

Section VIII

Speciality (Organic, Suvin and ELS) Cotton





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MINISTRY OF TEXTILES
GOVERNMENT OF INDIA



SUMMARY – SPECIALITY (ORGANIC, SUVIN AND EXTRA LONG STAPLE) COTTON

- I. The sub-group on Speciality (organic, Suvin and Extra Long Staple [ELS]) cotton constituted for the National fibre policy has enunciated policy recommendations for development of Organic, Suvin and ELS cotton sector after considering the current status of these fibres in the Indian as well as global economy and their future potential. Through various deliberations amongst the members, the sub-group has identified major issues that could inhibit future growth of these fibres and has suggested remedial measures for the same. For the purpose of deliberations of the sub-group the Organic Cotton Fibre was narrowly defined as the cotton fibre from seed cotton that has been grown according to the standards set by National Program on Organic Production (NPOP). The Suvin Cotton Fibre was defined by the subgroup as the cotton fibre derived out of Suvin seed cotton having a staple length of 38 mm to 40 mm in length, 2.9 to 3.3 micronaire & 32 g/tex to 33 g/tex strength.
- II. Currently, India has the distinction of being the world's largest producer of organic cotton and accounts for almost 51% of the world Organic cotton production. Organic cotton fibre is considered extremely important to Indian agronomy as organic cultivation is the only sustainable tool, available today, to revitalise the depleted / fast depleting agricultural lands of the country. It also possesses the unique advantage of having a highly evolved end to end value addition chain, which no other cotton producing country has. This home grown advantage needs to be sustained without loss of momentum and credibility. Therefore the organic cotton sector deserves special attention by the government of India. While considerable progress has been made in Organic cotton production in India, the sector still encounters certain issues and challenges. Also, the organic cotton sector in India is still in its infantile stage and it is in a stage where it needs support to mature and become independent and sustainable.
- III. Suvin cotton is the Jewel in the Indian cotton crown. The king of cotton and India's pride "Suvin" variety was released in 1979 by cross breeding Sujatha (Indian cotton variety) with St.Vincent (Sea-Island cotton variety). Suvin is the finest cotton being produced in India and has no parallel and alternative in the world today. It is the only commercially available fibre in the world today with spinnability up to 240s count. The highest production of Suvin was 36,000 bales (170 kg), achieved in the year 1989-90. However, the production of Suvin has depleted steadily over the years and currently stands at 300 MT i.e. around 1250 bales. It will be a national loss to let a world renowned fibre to phase itself out, for lack of initiatives.
- IV. Given the leading position that India has at the international level with regard to the production of Organic cotton and the distinction of growing one of the world's longest fibre "Suvin", it is very important to promote and protect these fibres. Thus, sustaining Organic & Suvin cotton cultivation

should be given the status of National Agenda under the National Fibre Policy, where in all the departments, Agriculture, Textiles & Commerce are policy bound and work in unison. Keeping in mind the challenges and the scope of the organic cotton sector, the sub-group, proposes two sequential initiatives that will aid the growth and development of the sector:

- Immediate adoption of a mission mode approach to help develop the sector through interventions in research and development, extension and promotional activities, until the formation of the Speciality Cotton Board. The sub-group recommends formation of a society for a tenure of 1 year which could co-ordinate the functioning of the Technology Mission on Speciality Cotton
 - Establishing a permanent **Speciality Cotton Board**, with fiscal and administrative autonomy, to bring synergy amongst various departments of the above three ministries and other stake holders in the textile value chain (Growers, Traders & Industry). This board is envisaged to handle the development of the Organic and Suvin cotton sector. The proposed Speciality Cotton Board, while pursuing matters related to Organic Cotton & Suvin, could also consider the recommendations made by SIMA - CITI in its ELS vision statement. Upon formation of the Board, a separate mission to handle other ELS cotton can be pursued. The board will manage and monitor the development of these sectors and allocate the budget to parties best equipped to execute tasks.
- V. The sub-group recommends initiation of a Technology Mission on Speciality Cotton (Organic, Suvin and ELS), with fund outlay for a 5 year period. The sub-group recommends formation of a society in the first year for tenure of 1 year which could co-ordinate the functioning of the Technology mission on speciality cotton. The implementation and monitoring of all the missions would be done by the designated GOI departments as recommended by the society. The year 2 through to year 5 of the Technology Mission on Speciality Cotton would be governed by the Speciality Cotton Board that is mandated to be brought into action from Year 2 onwards. The sub-group recommends that the establishment of the board is guided by competent agencies (like IIM and other competent consultants). These will have to detail the revenue model and have to ensure that the board is recruited and has its initial funding.
- VI. The budget proposed has been subdivided into two parts:
- a. The Technology Mission on Speciality Cotton Budget
 - b. Speciality Cotton Board – Formation & Administration Budget.
- VII. It is important to note here that the budget estimated for Sub-mission V of the technology mission is only for the revival of the Suvin cotton. The budget for development of ELS cotton could be estimated in conjunction with the proposed Speciality Cotton Board after a detailed study of the ELS cotton scenario in India.



Budget for Technology Mission on Speciality Cotton

Technology Mission on Speciality Cotton (figures in Rs. Crores)						
Sub Missions	2010-11	2011-12	2012- 13	2013-14	2014 - 15	Total Outlay
SUB-MISSION I Research & Technology Generation	5.00	4.00	3.00	2.00	1.00	15.00
SUB-MISSION II Transfer of Technology	58.50	75.00	94.00	119.00	149.50	496.00
SUB-MISSION III Statistical Data Compilation	1.00	1.00	1.00	1.00	1.00	5.00
SUB-MISSION IV Promotion, Quality Control, Processing & Marketing	6.52	7.90	9.74	12.04	14.80	51.00
SUB-MISSION V Revival of Suvin Cotton	1.00	1.25	1.50	1.75	2.02	7.52
Budget for formation of Society	3.80					3.80
GRAND TOTAL	75.82	89.15	109.24	135.79	168.32	578.32

Budget for Speciality Cotton Board – Formation & Administration (In Rs crores)

	2011-12	2012-13	2013-14	2014-15	Total
A. Total Cost: Head Office	1.86	1.70	1.74	1.84	7.14
B. Total Cost: Regional Office	1.54	1.16	1.28	1.30	5.28
Grand Total	3.40	2.86	3.02	3.14	12.42



8.1. ORGANIC COTTON – AN OVERVIEW

- 8.1.1. Cotton grown without the use of any synthetically compounded chemicals (i.e. pesticides, growth regulators, defoliants, etc.) and fertilisers is considered as 'organic' cotton. It simply means cotton cultivated using the organic farming methods. However, the cotton produced by using organic production techniques needs certification in order to be claimed as Organic cotton.

Box 8.1: Definition of Organic Farming

India's **National Programme for Organic Production (NPOP)** defines *Organic Agriculture* as a system of farm design and management to create an eco system, which can achieve sustainable productivity without the use of artificial external inputs such as chemical fertilizers and pesticides. In another definition **FAO** suggested that "*Organic agriculture is a unique production management system which promotes and enhances agro-ecosystem health, including biodiversity, biological cycles and soil biological activity, and this is accomplished by using on-farm agronomic, biological and mechanical methods in exclusion of all synthetic off-farm inputs*".

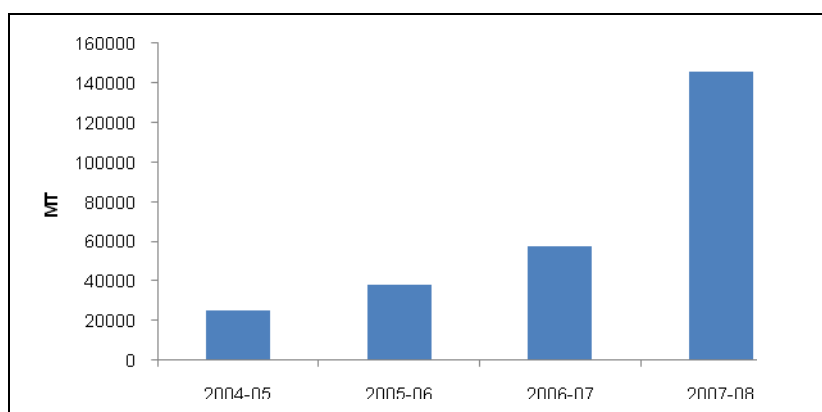
- 8.1.2. Organic cotton fibre is considered extremely important to Indian agronomy as organic cultivation is the only sustainable tool, available today, to revitalize the depleted / fast depleting agricultural lands of the country. India, is now the world's largest producer of Organic cotton, and also has a highly evolved end to end value addition chain, which no country possesses. It is essential to sustain this home grown advantage without losing momentum and credibility.
- 8.1.3. Minimised negative effect from farming on the environment and nature is considered to be the most important benefit of organic production. By applying the best management practices of organic agriculture such as improved rotation of crops, catch crops, intercropping and use of biological products or bio-pesticides, etc. the negative impact of farming on nature and the environment are minimized. Organic cotton cultivation has shown to improve microflora, restore fertility and successfully manage insecticide resistance, while reducing health and environmental risks of contamination. The pure nature of organically produced cotton i.e. the fibre without chemical residue is another benefit of Organic cotton. Further with no use of chemicals in the production process the production of the fibre has limited adverse impact on farm workers health.
- 8.1.4. The institutional benefits of Organic cotton are in the form of improved market access, premium price in markets and also the benefit of the increasing demand for Organic cotton in the world market. About 350,000 farmers were involved in cultivation of Organic cotton (A grade plus in conversion) during 2007-2008 season. Farmers have been moving towards cultivation of Organic cotton since it

allows them to operate even with lack of resources. Therefore, promotion of Organic cotton could lead to direct benefits for farmers. Given the institutional, ecological benefits of Organic cotton production coupled with the fact that India has emerged as leading producer, it is important to promote and protect this fibre.

