareness campaign under this scheme shall be as under:

- I. Funding for this activity will be on actual expenditure basis subject to an upper ceiling:
- ii. Upper ceiling for organizing road - shows /promotional efforts using print media, multimedia, radio, online platforms etc. shall be Rs. 2 lakhs per individual activity/event.
- iii. Upper ceiling for organizing State level seminars/ workshops shall be Rs. 2 Lakhs per event/activity. However, upper ceiling for seminars/ workshops involving entire North East shall be Rs 4 Lakhs per event/activity
- iv. Upper ceiling for organising exhibitions shall be Rs 5 Lakhs for State level exhibitions and Rs. 10 lakhs for NER exhibitions per exhibition / event.
- v. Upper ceilings for content design, programme recording and airing the campaign on All India Radio and FM channels in the NER shall be Rs 3 Lakhs per campaign.
- vi. Upper ceiling for content design, programme recording and airing Programmes and talk shows on television (DD) may be eligible for fee upto Rs 10 Lakhs per show.

The above upper ceilings may however, be relaxed by the AMC on the recommendations of the Textile Commissioner on merit for specific events.

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#### 8.1.1.4. Release of Funds

OTXC would directly release the payment to the concerned agency based on the satisfactory completion of the task. Payment will be done in installments on the achievement of milestones defined in the MoU/work order, while awarding of the work

**8.1.2. Market studies / User Manual/ Publications material, etc.:** The aim of this sub-component of the scheme is to create appropriate user manuals and other

publication materials such as leaflets/pamphlets, posters, etc. for the use of the users / farmers/ horticulturist / sericulturists and other stakeholders and to conduct market studies for the products and publish such reports which may be useful for further policy decision by the Govt. and investment decision by the investors.

#### 8.1.2.1. Eligible Agencies

COE Agrotech will be responsible for preparation of user manual and other publication material to support the awareness program during the implementation of the scheme and the agrotexile kits distributed to beneficiaries. SASMIRA shall also organize market studies and preparation of market study reports to be submitted to the GOI from time to time. PCA would assist SASMIRA in this activity.

#### 8.1.2.2. Operational Modalities

Proposals will be submitted by COE Agrotech to OTXC for these requirements from time to time depending upon the actual requirements of these activities. The proposals shall be routed through State level PMICs which will provide their inputs on the user manuals and other publication materials. Once the proposal is approved by the O/o Textiles Commissioner, based on the recommendation of the PMIC, SASMIRA will follow the procedures laid down in GFR of Government of India for all procurement and printing activities for such manuals and other material etc, wherever applicable. The user manuals and other such documents for agrotexiles products shall also be published in local North Eastern State's languages for beneficial use of the stakeholders.

As far as market studies and preparation of study reports are concerned, SASMIRA/ PCA will carry out the need based studies and submit the reports to AMC.

#### 8.1.2.3. Eligible Fund support and Release of Funds

Total fund support under this sub-component is as follows:

S. No.	Description	Estimated Costs (in Lakhs)
<b>Cost for creating awareness and other costs or soft interventions for five years</b>		
1	Market studies / User Manual/ Publications material, etc.	80.00

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Funding to SASMIRA for this activity will be done in installments on the achievement of defined milestones. The milestones to be achieved would be defined in the MoU/work order while awarding of the work. OTXC would directly release the payment to COE Agrotech, SASMIRA.

**8.1.3. Market Development Support:** The aim of this sub-component under the scheme is to provide assistance to indigenous manufacturers and stakeholders of agro-textiles products to showcase their products and its utility in NER. The activities under this sub-component are targeted at apprising institutional buyers, key stakeholders, etc, about the technical specifications and other quality parameters required for meeting the particular requirements of NER, which can be addressed using agrotexiles solutions.

Support will be provided to Indian stakeholders for participating in reputed domestic industry fairs, buyer-seller meets, exhibitions and similar events in which domestic producers would be showcasing the relevant products and demonstrating the benefits of application of agrotexiles products in NER. Participation in such events should enable these stakeholders to enhance the market competitiveness of Indian agrotexile products.

#### **8.1.3.1. Eligible Agencies**

The following agencies will be eligible to take up the market development programmes under the scheme which will be funded from relevant heads under sub-component-(a) of Component-1:

- I. Indian manufacturers and consumers of agrotexiles. Units have to be registered with OTXC for availing assistance
- ii. Textile research associations, Centers of Excellences, Regional OTXC in the NER, reputed industry associations, such as FICCI, ICC, CII and ITTA etc, which are assisting industry in organizing awareness campaigns
- iii. Various agricultural universities and agriculture research organizations such as Assam Agricultural University, Navsari Agricultural University, Indian Council of Agricultural Research etc.
- iv. Various farmer clubs, KVKs, etc. across the NER

The entity shall not be under investigation/ charged/ prosecuted/ debarred/ blacklisted under the Foreign Trade Policy of India or any other laws relating to export and import business. The applying entity shall not be availing similar benefits for the same event under any other scheme of Ministry of Textiles.