WORLD ORGANIC COTTON SCENARIO

- 8.1.5. According to the Organic Cotton Farm and Fibre Report of Organic Exchange, World output of Organic cotton has increased from around 25,394 Mt in 2004-05 to around 1,45,865 Mt in 2007-08. Increasing awareness among the consumer and companies, especially in the developed economies, regarding environmental and social issues, has helped in sustaining the growth in Organic cotton production. However, improved data collection coupled with identification of previously existing unknown projects and inclusion of their production could also be responsible in part for the surge in Organic cotton production.

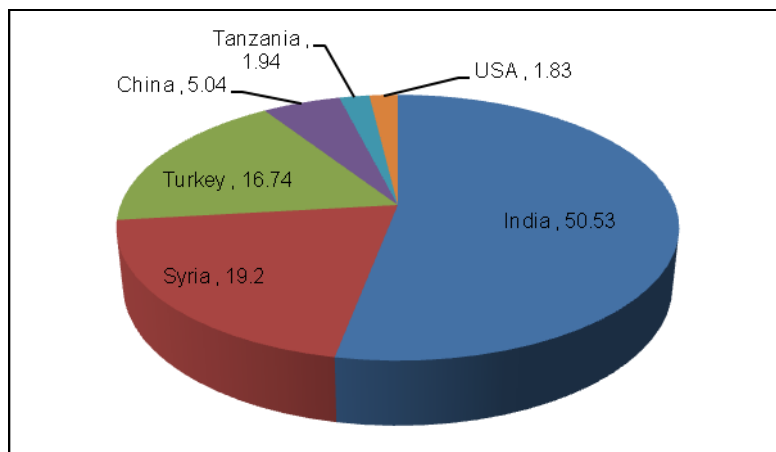
Exhibit 8.1.1: World's Organic cotton Output



Source: Organic cotton Exchange, Farm & Fibre Report, 2008, D&B India

- 8.1.6. World over Organic cotton is being produced by around 22 countries. Amongst these India, Syria, Turkey, China and Tanzania are currently the largest producers of Organic cotton. In fact, according to the Organic cotton farm and fibre report, almost 87% of the total Organic cotton is produced in just three countries: India, Turkey and Syria.

Exhibit 8.1.2: Country-wise Share in Production of Organic cotton



Source: Organic cotton Exchange, Farm & Fibre Report, 2008, D&B India

- 8.1.7. The demand for organic cotton has also been growing over the past few years. As increasing number of people are becoming aware of the environmental and sustainability issues the demand has been increasing. Products made from organically grown cotton fibre are achieving greater penetration in the some developed markets such as the UK, Germany, Switzerland, Japan, and the United States. The biggest markets for organic cotton are in Europe and the United States where big retailers have show interest to expand their existing organic cotton initiatives.
- 8.1.8. The sustained rise in Organic cotton demand could be attributed to (a) rising awareness of the benefits of organic cotton fibre (b) companies aligning their businesses on the lines of sustainable and eco-friendly practices (c) increased access to knowledge regarding organic farming and development programs. These developments have been supported by extensive media coverage and promotional activities and like trade shows.
- 8.1.9. As the demand for products of Organic cotton is gaining ground many companies are entering in the production and sale of products made from Organic cotton. Some companies are also entering this space as a part of their corporate social responsibility. The 10 brands and retailers with organic cotton programs were: Wal-Mart (USA), C&A (BE), Nike (USA), H&M (UK), Zara (ES), Anvil (USA), Coop Switzerland (CH), Pottery Barn (USA), Greensource (USA), and Hess Natur (DE). They consume 67% of the fibre consumed by the retail segment (ibid). In 2007, the retail sales of organic cotton figures had reached 2 billion USD and in 2008 these figures climbed to 3.2 billion USD (figure 1), at an annual growth rate of 63%. According to the Organic Exchange, there has been an increase in demand in organic fibre from 74,839 MT in 2007 to 92,998 MT, in 2008 a growth of 124.2%. According to Organic Exchange, the demand for organic fibre in the world market to support brand programs will increase in 2010 to 147,926 MT in 2010, an increase of 25% from 2009.

ORGANIC COTTON SCENARIO IN INDIA

- 8.1.10. Cotton is the largest crop under organic management in India. According to the Organic Cotton Farm and Fibre Report of Organic Exchange, Organic cotton production has registered a robust average annual growth of around 148.47% between 2005-06 and 2007-08. During 2007-08, India achieved the feat of being the largest producer of Organic cotton in the world overtaking Turkey's position. In fact India accounted for almost 50.53% of the world Organic cotton production. A confluence of factors such as high cost of synthetic pesticides and fertilizers, and dissatisfaction with genetically modified (GM) cotton production in certain regions could have led to considerable increase in Organic cotton production. Farmers have moved towards cultivation of Organic cotton since it allows them to operate even with lack of resources. Many of the farmers prefer growing Organic cotton because of lower costs on account of reliance on inputs produced on the farm itself: carry over seed, farm yard manure, cow urine, various herbs. However, some part of the surge in Organic cotton can be attributed to improved data collection coupled with more inclusive data-collection processes.
- 8.1.11. According to the data provided by APEDA, the production of Organic cotton stood at 1,86,925.631 MT during 2008-09. Area of around 1,28,751.733 hectares (ha) was under Organic cotton production during the same period. Along with this an area of approximately 70,838.647 ha was in the in-conversion stage. Although the production of Organic cotton has witnessed substantial growth in last few years, in value term it remains miniscule compared to the total cotton production in India.

Exhibit 8.1.3: Organic cotton production in India				
STATE	Organic		In-conversion	
	Quantity (M.T.)	Area (ha)	Quantity (M.T.)	Area (ha)
ANDHRA PRADESH	732.82	789.96	1504.47	2595.56
DELHI	0	0	1449.75	1073.82
GUJARAT	6411.55	5059.91	10650.15	7959.42
HARYANA	0	0	0	0
KARNATAKA	99.76	131.44	196.01	365.73
MADHYA PRADESH	106622.38	74946.79	27189.27	23060.34
MAHARASHTRA	37958.51	16567.68	15829.115	23093.49
ORISSA	34425.67	30341.33	6375.95	5984.26

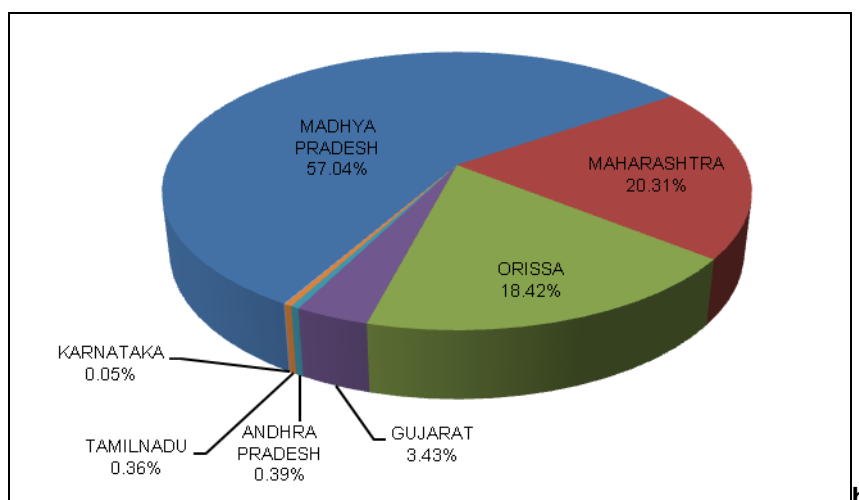
Exhibit 8.1.3: Organic cotton production in India

STATE	Organic		In-conversion	
	Quantity (M.T.)	Area (ha)	Quantity (M.T.)	Area (ha)
RAJASTHAN	0	0	3263.64	6338.12
TAMILNADU	674.93	914.6007	299.74	367.89
TOTAL	186925.63	128751.73	66758.10	70838.64

Source: APEDA, D&B India

- 8.1.12. Currently Organic cotton is being grown mainly in the states of Madhya Pradesh, Maharashtra, Orissa and Andhra Pradesh.

Exhibit 8.1.4: State-wise Share in Organic cotton Production during 2008-09 in India



Source: APEDA, D&B India

- 8.1.13. Majority of the Organic cotton produced in India is processed in India and is exported only as textile. The demand for organic cotton finished products in Indian is negligible, though its prospects for growth are tremendous. Despite having a fully integrated value chain, most of the finished products are exported. According to the data available from the office of textile commissioner and APEDA, of the 5 lakh bales produced in India, around 1 lakh bale is exported, while the remaining 4 lakh bales are consumed domestically for value added export products. The textiles and garments produced as organic are sold/ exported under the brand "Made from certified Organic cotton". Some private standards have been established internationally for certifying textile products as organic such as Global Organic Textile Standards (GOTS).

Economics of Organic cotton Cultivation:

- 8.1.14. Many studies done by various Government as well as non-government organisations over the years have demonstrated the benefits and feasibility of the Organic cotton production in India. It has been observed that in a span of few years, the soil productivity is built-up gradually and seed cotton yield in organic farming reaches the level of non-organic farming. A gradual improvement in soil fertility parameters such as organic carbon content has also been observed. The technological properties of cotton fibre grown under the organic cultivation such as micronaire (3.8-5.0), span length (25.5- 29.9 mm) and fibre maturity remain comparable to fibres produced by conventional methods.
- 8.1.15. Per hectare cost of production for Organic cotton cultivation is 20-30% lower compared to conventional cotton. Organic cotton yield are most consistent and increases over time. The yield of Organic cotton is more or less equal to that of conventional cotton. In terms of ecological benefits, Organic cotton cultivation has shown to improve microflora, restore fertility and successfully manage insecticide resistance, while reducing health and environmental risks of contamination. Given the leading position that India has at the international level with regard to the production of Organic cotton, it is very important to promote and protect this fibre. Organic cotton cultivation is a good replicable model for other crops. Unlike the conventional farmers, who operates as a single entity, Organic cotton farmers are a cohesive group operating under a well defined system of checks and balances, have direct linkage / access to cotton marketing, (sans multi layered middlemen), technology, customer interface, etc.

SOME INITIATIVE TAKEN TO PROMOTE ORGANIC FARMING IN INDIA

- 8.1.16. Contract farming initiatives across the country has emerged as one of the major driver of growth in the Organic cotton. The National Programme of Organic Production (NPOP) and The National Project on Promotion of Organic Farming (NPOF) have been two major initiatives taken by the Government of India for development of the organic farming in general.

National Programme of Organic Production (NPOP) (2000) –

- 8.1.17. National Programme for Organic Production (NPOP) was launched in the year 2000 by the Ministry of commerce and industry, Government of India to provide support for focused and well directed development of organic agriculture and quality products. It was formally notified under Foreign Trade Development and Regulation (FTDR) Act in October 2001, primarily for regulation and certification of

organic commodities meant for export. However, it is also being used as de-facto domestic regulation and certification system in the absence of any separate domestic regulation.

- 8.1.18. NPOP provides information on standards for organic production, system, criteria and procedures for accreditation of inspection and certification agencies, the national organic logo and the regulations governing its use. It also provides institutional mechanism for the implementation of National Standards for Organic Production, through a National Accreditation Policy and Programme. It covers crop production, animal husbandry, food processing, labelling and storage and transport. NPOP has equivalency with the EEC 2092/91 regulation. Under NPOP, Ministry of Commerce has instituted a regulatory mechanism for fixing of standards for organic cultivation, accreditation of certification and inspection agencies. National Accreditation Body (NAB) is the sole accreditation body with Agricultural Processed Foods Export. Development Authority (APEDA) as its secretariat.

National Project on Organic Farming (NPOF)⁴⁰:

- 8.1.19. The National Project on Organic Farming was launched as a pilot project in the Tenth Plan w.e.f. 01.10.2004 for production, promotion, market development of organic farming with an outlay of Rs. 57.05 crores. This scheme has been continued during the eleventh Plan period with an increased outlay of Rs.150 crores.
- 8.1.20. Under NPOF Department of Agriculture and Cooperation, Govt of India, has initiated systematic development of organic farming in the country in a project mode in specified areas. The National Centre of Organic Farming (NCOF) and its six Regional Centres of Organic Farming (RCOF) are operating the project. Some of the important strategies being implemented under the NPOF include capacity building through Service Providers, human resource development through training and demonstrations, financial support to organic input production industry, technology development, awareness creation and market development.

Achievements of the NPOF activities:

- Till March 2008, almost 1,47,013 ha area and 2,15,793 farmers were brought under organic certification by 421 Service Providers appointed under NPOF.
- The production capacity of Market waste compost, bio-fertilisers and Vermiculture was increased by 30,000 tons, 2500 tons and 85,500 ton respectively through production units supported during 2007-08
- Through various trainings, during 2007-08, more than 5600 trainers and 40,340 farmers were trained on different facets of organic farming.

⁴⁰ For further details Please refer: <http://dacnet.nic.in/ncof/>

- 1954 demonstrations were conducted to demonstrate the potential of organic management approaches and usefulness of various organic inputs to more than 97,700 farmers across the country.
- Through 164 model organic farms effort have been made to develop model centres of excellence on organic approaches.
- NCOF and RCOFs are the major source of mother culture supply and accounts for nearly 80% of total mother culture supply to production units.
- The notification of Bio fertilisers and organic fertilizers under FCO and regular authentic quality testing has led to quality improvement of these inputs.

CERTIFICATION OF ORGANIC COTTON & ROLE OF APEDA

- 8.1.21. Certification is an integral component of organic production. In fact, certification of a product is essential for it to be termed as “Organic”. Organic certification provides assurance that a particular product is organically produced. Various countries have established different standards for organic cultivation. Organic standards describe the minimum requirements that a farm or product should comply for being certified as organic. There are organic standards on national and international levels. Under NPOP, Ministry of Commerce has developed a regulatory mechanism covering standards for organic cultivation and accreditation of certification and inspection agencies. In 2006, India’s organic certification process under NPOP has been granted equivalence with European Union. It has also been recognized for conformity assessment by USDA’s NOP.
- 8.1.22. Certification in India is done by accredited certification and inspection agencies. Every certifier is required to implement a certification programme and a programme cannot be accredited without accrediting the certifier. Accreditation of the certification and inspection agencies is done by the National Accreditation Board (NAB), which is the sole accreditation body, under the National Programme for Organic Production (NPOP). The members of the National Accreditation Body comprise of representatives from Ministry of Agriculture, Ministry of Commerce and Industry, APEDA, Coffee Board, Spices Board and Tea Board. The responsibilities of the NAB include:
- Drawing up procedures for evaluation and Accreditation of certification programmes.
 - Formulating procedures for evaluation of the agencies implementing the programmes.
 - Accreditation of inspection and certification agencies

Role of APEDA in Organic Certification:

- 8.1.23. The Agricultural Processed Foods Export Development Authority (APEDA) is the secretariat of the NAB and also the implementation office for the NPOP. Being the implementation office the entire process of accreditation of certification agencies is conducted by APEDA. APEDA receives and screens the applications done by the certification agencies for accreditation. It also co-ordinates and arranges evaluation visits by the Evaluation committee nominated by the NAB to ascertain the credentials of the certification Programmes to be implemented by the applicants.
- 8.1.24. After the approval of accreditation by the NAB, APEDA is responsible for conducting the formal procedures right from informing the certification or inspection agencies about the approval of accreditation to issuance of Certificate of Accreditation. The Certificate of Accreditation is issued after execution of a contract on a non-judicial stamp paper of the value intimated to the applicant. The renewal of the Certificate of Accreditation is also done by APEDA on behalf of NAB. APEDA also has the powers to issue necessary guidelines to the certification or inspection agencies regarding the organic certification and inspection on behalf of the NAB.
- 8.1.25. APEDA also receives annual reports from the certification and inspection agencies. Submission of the annual reports is mandatory for the accredited certification and inspection agencies. The annual report of these agencies comprises of an updated report on recent developments in the Inspection and Certification Agency's programme such as the number of operators certified, under conversion, geographical area of operation and changes in personnel, and a compliance report in which compliance with imposed conditions is reported, supported by documentary evidence. These annual reports submitted by the accredited agencies form the basis of data being compiled by the APEDA on organic production in India. APEDA also conducts stringent audits and inspections of Certification Agencies and farmers in person annually.
- 8.1.26. Along with implantation of the NPOP, APEDA also conducts training for service providers appointed by the Ministry of Agriculture under NPOF.

Initiating the Organic Traceability System:

- 8.1.27. APEDA has developed a traceability system for organic products. With the traceability system the entire process of organic certification is expected to be online. Also with the launch of traceability system India's certification procedures and its organic products is likely to gain more credibility and reliability. It is also expected to overcome the current flaws in the certification system such as dual registration of the same operator with different certification agencies. The traceability system would be massive online database containing real time information on production and export. APEDA is likely to officially launch the traceability system in organic food products in January 2010.



Developing the Indian Organic Textile Standards (IOTS):

- 8.1.28. Organic cotton is mainly exported in form of finished products to European Union and US from India. The finished products are currently being sold / exported under the brand “Made from certified Organic cotton”. However, some standards have been developed for certification of textile products as organic like the Global Organic Textile Standard (GOTS). Most of the organic textile standards are developed through private initiatives. APEDA in association with ATIRA and other major stake holders has initiated the process of formulating standards for organic textile i.e. the Indian Organic Textile Standard, which are GOTS – equivalent. India is likely to become the first country with National standards for Organic Textile.



8.2. SUVIN AND ELS COTTON – AN OVERVIEW

SUVIN COTTON

- 8.2.1. Suvin was developed in 1974 by cross breeding Sujata with St. Vincent Sea Island seeds. The name SUVIN has been derived for the first letters of each variety (Sujata & Vincent). The release of ELS variety Suvin with a 2.5% span length of 36-40 mm; fibre strength of 32-33 g/tex and micronaire of 2.9 to 3.3 has been considered as a significant milestone in Indian cotton improvement. Suvin is considered as one of the finest cotton produced in India and also is a suitable substitute for Egyptian Giza 45. Suvin gives the finest-quality cotton with spinning performance of 120s counts. Suvin was grown in the states of Tamil Nadu, Andhra Pradesh and Karnataka. Suvin is sown in the month of August-September and comes to harvest by February or March.