Any one or more such eligible agencies may prepare a proposal for support for market development programmes to the OTXC through the State level Programme Monitoring and Implementation Committee (PMIC) subject to availability of funds and suitability of the program for the scheme. The support under the scheme is restricted to one event for any applying entity in a year.

#### **8.1.3.2. Operational Modalities**

- I. The applying entity shall submit the application for market development support with a minimum of 20 days of clear advance notice prior to the event. The entity will also be required to

submit a programme schedule, likely benefits and impact of the programme, and estimated budget for participation. Application materials may be sent electronically by email to PMIC, as well.

- ii. Proposal of providing market development support will be first considered and recommended by PMIC
- iii. The proposal will be considered and approved by OTXC based on the extent of industry and stakeholder participation and product range being covered. OTXC will examine and issue approval letter to the eligible agency within 5 working days of the receipt of the intimation

### 8.1.3.3. Eligible Fund support and Release of Funds

Assistance will be permissible on travel expenses by air in economy excursion class fair, lodging, and charges of the built-up display stall. Funding to the eligible entities will be restricted to 50% of the permitted expenditure for such activities subject to an upper ceiling of Rs. 50,000 per individual

S. No.	Description	Estimated Costs (in Lakhs)
<b>Cost for creating awareness and other costs or soft interventions for five years</b>		
1	Market Development Support	50.00

OTXC will directly release the payment to the concerned agencies on reimbursement basis following submission of expenditure statements and supporting documents. The claim along with the declaration duly completed and signed by a Chartered Accountant shall be submitted to OTXC along with the following documents within 14 days following the completion of the event/activity:

- Details of participation and event
- Documentary evidence of expenditure, such as original air ticket, boarding pass, event registration details and stall charges, and hotel bills

**8.1.4. Hiring of Expert / Consultants:** The aim of this sub-component under the scheme is to enable the implementing agency to hire technical experts and consultants to provide necessary auxiliary technical and consultancy support to COE Agrotech that the COE Agrotech is not able to furnish with its internal resources. Activities in which the consultants and experts may assist the COE Agrotech during scheme implementation would include inter-alia:

- Designing demo centers to make them effective and self-sustainable within three years
- Product customization, R&D, simulation modeling specification design for agrotextile products used in individual demonstration centers and in the agrotextile kits distributed by individual vendors
- Creation of the instructions, methods and manuals on use of agrotextile products included in the agrotextile kits disbursed to beneficiaries
- Technical content design and delivery for capacity-building, awareness, and training programs conducted by COE Agrotech to promote the use of agrotextile products
- Identification of international best practices and technical content support for market studies conducted by COE Agrotech to promote the use of agrotextile products in NER

- While the COE Agrotech may hire experts / consultants, as above, the overall responsibility for the scheme activity as assigned to the COE cannot be transferred to the expert/consultant and would continue to vest, with the COE Agrotech

#### **8.1.4.1. Eligible Agencies**

Agencies/individual experts in the fields of agrotexels, agriculture and allied activities with proven experience

in providing technical support for application and development of agrotexile products shall be eligible for consideration for engagement as an expert/consultant by the COE Agrotech for the scheme. The entity shall not be under investigation/charged/prosecuted/ debarred/ blacklisted under any rules, regulations, laws, and policies of Government of India or the State Governments

#### **8.1.4.2. Operational Modalities**

COE Agrotech will identify the need and justification for engaging an expert/consultant, the roles and responsibilities that may be entrusted to him, and duration of such engagement based on field experience and technical requirement, and submit a proposal to AMC. The proposal for hiring the consultant should also specify the terms of reference, expected outcomes, and expected remuneration, etc. AMC shall examine the proposal and permit COE Agrotech to hire experts or consultants for the project following the procedure laid down in GFR of Government of India. The remuneration and terms and conditions of engagement, including the duration and deliverables/milestones shall be finalized in consultation with the AMC at the time of hiring of the expert/consultant. COE Agrotech will submit the performance report of the hired consultant/expert based on agreed milestones to AMC from time to time for release of funds.

The COE Agrotech will sign a contract/work order with the expert/consultant clearly outlining the deliverables and measurable milestones, and other terms of engagement, including remuneration, etc.

#### **8.1.4.3. Eligible fund support and release of funds**

Funding available under this sub-component is as under

<b>S. No.</b>	<b>Description</b>	<b>Estimated Costs (in Lakhs)</b>
<b>Cost for creating awareness and other costs or soft interventions for five years</b>		
1	Hiring of experts / consultants	150.00

Based on the report of the performance of the consultant/expert received from the COE against milestones identified in the contract, OTXC will directly release funds to COE Agrotech for payment to the aforementioned experts/consultants. Funding to SASMIRA for this activity will be done in installments on the achievement of defined milestones. The milestones to be achieved would be defined in the MoU/work order, while awarding of the work.

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Based on the report of the performance of the consultant/expert received from the COE against milestones identified in the contract, OTXC will directly release funds to COE Agrotech for payment to the aforementioned experts/consultants. Funding to SASMIRA for this activity will be done in installments on the achievement of defined milestones. The milestones to be achieved would be defined in the MoU/work order, while awarding of the work.

**8.1.5. Testing, products customization, simulation modeling, R&D activities, etc.:** The aim of this sub-component under this scheme is to support R&D activities with respect to application of agro-textiles to specific areas of application, product modification and customization, testing and simulation modeling, etc, based on the experiences gained from the demonstration centres and agrotexile kits supplied to the users in NER. This sub-component will also cover services provided by COEs for testing and certification of the products to be used for establishment of demonstration centres and agrotexile kits to be distributed.

#### **8.1.5.1. Eligible agencies**

COE Agrotech will be responsible for carrying out such activities and may co-opt any of the agricultural universities, horticulture and/or sericulture research organizations and any such organization with R&D set up to carry out these activities.

#### **8.1.5.2. Operational Modalities**

Product testing and customization will be a continuous activity under the scheme and cost incurred by the COE in terms of utilization of testing equipment and actual manpower engaged for testing and certification and customization of the product will be submitted to OTXC. Funding to SASMIRA for this activity will be done in installments based on achievement of agreed-upon milestones. COE Agrotech will not charge vendors for providing testing services for products to be used under this scheme in demonstration centre and agrotexile kits.

The sole responsibility for the testing and certification of agrotexile products, as specified in the tender document, will rest with the agrotexile suppliers. COE Agrotech, i.e. SASMIRA, will periodically test these products for quality assurance purposes. For testing, products customization, simulation modeling, R&D activities, etc, COE Agrotech will submit the expenditure details along with relevant documentary evidence for above activities to OTXC for payment under head of "Other Costs for Soft Interventions." COE Agrotech will not charge vendors for testing and certifying products used for demonstration centers and agrotexile kits.

As far as R&D and simulation modeling etc is concerned, COE Agrotech will submit detailed proposal for such activities along with expected outcome,

schedule of activities, associated agencies and facilities available to carry out such activities, coverage of demo-centres and beneficiaries to be studied and estimated cost to OTXC. OTXC may constitute a technical committee to examine the proposal. Once the proposal is approved by the technical committee, OTXC shall release the funds to the COE as per the schedule that may be decided by the Committee. The composition of the Committee may be approved by the AMC depending upon the nature of the project to be taken up by COE. At the end of the project COE will produce the expenditure details along with documentary evidence for above activities to OTXC.

### 8.1.5.3. Eligibility of fund support and release of funds

The fund available for this sub-component is as follows:

S. No.	Description	Estimated Costs (in Lakhs)
<b>Cost for creating awareness and other costs or soft interventions for five years</b>		
1	Testing, products customization, simulation modeling, R&D activities, etc	100.00

OTXC would directly release the fund to the COE-Agrotech, SASMIRA as per the procedure prescribed at para 8.1.5.2.

**8.1.6.**OTXC and/or the CEO Agro-textiles will apprise the AMC about various activities and funds utilization under the Component-1 of the scheme from time to time and seek approval of AMC where ever required.

### **8.2.COMPONENT-I (B): SETTING–UP OF DEMONSTRATION CENTRE AND CAPACITY BUILDING**

The aim of creation of Demonstration Centers under the scheme is to demonstrate the technology and efficacy of usage of agro-textile materials in various fields of agriculture/horticulture/sericulture and other allied fields across the NER. The demonstration centers are intended to provide the potential users an opportunity of understanding the advantages of Agrotextile materials and train them for the usage of such products for enhanced productivity, quality improvements etc. through live demonstration.

A typical demonstration centre may have the following combination of agrotextiles product demonstration depending upon the agro-climatic condition and agro-product mix targeted in the demonstration center.

- a. Shade net + Ground Cover + Crop covers
- b. Ground cover + Shade net + Bird protection nets
- c. Shadec net + Vermicompost bed + Hail Protection Net
- d. Ground Cover + Crop covers + Vermicompost bed
- e. Bird protection nets + Ground Cover + Crop covers
- f. Hail Protection Net + Ground Cover + Crop covers

The cost of each demo-centre may therefore, vary depending upon the modules being demonstrated in that particular centre and the size of the centre within the overall ceilings of cost that may be decided by the AMC. . The COE-Agrotech will recommend the viable size of the demonstration centre depending upon land availability and other viability factors within overall ceilings of the cost.A typical demonstration centre will require the following activities:

1. Supply and installation of Agrotextiles material and maintenance thereof for the duration of the project i.e., at least three years;