Exhibit 8.2.1: Fibre Quality of Suvin cotton		
2.5% Span length (mm)	Fineness (Mic)	Tenacity (g/tex)
36 - 40	2.9 - 3.3	32.0 – 33.0

- 8.2.2. Suvin as a cotton due to its unique characters has a very good potential in various fields of textiles. The main applications of Suvin cotton are traditional handloom sarees, dhotis, fine shirting's (200/2 count). Lining fabrics, bed linen (1400 Thread Count), Muslin fabrics (300s count hand spun & hand woven), Fine voiles, Down Proof quilt fabrics, Soft denims, Towels & Knitwear's for new born, home furnishing, tyre cords, technical textiles (fire resistant fabrics, parachute fabrics)etc
- 8.2.3. According to the Extra Long Staple Cotton Vision Statement (2006) prepared by Confederation of Indian Textile Industry (CITI) and The Southern India Mills Association (SIMA), the highest production of Suvin was 36,000 bales (170 kg) achieved in the year 1989-90. The production of Suvin has depleted steadily over the years and currently stands at 300 MT i.e. around 1250 bales. An area of around 600 ha is under Suvin cultivation. Out of the total Suvin production around 100 MT i.e. approximately 600 bales is exported and the rest is consumed domestically for export of high value technical yarn (120s to 240s count). A confluence of factors such as instability in yield, competition from other hybrid cottons, longer crop duration, market related distortions especially in terms of pricing, could have adversely impacted the Suvin production in India.
- 8.2.4. Suvin has no parallel and alternative in the world today. The production of its distant alternatives, i.e. Giza 45 and Sea Island cotton is almost nil/ insignificant. Thus, it is essential to prevent Suvin from becoming extinct. Suvin has already established its position as "The" fibre for spinning over 140s-240s count yarn. This advantage could be used for the sustaining the fibre production in India. Suvin



cotton has very niche markets, which are expected to sustain the demand for Suvin. Fine fashion garment & home textile manufactures prefer Suvin for its lustre and feel. Moreover, Suvin is the only cotton used for Down & Feather Proof Quilts in the world today. Usage of Suvin in Technical Textiles is also gaining ground due to legal norms mandated in the west. Being super fine and lustrous, Suvin cotton is also being experimented for substitution in Silk.

- 8.2.5. Although Suvin cotton is the finest cotton produced in India, it has no official recognition or status. It has been noted that the farmers struggle to sustain Suvin with its current productivity, cost of cultivation and outdated conventional farming methods. Thus to restore production of Suvin cotton it is essential to focus on the research and development of the Suvin seed and the branding of the products.

Exhibit 8.2.2: Total cost of Suvin Cultivation	
Cost of cultivation	Total cost (Rs/ha)
Land preparation	4000.00
Irrigation charges	2500.00
Sowing	1350.00
Weeding	2750.00
Spraying	1750.00
Harvesting	7500.00
Seeds	750.00
Nutrients	8554.00
Agro chemicals	8010.00
IPM	1066.00
Total	38230.00



Exhibit 8.2.3: Quantity, unit price & cost of the input required for hectare of Suvin cultivation				
Sl.No	Inputs	Quantity required	Unit price (Rs)	Total cost (Rs/ha)
Seeds				
1	Suvin	7.5kg	100/Kg	750.00
Total				750.00
Nutrients				
1	Urea	260kg	280/bag	1456.00
2	DAP	200 kg	500/bag	2000.00
3	Muriate of potash	100/kg	260/bag	520.00
4	Micronutrient mixture	12.5/Kg	25/Kg	313.00
5	Azospirillum	13 Packets	10/packet	130.00
6	Zinc sulphate	5Kg	35/Kg	175.00
7	Magnesium sulphate	10 Kg	90/Kg	900.00
8	Solubor	750g	100/250g	300.00
9	Poly feed	10kg	10/Kg	100.00
10	Multi-K	5Kg	132/Kg	660.00
11	Neem cake	250Kg	8/Kg	2000.00
Total				8554.00
IPM				
1	Stomp	4.5L	525/L	2362.50
2	Planofix	200 ml	60/100ml	120.00
3	Confidor	350ml	Rs245/100ml	857.50
4	Dimethiate	1.25L	Rs320/L	400.00
5	Chloropyriphos	3 L	220/L	660.00
6	Endosulphan	3 L	350/L	1050.00
7	Triazophos	1.5 L	435/L	652.50
8	Maize	0.5Kg	25/kg	12.50
9	Carbendazim	500 g	75/100g	375.00
10	Mancozeb	2.5Kg	32/100g	800.00
11	Carbofuron	30KG	24/kg	720.00
Total				8010.00

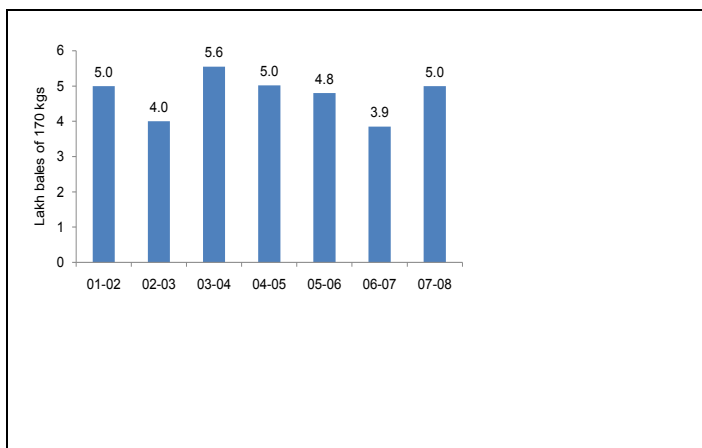


Exhibit 8.2.3: Quantity, unit price & cost of the input required for hectare of Suvin cultivation				
Sl.No	Inputs	Quantity required	Unit price (Rs)	Total cost (Rs/ha)
Agro chemicals				
1	NPV	500 LE	1LE	500.00
2	Trichogramma	6.25 cc	30/cc	188.00
3	Trap	2 traps	25/trap	50.00
4	Lure	4nos	20/lure	80.00
5	neem seed kernel	10kg	20/kg	200.00
6	Castor	0.25kg	30/kg	7.50
7	Trichoderma viridi	10g		20.00
8	Pseudomonas	10g		20.00
Total				1066.00

EXTRA LONG STAPLE COTTON

- 8.2.6. Along with Suvin only a few ELS varieties grown in India like DCH-32, TCH-213 meet the international ELS specifications. According to some reports, the share of India's ELS production has declined from 32% of world ELS production in 1992/93, to 10% in 2007/08.

Exhibit 8.2.4: Production of Extra Long Staple (34 mm & above)



Source: CAB

- 8.2.7. China, Egypt and the US contribute as much 21%, 30% and 25 % of the world ELS production respectively. The fibre quality and yields of the ELS varieties have remained unstable leading to marketing problems and impacting the returns to growers. Given the relatively higher domestic



consumption of ELS cotton compared to its production India has been a net importer of ELS cotton. India import about 1.75 lakh bales (480 lbs bales) of ELS cotton during 2008-09. India imports ELS varieties from countries like Egypt, USA, Sudan, etc.

Exhibit 8.2.5: Commodity, ELS Cotton - 35mm staple length and above (Units: lakh bales of 480 lbs)				
	2006-07 Final	2007-08 Final	2008-09 Revised	2009-10 Forecast
Beginning Stocks	0.59	0.51	0.51	0.22
Production	1.56	1.56	1.41	1.35
Imports	2.66	2.50	1.75	2.30
Total Supply	4.81	4.57	3.67	3.87
Exports	0.00	0.00	0.00	0.00
Domestic Consumption	4.29	4.06	3.45	3.75
Ending Stocks	0.51	0.51	0.22	0.12
Total Distribution	4.81	4.57	3.67	3.87

Source: USDA

- 8.2.8. According to the Extra Long Staple Cotton Vision Statement (2006) prepared by Confederation of Indian Textile Industry (CITI) and The Southern India Mills Association (SIMA), with the progressive addition in the installed capacity, modernization of the existing machinery and also the opportunities provided by the abolition of quota system from 1st January 2005, the country's requirement of ELS cotton is estimated at 15 lakh bales by 2010 and at 20 lakh bales by 2015. It is therefore imperative that the ELS, especially Suvin cotton, to improve production and quality to make India self sufficient in the ELS production.

8.3. SUB-GROUP ON SPECIALITY (ORGANIC, SUVIN AND ELS) COTTON

- 8.3.1. The sub-group on speciality (Organic Suvin and ELS) cotton formulated for the National Fibre Policy held three meetings aimed at identifying the issues facing the Organic, Suvin and ELS cotton cultivation in India and articulating policy measures for development of the same.
- 8.3.2. It has been noted by the members of the sub-group that Suvin is the finest cotton being produced in India and has no parallel and alternative in the world today. It therefore becomes very essential to prevent the Suvin cotton variety from being extinct. Organic cotton fibre, on the other hand, is considered extremely important to Indian agronomy as organic cultivation is the only sustainable tool, available today, to revitalize the depleted / fast depleting agricultural lands of the country. India, is now the world's largest producer of Organic cotton, and also has a highly evolved end to end value addition chain, which no country possesses. This home grown advantage should be sustained without losing momentum and credibility.
- 8.3.3. Given the leading position that India has at the international level with regard to the production of Organic cotton and the distinction of growing one of the world's longest fibre "Suvin", it is very important to promote and protect these fibres.

ISSUES IDENTIFIED BY THE SUB-GROUP

- 8.3.4. The sub-group on speciality (organic, Suvin and ELS) cotton has identified various issues that could inhibit the growth of Organic, Suvin and ELS cotton in India. Various challenges and issues identified by the sub-group for policy intervention can be summarised under the following broad heads:

Issues faced by Organic cotton sector:

Unavailability of non-treated seeds and shortage of organic fertiliser

- 8.3.5. Access to organic inputs such as non-treated seeds, bio-fertilizers, bio-pesticides and bio-fungicides is one of the major hindrances in cultivation of organic cotton fibre
8. To sustain the status quo of number on Organic Cotton producing country in the world, India needs to make available around 1500 MT of variety fuzzy seeds [@ 7kg of fuzzy seeds / ha] or 225 MT of delinted Hybrids [@ 1.125 kgs of delinted seeds / ha] seeds to the Organic Cotton sector. This is the current requirement, to sustain the 2,00,000 hectares of organic cotton cultivation achieved till date (APEDA figures).

9. It is estimated that India would soon be achieving 5,00,000 hectares of organic cotton by 2012. This means, around 3750 MT of variety fuzzy seeds or 565 MT of delinted Hybrid seeds would be needed. Due to multi-fold adoption of Bt seeds in India, over the past 3 years, the production of Non Bt seeds have fallen drastically. This would hamper the growth of Organic Cotton sector in India and be very detrimental to the entire organic value addition chain.
10. Shortage of organic fertilisers is another major issues faced by the sector. This is a primary requirement to augment India's depleted cotton soils. Majority of our soils have not more that 0.5% organic content in them. This heavily hampers the water retention capacity during monsoons and hence plays havoc with rain fed cotton raising farmers.
11. Production and application of sufficient quantities of quality organic matter is essential.

Lack of availability of farming technology

- 8.3.6. Promotion of organic cultivation would require substantial research in the areas of seed development, Organic pest management, etc. In a vast country like India with varied agro climatic regions, it is essential to develop region specific manuals of organic farm practices consisting information regarding suitable rotational crop, seeds etc. The inadequate research support is primarily due to financial limitations.
- 8.3.7. Instability in yield and lack of innovative techniques at farms levels are two major problem encountered by the Suvin cultivators, which requires strong research and development initiatives in this area.

Issues pertaining Organic Certification

- 8.3.8. With the advent of group grower certification programme the cost of certification has reduced for farmer belonging to groups. However, the cost for individual farmers to obtain organic certification remains high. (New and stringent standards are bound to increase the cost of certification, which will be a burden to the already resource poor farmer.) Lack of scientifically defined and simple to implement procedures to ascertain genuine Organic cotton is another issues faced by the sector. Certification, traceability in the chain and proper data on the sector is limited as the sector is composed of small holder farmers from many different states which means dispersed processing of organic cotton.

Lack of information, know-how and skills

- 8.3.9. Organic by definition requires certification and standardisation of practices to be adopted by farmers. Creating awareness about organic cultivation processes and procedures among farmers is crucial to

sustain the growth momentum of Organic cotton. Lack of know-how on farm ecology, management of crop rotation and complex standard requirement are some of the factors inhibiting adoption of Organic farming by the growers. Disorganised dissemination of information coupled with inadequate information sharing and communication down the supply chain are some other issues prevailing in the sector.

- 8.3.10. Issues related to insufficient grading of cotton at farmers level leading to a variety of problems in ginning, spinning and finished product stages are prevalent. Organic dyeing procedures are still inadequately developed the world over with sufficient investments, India could probably take a lead given its background in natural dyeing.

Lack or almost non-existence of domestic market for products of organic cotton

- 8.3.11. There is a need to develop domestic market for products of certified organic cotton to mitigate/hedge risk of export market. It is also important for India to focus on developing the domestic market for Organic cotton and avoid complete dependence on the export market. Towards this end, increasing awareness regarding the Organic cotton fibre and textile and garments made with it would be essential.

Data collection and dissemination:

- 8.3.12. Given the stage of development and importance of Organic cotton, accurate data collection is very critical for tracing the growth of the sector and timely policy interventions. Data pertaining to production, area, yield, exports of Organic cotton also needs to be shared with all the facilitators of Organic cotton cultivation in India, including, respective State Agri. Departments, Textile Ministry, Cotton Associations, and trade bodies.

Challenges confronted in sustaining the Organic cultivation

- 8.3.13. No formal extension infrastructure exists to promote the sector at all levels, presently the on-farm production of organic cotton is guided mostly by NGO and private sector (with the exception of Maharashtra) with private funds. These funds will probably reduce in the years to come. There is a long conversion period of three years before premium prices can be encashed, and there is a lack of markets for in-conversion cotton and lack of support during conversion period. There is also a lacunae in the marketing infrastructure for the organic intercrops, rotation crops partly due to lack of national market for organic food items and partly because crops or their cultivars are not easily marketable internationally

Lack of coordination amongst various GOI departments

- 8.3.14. Organic cotton is currently handled by three different ministries namely, Ministry of Commerce (certification), Ministry of Agriculture (Agronomy) & Ministry of Textiles (Value Addition). Increased co-ordination between various departments is warranted for developing the Organic cotton sector.

Enhancing credibility of Organic cotton produced in India in international markets

- 8.3.15. Some instances of false certification of organic produce have been observed in the past creating issues of credibility for Indian Organic cotton. While APEDA has decertified some agencies involved in such practices and also suspended some certifiers for short periods, more measures are required toward enhancing the credibility of Indian Organic cotton in international markets. Also it is essential to protect genuine organic farmers whilst taking action against erring entities

Issues pertaining to Suvin and ELS cotton:

- 8.3.16. Some of the major issues related to Suvin cultivation could be summarised as follows:
- Instability in yield of Suvin cotton
 - Non availability of quality seeds
 - Lack of innovative techniques at farm levels
 - Higher pest attack, lack of branding
 - Lack of marketing & non-preference of other BT varieties over Suvin by the farmers

IMPLICATIONS AND FUTURE OUTLOOK

- 8.3.17. Organic cultivation is a sustainable tool to revitalise the depleted / fast depleting agricultural lands of the country. Considering the robust growth of Indian economy, farmers are expected to dedicate / divert most of their fertile lands to food crops. Farmers have moved towards cultivation of Organic Cotton since it allows them to operate even with lack of resources. It is a live case of transfer of technology from lab to land, and allows for groups and families to be involved, and is one of the fibres where the world consumer is connected directly to the Indian farmer. Organic cotton is a viable option in rain-fed areas.
- 8.3.18. India has improved its position in the total cotton market by doubling its average yield and is now the second largest producer of cotton in the world, mainly due to the increase in area under Bt Cotton.



Insect resistance management (IRM) in cotton cultivation is a necessity as the Bt targeted *Helicoverpa* should stay susceptible to Bt toxins. To guarantee resistance management, Bt farmers are supplied with non-Bt cotton seeds (refuge seeds), which are rarely planted by the farmers. Hence a huge investment by the seed companies, which is mandated for the production of refuge seeds goes virtually waste. Organic farming could come in handy, as neither GMO's nor pesticides are used in organic cultivation and the area is certified as 'GMO free', thereby becoming the required refuge area. It can safeguard the environment against unforeseen consequences of Bt farming. In "traditional" organic cotton growing areas (Madhya Pradesh and Gujarat), there is stiff competition from Bt cotton. Especially in Gujarat it would make sense to have organic cotton as refuge for Bt Cotton. Large non-traditional cotton areas like Orissa, the north eastern states and the other non-G.hirsutum areas in Karnataka are also potential areas for expansion to organic cotton.

Further Organic cotton farming helps to reduce greenhouse gases by converting atmospheric carbon dioxide (CO₂) via the application of compost prepared from trees and other vegetative material into soil organic matter and humus, the most stable form. Conventional agriculture has caused a massive decline in soil organic matter, due to oxidisation of organic matter by the overuse of nitrogen fertilisers in proportion to potassium and phosphorous, low or non application of FYM and topsoil loss through wind and water erosion.

- 8.3.19. Every tonne of carbon lost from soil leads to more than proportionate increase in carbon dioxide (CO₂) gas to atmosphere. Conversely, every tonne increase in soil organic carbon more than proportionate increase in sequestered CO₂ from the atmosphere and removed from the greenhouse equation.
- 8.3.20. According to Dr. Kranthi, Director, CICR, "Components of this technology were tested in test in about 400.6 ha of certified organic and in 467.39 ha of 'transient' cotton in addition to about 82.4 ha of borderline fields from 1995 in Yavatmal and Amravati districts of Maharashtra. These organic farms were evaluated for key soil quality and socio-economic parameters at the end of 5 years (2000-2001) and 10 years (2005). Our studies concluded that despite similar substrate quality and identical climatic influence, the cotton growing vertisols and their intergrades of Central India have the ability to sequester more organic carbon by adoption of organic production systems. This system appears to be a sustainable management option to enhance the organic carbon status, which in turn improves many physical and chemical properties, besides arresting the natural degradation of these soils through the formation of pedogenic CaCO₃ and sodicity. It may help in sustaining the productivity of rainfed cotton grown under sub-optimal pedo-climatic environment and low productivity regimes in the Indian sub-continent. The organic system reduced pest management cost and was also economically viable."