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2. Supply and installation of mechanical support structure wherever required and maintenance thereof for the duration of the project i.e., at least three years;
  3. Supply and installation of Irrigation and Fertigation system wherever required and maintenance thereof for the duration of the project i.e., at least three years;
  4. Supply of seed and seedlings; Manures, Fertilizers and pesticides and other agricultural materials as per the requirement of the centre for the entire duration of the project i.e., at least three years (at least 6 crop cycles);
  5. Land preparation and sowing and harvesting operations;
  6. Post harvest storage, Grading & packaging arrangements
  7. Engagement of technical and farm manpower for the above activities;
  8. Providing training to farmers/ horticulturists/ sericulturists etc and conducting demonstrations, Capacity building programmes for State, /Central Agriculture universities Horticulture/ Sericulture institutes/ organizations/ universities and other bodies such as KVKs etc.

It is envisaged that 3-4 demonstration centres will be established in each NE States. However, allocation of funds and number of demonstration centres in each State will be decided by the AMC based on the emerging demands from the States during the course of scheme implementation. Based on the proposal received from PMIC, AMC will decide State-wise fund allocation for establishing demo centres.

#### **8.2.1. Eligible Agencies for setting up and maintenance of Demonstration Centers**

It is envisaged that the State Government/PMIC will identify suitable State/ Central Agriculture/ Horticulture /Sericulture institutes/organizations/universities and other bodies such as KVKs for establishing the demonstration centres in their premises. The organization/body selected should have adequate land available to set up a multi-modal demonstration centre and technical manpower to support the centre. The bodies so selected will be the owner of the demonstration centre and shall be called the 'Demo-centre owner' herein after. The agriculture/ horticulture/ sericulture out-put of the demo-centre will be the benefit accrued to the Demo-centre owner in lieu of the support provided by it in terms of land and manpower.

However, the responsibility of setting up of the infrastructure, maintenance of the same and carrying out the activities 1 to 8 listed in the para above will have to be provided by an Agency, (herein after called the 'Demo-centre Service Provider' to be selected through a tendering/bidding process, in collaboration with the owners of the centre. The following agencies will be eligible to act as 'Demo-centre Service Provider':

- I. Agrotextile manufacturers/authorised dealers/ suppliers willing to provide complete solution as above;
- II. State/Central Agriculture/ Horticulture/ Sericulture institutes /organizations/ universities and other bodies such as KVKs may also be considered for this activity in collaboration with the suppliers of Agrotech materials;

As mentioned above the selected 'Demo-centre Service Provider' will be primarily responsible for establishing and maintaining the demonstration centre, including agrotexiles product and other infrastructure facilities such as water, electricity, seeds, fertilizers, manpower, etc. However, it will be open to the service provider to tie up with the owner on cost sharing basis for any of the activities listed above. Demo-centre Service Provider' will also have to partner with the owner of the demo centre and COE: Agrotech to demonstrate the technology for at least a period of 3 years. Therefore, the Agency bidding for the demo-centre should have adequate capabilities or tie ups to provide these supports on a sustainable basis. The 'Demo-centre Service Provider' will be paid for the material and services as enlisted above and shall not have any claim on the produce in the demo-centre during the period of its operation.

After the initial period of 3 years the owner and the service provider may enter into an agreement for cost and profit sharing for running the demo-centre on a self-sustained mode. The State Govt. may allow them to charge fee for training and demonstration and also support the centres with financial assistance through their own schemes.

### **8.2.2. Eligible Funding for setting up of the demonstration centre and capacity Building Programmes**

Total fund available for establishing demonstration centre is as follows:

<b>S. No.</b>	<b>Description</b>	<b>Estimated Costs (in Lakhs)</b>
<b>Setting-up of demonstration centres in 8 states for three years</b>		
1	Establishment of demonstration center, including Maintenance and recurring expenses (including manpower and material costs)	944
3	Capacity building of farmers and other stakeholders	

Average cost for setting up of a demonstration centre will vary depending upon the combination of agro-textiles materials and modules as listed in para 8.2 above is selected for the demo-centre. However, there will be an upper ceiling of Rs 20.00 Lakhs for each Demonstration Centre, which will include all activities 1 to 7 listed at para 8.2. PMIC will get a project report prepared for the selected site in consultation with COE Agrotech, which will be the basis for inviting bids for the demonstration center.

The activity 8 will however, be separately funded as a soft intervention sub-component of this component for which each demo-centre may receive grant up to Rs 3.00 lakhs for the entire period of the demo-centre, i.e., 3 years. The demo-centre-owner and the service provider, with the help of COE agro-textiles will be required to formulate training and capacity building programmes for the stakeholder within the local area and such activities will be funded through the COE Agro-Textiles from this sub-component.