- 8.3.21. Given the leading position that India has at the international level with regard to the production of Organic Cotton and the distinction of growing the world's longest fibre "Suvin", it is very important to promote and protect these fibres. Also, support for ELS cotton would ensure that India achieves self-sufficiency across all grades of cotton fibre.
- 8.3.22. While it may be difficult to arrive at robust forecasts of future production of Organic cotton (given the paucity in available data), simply extrapolating from current levels would give an indication of the potential of this fibre. Given that approximately 200,000 hectares under Organic cotton cultivation yields 500,000 bales currently, if the area were to go up to 500,000 hectares by 2015 (as estimated by experts), the potential output would be approximately 1,250,000 bales. This is under the assumption that no Government intervention would be made for supporting this sector. However, if support was provided to this sector, it is possible that the total output of Organic cotton touches 2,000,000 bales by the year 2015, as the area under cultivation could increase to over 600,000 hectares and significant improvement in yield is also achieved.
- 8.3.23. On the demand side, there is sufficient anecdotal evidence to suggest that as per capita incomes rise, and ecological awareness increases, there is a higher willingness to pay for environmentally sound products. A major reason for sustained Organic cotton demand in the United states despite the global economic slowdown is attributed to (a) rising awareness of the benefits of organic cotton fibre, (b) companies aligning their businesses on the lines of sustainable and eco-friendly practices, and (c) increased access to knowledge regarding organic farming and development programs. The retail sales of products made from Organic cotton have increased from USD 1.1 bn in 2006 to USD 3.2 bn. While the domestic demand (in India) for such products remains low, if supported by Government intervention in the form of creating awareness, it is conceivable that the domestic demand would grow substantially, as per capita incomes in India rise, and ecological awareness increases.
- 8.3.24. Given the benefits enumerated above, and the high probability of growth in demand for these products, there is a strong case for policy intervention to support and promote Organic cotton, Suvin as well as ELS cotton.

RECOMMENDATIONS OF THE SUB-GROUP FOR ORGANIC, SUVIN AND ELS COTTON SECTOR

8.3.25. With an aim to cater to these issues faced by organic, Suvin and ELS cotton sector, the sub-group on speciality cotton proposes the following recommendations:

8.3.26. **Recommendations for sustaining Suvin production:**

- It was recommended by the members that the acreage under Suvin fibre should not be allowed to decline further and prevent Suvin from becoming extinct. The members suggested that a special subsidy package could be developed in order to sustain the long duration crop and to keep alive the interest of the current Suvin growers.
- The members opined that precision farming technology could be adopted to cut the cost of cultivation and yield increase, thereby sustaining the interest of Suvin growers to continue growing Suvin.
- The members opined that branding of Suvin should be considered in the lines of SUPIMA.

8.3.27. **Ensuring seed availability for Organic, Suvin and ELS cotton:**

It has been suggested by the members that the seed producing companies could be informed in time about the requirement of non-treated seeds, thereby ensuring the availability of the same. It has been recommended that a yearly indent could be placed, along with lifting assurances, and suitable incentives to States to provide suitable varieties of seeds. Availability of seeds at the farm gate could be ensured through service providers. The members recommended that minimum orders for seeds could be given to the seed division of the Ministry of Agriculture on a yearly basis, so that it could track and enforce the orders and availability. A mechanism could be devised for providing guarantees of buy-back in case the minimum orders were not met. Farmers can be encouraged to retain their seeds thereby ensuring availability of straight varieties. It was recommended that the various varieties of Organic cotton could be protected through a seed bank. The sub-group recommended that research could be carried out to sustain the gene bank of Suvin and other ELS varieties. Also availability of these seeds to the cultivators should be ensured.

8.3.28. **Incentives to the farmers for sustaining organic cultivation:**

The sub-group recommended that a mechanism should be evolved to explore possibilities to distribute cattle/cow to the organic farmers (as in the case of Vidharba Farmers) as it is an integral part of organic cultivation. It is likely to help sustain the resource poor farmer's family and his farm land. The sub-group opined that NREGA scheme could be utilised in such instances of community

based assistance (e.g., collective compost making, making bunds etc) for ensuring availability of labour for the purpose of cultivating Organic cotton.

Enhancing production & quality:

- 8.3.29. Areas under organic cultivation can be designated/ear marked as Organic Zones, for growing Organic cotton in suitable blocks or districts in respective States, so as to protect the crops from any form of BT contamination. Organic zones could be created based upon soil and climatic conditions suited towards the production of different agricultural products. The zoning could reduce the high risk of contamination. Organic process could be made uniform, with suitable adjustments for each State, since the variety of Organic cotton would differ across states. Universities of the 4 major Organic cotton producing States can be involved and consulted, so that they could define the best variety for each state. Technology certification validation of the process of Organic cotton certification needs to be done. A mechanism to ensure availability of organic manure, devising methods to produce organic manure and training the farmers regarding the same could be developed. Organic cultivation can be encouraged through organising farmers. Individual farmers are likely to have insufficient demand for inputs and might supply insufficient kapas for separate transport and ginning. Thus it is considered essential to organise organic cultivators in order to provide for separate handling of organic produce and separate marketing of the same. Moreover, group certification could also help reducing costs.

Streamlining Organic certification and APEDA:

- 8.3.30. It was noted by the sub-group that although the exports of organic cotton constitutes the largest share in the total exports of all organic produce accredited by APEDA, there is lack of communication channel between organic cotton stake holders and APEDA. It was also noted that APEDA has already undertaken formulation of its own Textile Standards for Organic Cotton, sans any involvement of the stake holders. It was conveyed to the APEDA representative that a representation from the sector in the National Accreditation Board is essential and should be provided for. It was recommended that the role of various agencies involved in organic certification and development should be clearly stated and any duplication, with respect to handling Organic Cotton in the future could be avoided.

Adopting a Mission mode approach and establishing a Board for development of Organic, Suvin and ELS cotton

- 8.3.31. The various recommendations enunciated above cuts across a wide swath of issues. Given the special nature of the status of the speciality fibres (one on the ascendance, and the other on the decline), it may be more practical if the various recommendations are clubbed together in the form of concerted action points, both in the short term as well as over a long term. Therefore, the sub-group's recommendation is to

- a. Create a Technology Mission on Speciality Cotton to give a desired acceleration to the these segments of the cotton economy in the short-run
 - b. Create a board for Speciality Cotton to take care of developmental and promotional aspects over a long term, into perpetuity.
- 8.3.32. Adopting a mission approach for speciality cotton, similar in nature and structure to the Technology Mission for Cotton, would yield benefits to the sector given the fact that many of the issues faced by the Organic cotton & Suvin are similar to those faced by the cotton sector in the pre-TMC scenario and were successfully catered to by the TMC. This could be time bound measure, and look at various developmental aspects for Organic cotton including production, research, technology, certification, marketing, promotion etc. The structure of the proposed mission (Technology Mission on Organic cotton & Suvin) and the areas that this mission would intervene in and develop have been discussed in the section 3.3.
- 8.3.33. Given the current situation, stage of development and the importance of Organic cotton to the country, the sub-group on speciality cotton suggested that an apex body, with policy power, implementation power, financial power could be set up to look at the various aspects of development in the long run i.e. over a period of one year. The apex body or board can be formulated on the lines of other already existing boards such as the Central Silk Board (CSB), the Coffee Board etc. The final objectives, form, structure and working of the proposed board for Organic cotton could be developed with the participation of a private player / research organisation (such as the IIM Bangalore), which could study the existing commodity boards, and imbibe their best practices. The structure, role and functioning of the proposed board has been discussed in the section 3.4.

BLUEPRINT FOR THE TECHNOLOGY MISSION ON SPECIALITY COTTON (ORGANIC, SUVIN AND ELS)

- 8.3.34. The sub-group recommends formation of a society, with tenure of 1 year, and the society could recommend support initiatives that could be needed to be implemented by designated GOI departments, for effective implementation of the Technology Mission on Speciality Cotton.

Sub Mission I: Research and Technology generation

- 8.3.35. The main objective of the SM I could be:
- To study the risk of Organic cotton versus conventional cotton

- To identify and recommend location specific suitable varieties/Cultivars/hybrids for organic cotton
- To identify the sustainable area of organic cotton including non-traditional area
- To standardize agronomic management including Integrated Organic Pest Management (IOPM) module
- To analyze the environmental, soil health & other socio economic benefits
- To devise methods for exploiting carbon credits.

(A) Develop technologies to aid in the growth of organic cotton production that can serve as a basis for extension to farmers.

8.3.36. The technologies that are adopted need to cover not only organic cotton but also its rotational crops and intercrops. It needs to be oriented towards developing organic farming systems that are mutually supportive. For example cotton is helped by cattle (through FYM) and cattle by cotton (through cotton seed).

8.3.37. In order to increase dissemination efficiency farmers need to be systematically involved in problem identification, problem priority setting and screening of proposed solutions in the early stages of implementation of research activities through a PTD like processes. This is important as different agro-ecological zones have different priorities and location specific issues that need to be addressed. Some of the areas that need attention from production perspectives are:

1. Selection of the suitable varieties/cultivars from the perspective of buyer within the agro-ecological and socio-economic contexts considered. Supply of certified organic cotton varieties is critical for organic cultivation. There is a need to screen cultivars under organic environment for high yields, yield stability, pest and disease tolerance and high input use efficiency.
2. Land development strategies to mitigate effects of climate change (heavy downpours and drought in same season) through drainage and storage activities by which run-off water can be reused.
3. Production of sufficient organic matter for soil application to avoid mining of soil fertility and increase water infiltration and retention.
4. Organic Nitrogen management strategies, especially at time of boll formation, to ensure proper boll development and prevention of N-mining.
5. Fine-tuning of organic IPM/IDM systems aiming at reduction of early boll loss.
6. Inter- and rotational cropping systems: choice of crops and cultivars to give the best mix of agronomical and market benefits.