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### **8.2.3. Operational Modalities**

#### **8.2.3.1. Identification of Demo-centre Location and owner**

- a) PMIC of the State will identify the central/State agriculture/horticulture/sericulture and other allied bodies such as KVKs, and Agriculture Universities etc. who can provide suitable land and act as the owner of the demo-centre.
- b) MIC will also identify and select the land available with these agencies for establishing the demo center. The identified location for the demo-centre should preferably be easily accessible to majority of the target beneficiaries.
- c) After identification of the location and the State agency COE Agrotech will make a site inspection and suggest a model of the demo-centre with material specification etc. for establishing the demo-centre. Preference will be given to use of local material to the extent possible for such designs. If, however, the structure requires use of metal/other non-local materials, the justification would be clearly recorded in writing and a decision be taken on case-by-case basis by AMC
- d) Once the design and specifications are finalized by the COE in consultation with the State body concerned, a detailed proposal for establishing the demo-centre shall be submitted by the said body to the PMIC. PMIC will appraise the project proposals and recommend the same to the OTXC.
- e) Consolidated proposals received from several State bodies will be submitted to the AMC for approval. AMC may consider such proposals based on funds availability, suitability of the proposal for the stakeholders and cost estimates involved.

#### **8.2.3.2. Selection of vendor/ Demo-centre service provider**

- a) Once the project proposal is approved by AMC, COE Agrotech will invite open tender for proposals from eligible vendors/agencies to act as demo-centre service providers and establish demo center in the identified location. Attempt shall be made by COE to club several such proposals for inviting tender to attract better response/participation and price competitiveness. The expenses for tendering process shall be borne out of the administrative cost component of the scheme.
- b) Project Coordinating Agency (PCA), to be engaged to manage the scheme will run the entire bid process for vendor selection under the COE Agrotech.
- c) Procedures laid down under General Financial Rules (GFR) of Government of India for bid invitation and evaluation shall be followed.
- d) The COE Agrotech would formulate the Purchase Committee for NER to execute the procedure as per GFR, the committee would comprise of the following members:
  - i. Director, COE Agrotech as Chairman of the Committee;
  - ii. Representative from respective State Agriculture/Horticulture Department
  - iii. Representative from local KVK/ Agriculture University
  - iv. Representative from OTXC

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- v. Representative from State finance and expenditure departments
  - vi. Representative from PCA; and
  - vii. A subject matter expert could be co-opted by the Chairman.

e) The selected vendor/ service provider will set up and run the demo center in line with the specifications approved;

f) COE Agrotech will place the work order on the vendor against a performance guarantee for successful operation for a period of 3 years;

g) The vendor so selected will have to sign an MOU with the site owner for usage of the premises and other common facilities/utilities and joint operations in respect of certain components as may be mutually agreed between them and for providing training and capacity building programmes.

#### **8.2.3.3. Training and capacity building**

The site owner and Demo-center service provider will jointly conduct the capacity building programmes. The demo-centre-owner and the service provider, with the help of COE Agrotech, will be required to formulate training and capacity building programmes for the stakeholder within the local area and such activities will be funded through the COE Agro-Textiles from the separate sub-component. The proposal for capacity building of farmers and other stakeholders will be evaluated and approved by PMIC and submitted to COE Agrotexiles. The proposal should include the programme schedules for the year, number of beneficiaries to be taken up for training and capacity building and duration of such programmes, etc and the cost estimates of such programmes for a calendar year. Based on this the PMIC may recommend the programme within the overall cost ceiling per demo-centre to COE Agro-textiles.

#### **8.2.3.4. Payment and Monitoring**

- a) Once the demo center is established, COE will test the product supplied and installation thereof in the approved manner;
- b) The vendor/service provider will submit the project installation report to PMIC along with the report of COE Agrotech. PMIC will appraise the report and recommend it to OTXC for release of funds as per approved payment schedules described in subsequent paras;
- c) COE Agrotech, PMIC and PCA will regularly monitor the maintenance of the established demo centers;
- d) The COE / PCA will be required to work closely with the site owner in training the site owner staff for operating and maintaining the demo center and other stakeholders.

#### **8.2.4. Release of Funds:**

The following procedure shall be followed for release of funds for this scheme:

##### **8.2.4.1. For establishment and maintenance of the Demo Centers**

OTXC will release funds to vendors/ Demo-center Service provider through COE Agrotech. The release of funds for establishment and maintenance of demo centre will be as under:

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- i. 20% of the total project cost, including 3 years maintenance as per the accepted bidder's bid value, will be released once the project is sanctioned and work order is placed on the bidder and MOU is signed with the site owner. However, the vendor has to execute a bank guarantee for the like amount valid for 3 years as a security against performance.
  - ii. 30% of the bid value will be released on the receipt of completion report of all material as per schedule, duly submitted by COE Agrotech.
  - iii. 25% of the bid value will be released at the beginning of the second year of the demonstration centre upon receipt of progress cum performance report from the PCA;
  - iv. 25% of the bid value will be released at the beginning of the third year of the demonstration centre upon receipt of progress cum performance report from the PCA;
  - v. The bank Guarantee will be released at the end of the 3<sup>rd</sup> year after receipt of completion certificate and performance reports from PCA through COE Agrotexiles.

#### **8.2.4.2. For Capacity-Building Programmes**

Once the capacity building programme schedule of a demo-centre is approved by PMIC, OTXC will release 50% of the funds to COE Agrotech and COE Agrotech will release the funds to the concerned agency. Remaining 50% of the funds will be released to the agency concerned through the COE Agrotech after submission of the programme completion certificate from COE Agrotech/PCA.

### **8.3.COMPONENT II: DISTRIBUTION OF AGRO-TEXTILE KITS IN THE NER STATES:**

**8.3.1.** This component of the Scheme will include the following activities:

- i. Providing ready Agro-textile-Kits to beneficiary Agriculture/sericulture/horticulture and other farmers; and
- ii. Installation of the agrotexile kits
- iii. Handholding support in usage of Agro-textile Kits

**8.3.2.** A standard kit will consist of the followings:

- a. Relevant Agro-textiles Material, such as: Shade net house; Ground Cover; Hail protection nets; Bird protection house; Vermicompost bed; Low tunnel for crop protection;
- b. Support structure made of local materials to support the ago-textiles material as per design wherever required. Use of metal or non-local material for the support structure may be permitted with the approval of the PMIC with reasons for the need for such materials to be recorded clearly in writing, along with an indication of how beneficiaries are meeting the remaining expense of 10% for support structure with the agrotexile kit;
- c. Instruction Manuals and guides for the users about best practices; installation layouts and methods and use of the kit and its beneficial effects.

Beneficiary may choose any combination of the ago-textiles material based on individual requirement and as per the recommendations of the PMIC. However, upper ceiling per beneficiary

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for receiving agro-textile kits along with the cost of support structure shall be Rs 5.0 Lakhs per beneficiary. The Government of India will bear 90% of the cost of the kit, along with its installation (Item No. i & ii above), and the beneficiary will bear the remaining 10% of the cost. However, the State govt. concerned may support the beneficiary to bear the 10% share as they may deem fit under any of their own schemes/programmes. Item No.3 above will be supplied free of cost by the COE.

To the extent possible the kit shall be supplied to a single beneficiary only once during the scheme period. However, kit assistance may be provided to the same beneficiaries for a different kind of agro-textiles solution to ensure the benefits of technology. PMIC/PCA will maintain a master list of beneficiaries in each state to ensure proper use of the kits. The master list of beneficiaries will be shared with AMC from time to time for its perusal. PMIC will apprise the AMC on the development and requirements of kits on time to time basis.

### **8.3.3. Eligible Beneficiaries**

- I. Farmers who own agriculture/ sericultur horticulture land in North Eastern States of India shall be eligible to get the kits under the scheme. The ownership of land shall be supported by government recognized documents;
- ii. In order to be eligible to receive the kits the beneficiaries should have undergone training by the COE–Agrotech/Demo Centre established under the scheme to ensure effective application of the supplied agrotexile products.

### **8.3.4. Eligible suppliers**

The agrotexiles kit consisting of the agrotexiles material and the support structure will be supplied as a package. The agency should be in a position to source support structure material and local material as per the specifications to be provided by the COE to support installation of the agro-textiles. Therefore, the supplier of the kit has to be able to supply both the agrotexiles material and the support structure, and install the same. The following entities will be eligible for these activities under the scheme:

- I. Agrotexile manufacturers/authorised dealers/suppliers willing to provide complete solution, as above, will be eligible for these activities;
- ii. A consortium of bidders consisting of agrotexile producers/suppliers, supplier of structural material and installation agencies may also bid for these activities together;
- iii. The agency should have capabilities to supply and install the agro-textiles products in the NER.

### **8.3.5. Operational Modalities:**

- I. COE Agrotech shall work closely with State agriculture bodies/KVKs/ and Demo centers, Farmers clubs, etc. to define specifications of Agrotexiles to be included in the agriculture kit;
- ii. PCA will mobilize KVKs and farmers clubs to identify eligible beneficiaries of Agro-textiles kits based on the eligible criteria specified above;
- iii. The beneficiaries may be encouraged to avail items in the kit in various combinations to yield maximum benefits, or any single item as per the requirement, subject to the overall ceiling.