7. Appropriate levels of mechanisation in weeding and harvest operations that consume much of the increasingly scarce labour, consequently: money.
8. Development of a holistic integrated index (like land quality index) based on physical and socio-economic parameters to objectively assess the long term consequences of organic cotton cultivation and use these indices to monitor sustainability of organic farms.
9. Implement a sustainability analysis of a representative sample of organic cotton farms.

(B) Systems, tools and procedures to ensure organic cotton is genuinely organic.

8.3.38. In the organic cotton market it is important to ensure that the organic cotton produced is genuinely certified and not contaminated. It will be the responsibility of the first sub mission to develop systems and measures to ensure the organic cotton produced is genuinely organic. The challenges and needs in this area are

1. Rapid and reliable testing methods needs to be developed to detect pesticides (conventional and new) and GM proteins (Cry1Ac, Cry2Ab, Cry1C, Cry1F, VIP3A, EPSPS etc.) in the seeds and fibre.
2. LOD (limits of detection) and LOQ (limits of quantification) protocols to detect GM genes in seeds and fibre is required to be in place to detect contamination
3. To develop accredited statistical tools to standardize the appropriate protocols to certify organic cotton that is free of GM proteins and insecticides. Development of local norms and standards of certification of organic cotton farming and development of tools and techniques (protocols) for standardization and accreditation.
4. Buffer zones between organic and Bt cotton to ensure that cross pollination does not occur needs to be investigated. A final and binding buffer zone size and composition needs to be established on scientific basis. This issue will become more complicated with the introduction of easily cross pollinating crops like Bt maize and Bt pigeon pea.
5. Several mass production protocols for bio-pesticides, bio-control agents and other organic inputs have been developed prior to the introduction of Bt-cotton. The protocols need to be identified for factory-scale production of the most appropriate biological control agents, bio-pesticides, manures and micronutrients. The biological inputs need to be certified for biological purity.

Sub-Mission II: Transfer of Technology

8.3.39. A scheme on Organic cotton will be drawn in the pattern of 75:25% funded basis between the State Department of Agriculture and the Government of India. It is recommended by the sub-group that Sub-Mission II could be implemented by agriculture department of the respective states. Need based



components of technology adoption & awareness could be subsidised to the organic cotton growers in terms of inputs & knowledge. It could be implemented in Maharashtra, Gujarat, Orissa, Madhya Pradesh, Karnataka and Tamil Nadu as major States in identified districts where scope of organic cotton cultivation are promising. The state of West Bengal, Kerala, Tripura, Assam, Mizoram, Sikkim, Chattishgarh and others could be considered as minor states.

8.3.40. Subsidies Component could be implemented through State Department of Agriculture, Cooperatives, ICAR, SAUs and others. The possible components could be:

- Production of Breeder, Foundation & Certified Seeds
- Distribution of Certified Organic Seeds
- Supply of bio-fertilizers, Organic manures and other inputs
- Assistance for vermi compost, Azola, Crop residues compost etc.
- Promotion of bio-pesticides / P.traps / light traps / neem based products
- Organization of FLDs on organic cotton production technologies
- Awareness programme/electronic print media / seminar / workshop/ preparation of CD / exposure visit, Training programme etc.

8.3.41. Technology dissemination is best done by farmer to farmer communication. The role of the Sub mission II is to kick start that process by actively involving farmers as early as possible in the research and dissemination stages. The challenge is to create a critical mass of people, originating from all stakeholders in the organic cotton sector, who are aware of the technologies developed, know the details of them and have mastered the skills to impart the same to third parties. Enabling support systems are required to ensure adoption of technologies. This requires that suggested inputs are available, credit to buy the inputs is accessible and affordable, and that skill training is available.

(A) Awareness creation

8.3.42. It will be the responsibility of the Sub mission to organise periodic workshops at the District, State and National level on the results of research into organic cotton farming and farming systems. At these workshops, all stakeholders in the sector should be present: from researchers, seed companies to certifiers, spinners and weavers. The workshops will address present opportunities for and challenges to the sector. A quarterly magazine on organic farming can be a method of information dissemination. In due time subscriptions and advertisements can pay for its costs. It could also be a section in a general cotton magazine.

(B) Organic Cotton Zones

8.3.43. Organic Cotton cultivation demands a long-term commitment from the growers. It takes 3 years for them to get their land certified organic, hence their land has to be protected from possible contamination arising due to chemical or Bt. This can be done only if some potential areas are designated as Organic Zones. The main features of these zones will be determined by the submission. The broad considerations and features of these zones are

1. Areas with a long track record of organic cotton cultivation will be part of these zones.
2. The farmers in these organic cotton zones will be encouraged to adopt organic agriculture by way of incentives and input benefits.
3. This will provide a clear insight in the training requirements of government staff, service providers and community based organisations. The organisations active and effective in the organic cotton zone can easily be identified and assessed for their training requirement.

(C) Training of trainers

8.3.44. Selection of people to train is very important, as they should be available to the sector for a number of years after being trained as the training investment is substantial. Not only should they be available, they should also be part of a definite and potentially successful program located in designated organic cotton zones. Training of trainers can take place in a number of fields such as how to work (systematically plan, implement and evaluate), farmers' organisation, credit and saving, input knowledge, production technologies, quality issues in organic cotton production, sustainable farming systems, certification issues, marketing issues etc.

8.3.45. A training manual will have to be developed using the expertise of various stakeholders in the sector. This manual should be used by the trainers in their work. The material will have to be developed in vernacular. The material developed by CICR, Maikaal BioRe, Kabini Organics and CIKS can be used as starting point. It would be important to check the effectiveness and knowledge of the trainers on a regular basis and certify them as "organic cotton trainers". A provisional estimate suggests that the mission should aim to train about 100 trainers (assuming each trainer will train and supervise 40 extension workers). This could be done in five batches of 20, the ideal size for imparting skills. The obvious venue would be CICR but among the faculty there needs to be a good representation of service providers on merit basis. Trainers to be trained should be chosen (on merit basis and on area basis) out of a selection proposed by government, service providers and CBOs.

(D) Promotion of service providers

- 8.3.46. The trainers will have to have trainees who in turn will work with groups of farmers to promote organic cotton cultivation. The changes required, such as, developing organic cotton zones, in production methods and social organisation are substantial. Practical experience suggests that a ratio of one extension worker per 100 farmers is required in the initial stages. The sector aims at expanding the area to 5,00,000 hectares and 2,00,000 hectares are developed. This implies that about 4,000 extension workers should be involved and be trained.
- 8.3.47. The present model of NCOF to support service providers can serve as a basis for support. The financial support though does not meet real levels of expenditures incurred by the service providers.

(E) Building enabling support systems

- 8.3.48. Since a large segment of Indian farmers are resource-poor, and may lack or be hindered by an inability to display repayment discipline for money borrowed from the formal sector, it may be useful to consider subsidising crucial inputs. These subsidies can be to the establishment period, which is about 3 years. The most crucial inputs for organic cotton production to be successful and profitable are:
1. Seed
 2. Organic matter and its production:
 - a. Recommended application 15 tons per hectare
 - b. Biomass production: *Gliricidia sepium*, *Cassia siamea*, perennial pigeon pea, sunhemp
 - c. Improved stables for cattle (with dung and urine collection systems)
 3. Nitrogen management:
 - a. Nitrogen fixing bacteria: *azospirillum*, *azotobacter*, *rhizobium*.
 - b. Poultry units @ 150 hens per hectare cotton grown.
 4. Phosphorus Management:
 - a. Rock phosphate
 - b. Phospho-solubilising-Bacteria
 5. Pheromone traps for pink bollworm detection and mass trapping in endemic areas only.
 6. Bio-pesticides like haNPV, dipel, *pseudomonas*,
 7. Improved, width adjustable, weeding equipment
 8. Stalk-chippers and *Trichoderma* to speed up composting of cotton stalks

9. Drying areas with tarpaulin covers as a major problem for ginner is the moisture content of raw cotton.

Sub Mission III: Statistical data Compilation

8.3.49. The main objectives of this Sub Mission could be:

- To collect the data on area, production and yield of organic cotton: production areas, where, what, when, how much, what quality, what minimum price (break-even)
- To maintain record on proper certification of organic cotton
- To gathered data on export, import price and demand of organic cotton (national and international): where, what, when, how much, what quality and what price.
- To develop information dissemination channels using Information and Communication Technologies (ICT) aimed at national producers of organic cotton but also national and international consumers of organic cotton:
 - create a special organic cotton portal, which can be linked also to portals as run by APEDA, Organic Exchange, Helvetas, ICCOA, BioFach to mention a few.
 - Results of research, current updates on the developments in the organic cotton sector, etc. could form another part of information supplied.
 - The website could also have a B2B module, aimed at increasing clientele from abroad. The B2B module could eventually finance the website.
- To coordinate with National & International Organic Certification Agencies and Promotional bodies
- Maintain actual statistics of export, import, stocks of organic cotton and its products.
- Maintain a database of certified organic input suppliers: where, what, how much can they produce, what quality, what price
- Maintain a database of organic certification agencies: who, where, how many staff, how many farmers, what area.
- Maintain a database of service providers: who, where, how many staff, how many farmers, what area,

8.3.50. It would be useful to also collect similar data with regard to the rotational and intercrops grown by farmers as this would greatly improve marketability of products.