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- iv. PMIC will periodically finalize the beneficiary list, type of material to be supplied and composition of the kits to be supplied to each beneficiary in consultation with COE. After the beneficiary list is finalized PCA will submit a proposal to OTXC indicating the number of target beneficiaries and estimated volume of agro-textile kits required for distribution on the basis of demand received from the States on quarterly basis. PMIC will be responsible for approving eligible individual recipients for the agrotexile kits, AMC will be appraised of the same periodically, along with relevant progress reports, through Management Information Systems
  - v. Based on the projected demand from the States, the AMC will decide an annual State-wise allocation of funds for each state at the beginning of the year. However, the allocation of the funds may be changed by AMC subsequently based on actual off take and potential demand.
  - vi. Based on projected demands from various states, COE Agrotech shall invite bids from eligible suppliers through open tender system for supply and installation of the kits on annual contract basis. The tender will cover both agrotexiles material as well as structural material for supporting the installation of agrotexile products.
  - vii. COE Agrotech will constitute a tender evaluation committee with the approval of AMC to evaluate and select bidder/ bidders for supply of the kits to different states. All procedure laid down under GFR shall be followed for tendering and procurement activities.
  - viii. COE Agrotech may select one or more vendors in the process or empanel a group of eligible suppliers on the basis of price determined through the tendering process under a rate contract agreement valid for a period of one year.
  - ix. The COE Agrotech will place periodic orders on the suppliers based on the rate contracts for supply of the kits to individual beneficiaries in each of these states as per the approved list of beneficiaries to be supplied by PCA/COE Agrotech.
  - x. The suppliers shall arrange to supply the agro-textiles materials as well as structural material, as per the specifications defined by COE Agrotech, following inspection by COE Agrotech.
  - xi. The material transportation and supply in individual locations shall be the responsibility of the supplier.
  - xii. Beneficiaries shall be distributed the kits as per the size of the area to be covered and composition of material as decided by PMIC for individual beneficiaries under the supervision of PCA upon submission of an undertaking to the effect that the materials received under this scheme will continue to be used in beneficiary's own agricultural land.
  - xiii. The supplier will collect 10% of the kit value from the beneficiary at the time of supply and will raise its bill to COE Agrotech for remaining 90% along with relevant documents such as quality certificate from COE Agrotech, confirmation of product delivery and installation from the beneficiary, authentication of such confirmation from PCA. The bills will be cleared by the COE Agrotech on a monthly basis.

#### **8.3.6. Funding and Release of Funds:**

Total funding under this component is Rs 36.50 crores.

As indicated above, the procurement and distribution of the kits will be a continuous process and will be done in phases. Therefore, the procuring authority i.e., COE Agrotech, will enter into rate

contracts with the successful bidders in the beginning of the year based on estimated demand for distribution of kits during the year and availability of funds. The periodicity of supplies and distribution will be as specified in the rate contract.

Funds will be released to COE Agrotech for payment to the vendor as per the following milestones:

- 20% of the cost of the agrotexile kits to be paid upfront following placement of order by COE Agrotech against bank guarantee of like amount valid for 1 year
- 10% of the cost of the agrotexile kits to be paid by beneficiaries/State Government at the time of distribution/purchase
- 70% of the cost of the agrotexile kits to be paid against completion of supply and verification of beneficiaries' receipt of approved agrotexile kits by COE Agrotech. Bank Guarantee will be released at the end of the year after successful supply of agrotexile kits.

OTXC may release funds to COE Agrotech, which will subsequently release them to the supplying vendors as per the terms of the contracts.

## 9. INDEPENDENT MIDTERM AND END-TERM EVALUATION OF SCHEME

A mid-term evaluation of the scheme will be carried out at the end of 2<sup>nd</sup> year of implementation to evaluate the effectiveness of the scheme and mid-course correction, if any required. Similarly, an end-term evaluation will also be carried out at the end of the scheme period of 5 years.

### 9.1. Eligible Agencies

OTXC shall engage suitable agencies to carry out the mid-term and end-term evaluations of the scheme. OTXC will release a Request for Proposal (RFP) and invite bids through open tender for engaging such agencies for the above purpose at appropriate time. The agencies that will be eligible to bid for these evaluation studies should have demonstrated experience of evaluating government schemes. The OTXC will frame detailed eligibility criteria and evaluation criteria in the Request For Proposals (RFP).

### 9.2. Operational Modalities

Consulting agency will be hired in accordance with the provision of GFR of Government of India.

S. No.	Description	Estimated Costs (in Lakhs)
<b>Cost for creating awareness and other costs or soft interventions for five years</b>		
1	Independent Evaluation (midterm and end term) of entire scheme	50.00

Based on the bid of the successful bidders, which will be engaged for carrying out these studies, payment schedule will be decided by the AMC and payment will be released by OTXC as per these schedules against milestones. Final payment to the agency shall be released after successful completion of the evaluation studies and submission and acceptance of the reports by the AMC.



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## **10. HIRING OF PROJECT COORDINATING AGENCY (PCA):**

A Project Coordinating Agency (PCA) will be engaged for coordinating the implementation of the scheme through various agencies involved. PCA will have its office in a centralized location in the North East to coordinate various activities.

### **10.1. Roles & Responsibilities for PCA**

Following shall be the roles and responsibilities of the PCA:

- i. PCA will be responsible for overall onsite monitoring of the project implementation;
- ii. Coordination among all project stakeholders, including State Governments, COE Agrotech, Demo-centre owners such as KVKs, Agriculture Universities, NGOs; manufacturing units and suppliers/service providers, etc.
- iii. Coordination with the PMIC for identification of demo-centre sites and agencies; identification of beneficiaries for distribution of kits;
- iv. PCA will support SASMIRA in running the entire bid process for vendor selection for establishing demo centers in conjunction with COE Agrotech;
- v. Coordination with the demo-centres for their day to day function, monitoring their activities, including capacity building programmes and reporting thereof.
- vi. PCA will be required to work closely with the Demo Site owner in training the site owner staff for operating and maintaining the demo center;
- vii. PCA will mobilize KVKs and farmers clubs to identify beneficiaries of Agrotexiles kits;
- viii. Coordination with the suppliers for distribution of kits and supervision of installation and certification;
- ix. Coordination with the COE Agrotech and OTXC and other relevant agencies for various activities, including all soft intervention programmes and evaluation studies;
- x. PCA will report regularly to OTXC/MOT/PMIC and prepare MIS reports and returns to OTXC and MOT from time to time;
- xi. PCA shall also coordinate for all meetings of PMIC and AMC, which shall include preparing the agenda, minutes of meeting and any other follow-up actions pertaining to the meetings;
- xii. PCA shall prepare reports on its work and submit them to OTXC and MOT on a quarterly basis;
- xiii. Any other work related to the project which may be allocated to the PCA on a periodic basis. The AMC may include any other responsibility in the RFP for the engagement of the PCA.

### **10.2. Engagement of Project Coordination Agencies:**

The OTXC will release a Request for Proposal (RFP) and invite bids from reputed consulting firms and project implementation/coordinating agencies etc. through an open tender following the GFR guidelines. Eligibility criteria for agencies bidding for engagement as PCA shall be as follows:

- I Reputed consulting agencies/project coordinating agencies having working experience of implementing government schemes.

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- ii. Experience of executing project involving multi-stakeholder coordination activities.
  - iii. Prior experience in technical textiles consultancy assignments will be an added advantage.
  - iv. Preference will be given to experience in executing the government projects in NER.

The detailed eligibility criteria, and roles & responsibilities of PCA may be formulated by OTXC/AMC and incorporated in the RFP. The bids shall be evaluated by the AMC for selection of a suitable agency for this purpose.

### **10.3. Terms of engagement and payment schedule**

The terms of engagement and payment schedule of the PCA shall be as follows:

- The agency will be engaged for the entire duration of the scheme till completion of end term evaluation and submission of reports on the scheme implementation after the implementation period;
- The PCA shall be required to mobilize adequate manpower onsite for implementation of the scheme and submit an implementation/activity plan, including quarterly deliverable milestones to the OTXC immediately after its engagement;
- The selected agency shall be required to submit a bank guarantee of 10% of the contract value, which will remain valid for a period of 5 years or till successful completion of the scheme, whichever is later.
- PCA shall submit quarterly scheme implementation reports against established milestones. AMC shall review the performance of the PCA and recommend the release of funds. Payment to the PCA shall be released on a quarterly basis for an amount equally divided over the scheme period.
- OTXC would directly release the payment to PCA based on the recommendation of the AMC.

### **11. ROLES AND RESPONSIBILITIES OF OTHER AGENCIES INVOLVED IN THE SCHEME**

The scheme is envisaged to be implemented in close co-operation, coordination and partnership with a host of Governmental and Non-Governmental Agencies. The role of each of these agencies shall be as outlined in the detailed implementation guidelines as above.

## GLOSSARY OF ABBREVIATIONS USED

Sr. No.	ABBREVIATION	UNABRIDGED
1	NER	North East Region of India
2	KVK	KrishiVigyan Kendra
3	NGO	Non-Governmental Organization
4	COE Agrotech	Centre of Excellence for Agrotextiles
5	SASMIRA	Synthetic & Art Silk Mills' Research Association
6	BIS	Bureau of Indian Standards
7	IA	Implementing Agency
8	R & D	Research and Development
9	GOI	Government of India
10	PCA	Project Coordination Agency
11	TRA	Textile Research Association
12	FICCI	Federation of Indian Chambers of Commerce and Industry
13	ICC	Indian Chamber of Commerce
14	CII	Confederation of Indian Industry
15	ITTA	Indian Technical Textile Association
16	TMTT	Technology Mission on Technical Textiles
17	OTXC	Office of the Textile Commissioner
18	PMIC	Project Monitoring and Implementation Committee
19	AMC	Apex Monitoring Committee
20	GFR	General Financial Rules, Government of India
21	EC	Empowered Committee
22	DONER	Ministry of Development of North Eastern Region
23	AS&FA	Additional Secretary & Financial Adviser

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