Sub Mission IV: Promotion, Quality Control, Processing and Marketing of organic cotton

8.3.51. Few Market Yards and Ginning & Pressing factories already upgraded through MM IV of the Technology Mission on Cotton (TMC) could be identified and further improved where organic cotton will be marketed & bale pressed to reduce contamination & adulteration intermixing with conventional cotton. The following could be the broad objectives of this sub-mission:

- Development of group farming options (co-operative movements / Producer Companies and/or contract farming)
- To create marketing infrastructure only for organic cotton to reduce contamination
- To assure remunerative price for organic cotton
- To adequately equip existing ginning & pressing factories to handle organic cotton
- To ensure quality of organic cotton produced in India
- To create awareness on Post Harvest Management
- To promote organic cotton use through exhibition/ melas/ fashion shows/ workshop

(A) Assessment and development of group farming option through the development of cooperative movements or incentivized contract farming initiatives.

8.3.52. The average landholdings of cotton farmers like most other agricultural crops in India are small. Most small and marginal farmers do not have the resources to handle higher marketing costs like certification costs. In this respect, other options of group farming like contract farming, cooperative farming and producer companies need to be explored. Sub Mission IV needs look into the feasibility of these options and also aid in their registration and establishment. This will give options and enable larger groups of farmers to access certification and enter organic agriculture.

(B) Organization of Fairs and Exhibitions to Promote Organic Cotton

8.3.53. Promotion of organic cotton to establish a niche in the national and international markets is essential to develop the organic cotton market. Considering India's position as the world's largest producer of organic cotton, it is important to market organic cotton at a macro level. Promotion through participation in various International Institutional Forums, Trade Fairs, Study Tours, etc., Sub mission IV needs to take on the responsibility of promoting Indian organic cotton at the national and international level.

(C) Exploring the possibilities of utilising Organic Cotton or other value added products in Technical Textiles

(D) Export Quality to Ensure the Establishment of “Reputation Systems”

- 8.3.54. Ensuring scientific testing to ascertain the genuineness of Organic Cotton is of prime importance. Hence, Sub Mission IV will incentivise the testing charges incurred by the Ginners / other stake holders, for all the testing done through accredited laboratories that test for chemical traces / GMO traces in their certified produce (seed cotton to finished product).

(E) Branding and Promotion of value added goods

Sub Mission V: Revival of Suvin Cotton and ELS Cotton

Sub Mission V could cater to the development requirements of the ELS cotton in general and Suvin cotton in specific. The broad objectives of the mission would be:

- To sustain the interest of traditional Suvin Cotton growers by substantially increasing their net take home incomes, by adopting technologies that not only reduces the cost of cultivation by also increases the per acre yield.
- To revive Suvin productivity from the current 1250 bales to around 10,000 bales by 2015.
- To ensure adequate supply of quality Suvin cotton seeds (by establishing seed farms with modern facilities).
- To introduce FLD programs in non traditional cotton growing regions of Suvin to enhance production of Suvin
- To establish modern seed farm to maintain the purity of the seed material.
- Ensure availability of quality Suvin fibre to the domestic industry at competitive rates.
- To establish “SUVIN” as a Brand in the international markets on the lines of Supima.

Enhancing Research on Suvin

- Restoration of Suvin variety and enhance seed multiplication of new Suvin.
- Establish precision farming (polymulch, drip irrigation system).
- Increase the boll size by R&D
- Increase the yield and improve the quality of the cotton.
- Shorten the crop period.
- Nutrient management.

- Research aimed at reducing the gestation period
- R&D for pest management

Mission Strategy

- To increase Suvin area up to 7500 acres in next five years with a periodical increase in production and acreage.
- To provide quality seeds through parent seed developmental program, R&D in seed development (increase cotton yield, boll size, reduce crop period).
- To increase the farmers take home income & reduce the cotton cost.
- To enhance the Suvin production to 10,000 bales from the current level of 1250 bales per annum.

It is important to note here that the budget estimated for Sub-mission V of the technology mission is only for the revival of the Suvin cotton. The budget for development of ELS cotton could be estimated in conjunction with the proposed Speciality Cotton Board after a detailed study of the ELS cotton scenario in India.

Fund requirement for the Technology Mission on Speciality cotton

8.3.55. The consolidated budget requirement for the Technology Mission on Speciality Cotton for tenure of five years has been presented in the table below.

Consolidated Mission Wise fund requirement:

Exhibit 8.3.1: Technology Mission on Speciality Cotton (figures in Rs. Crores)						
Sub Missions	2010-11	2011-12	2012- 13	2013-14	2014 – 15	Total Outlay
SUB-MISSION I Research & Technology Generation	5.00	4.00	3.00	2.00	1.00	15.00
SUB-MISSION II Transfer of Technology	58.50	75.00	94.00	119.00	149.50	496.00
SUB-MISSION III Statistical Data Compilation	1.00	1.00	1.00	1.00	1.00	5.00



Exhibit 8.3.1: Technology Mission on Speciality Cotton (figures in Rs. Crores)						
Sub Missions	2010-11	2011-12	2012- 13	2013-14	2014 – 15	Total Outlay
SUB-MISSION IV Promotion, Quality Control, Processing & Marketing	6.52	7.90	9.74	12.04	14.80	51.00
SUB-MISSION V Revival of Suvin Cotton	1.00	1.25	1.50	1.75	2.02	7.52
Budget for formation of Society	3.80					3.80
GRAND TOTAL	75.82	89.15	109.24	135.79	168.32	578.32

Exhibit 8.3.2: Mission-wise fund requirement (in Rs. crores)						
Mission Wise budget	2010-2011	2011-2012	2012-2013	2013-2014	2014-2015	Total Outlay
SUB-MISSION I : Research & Technology Generation	5.00	4.00	3.00	2.00	1.00	15.00
SUB-MISSION II : Transfer of Technology	58.50	75.00	94.00	119.00	149.50	496.00
<i>Support to Service Providers</i>	20.00	25.00	32.00	40.00	50.00	167.00
<i>Training</i>	2.00	3.00	3.00	4.00	6.00	18.00
<i>Biomass development</i>	13.00	16.00	20.00	26.00	32.00	107.00
<i>Production of certified seeds</i>	12.00	15.00	19.00	24.00	30.00	100.00
<i>Distribution of organic seeds</i>	3.00	4.00	5.00	7.00	9.00	28.00
<i>Supply organic inputs</i>	1.00	2.00	2.00	2.00	3.00	10.00
<i>Awareness programmes</i>	0.50	1.00	1.00	1.00	1.50	5.00
<i>Organic Certification costs</i>	5.00	7.00	9.00	11.00	14.00	46.00



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Exhibit 8.3.2: Mission-wise fund requirement (in Rs. crores)						
Mission Wise budget	2010-2011	2011-2012	2012-2013	2013-2014	2014-2015	Total Outlay
<i>Chippers & Improved weeding equipment</i>	2.00	2.00	3.00	4.00	4.00	15.00
SUB-MISSION III: Statistical Data Compilation	1.00	1.00	1.00	1.00	1.00	5.00
SUB-MISSION IV: Promotion, Quality Control, Processing & Marketing of Organic Cotton	6.52	7.90	9.74	12.04	14.80	51.00
<i>Development of protocol for testing Bt Cotton</i>	1.00	1.00	1.00	1.00	1.00	5.00
<i>Quality control for testing for genetic BT contamination @ Rs. 9,000 per 500 ha (approx.) {50 samples/ICS}</i>	0.36	0.45	0.57	0.72	0.90	3.00
<i>Awareness & Training on testing, Certification, Quality Requirements and PHM</i>	0.36	0.45	0.57	0.72	0.90	3.00
<i>Setting of National Referral Laboratory for GM & other testing and monitoring</i>	3.60	4.50	5.70	7.20	9.00	30.00
<i>Promotion of organic Cotton use through Exhibitions/Melas/Fas hion Shows/Workshop</i>	1.20	1.50	1.90	2.40	3.00	10.00
SUB-MISSION V : Revival package for Suvini Cotton*	1.00	1.25	1.50	1.75	2.02	7.52



Exhibit 8.3.3: *Sub Mission V a: Research & Development (Five Year Plan Period)	
Components	Proposed Fund Requirements (In Rs. Crore)
Genetic Purity Maintenance of Suvin Cotton varieties / hybrids	0.05
Identification of Suvin cotton cultivation area of the country	0.03
Standardization of Suvin cotton Package & Practices for various agro climatic Zones	0.02
Development & Validation of IPM / IRM Strategies for Suvin cotton under different eco system	0.17
Soil , Water & Nutrient management of Suvin cotton	1.38
Development of Suvin cotton web site at National & International Level	0.03
Over all Contingencies	0.05
Total	1.73

Exhibit 8.3.4: Sub Mission V b: Transfer of Technology	
Components	Proposed Fund Requirements (In Rs. Crore)
1. Seed Sector	
<i>Production of Breeder, Foundation & Certified seeds</i>	0.17
<i>Distribution of Certified seeds</i>	0.12
2. Soil Health improvement	1.05
3. Plant Protection & Cultivation	
<i>Sowing, Weeding, Spraying & Harvesting</i>	2.16
<i>Surveillance of disease & Pest</i>	1.29
4. Human resource Development	
<i>State Level Training & Farmers Training (2 days)</i>	0.02
<i>Farmers Field School (FFS) on Suvin Cotton (2 weeks training)</i>	0.02



Exhibit 8.3.4: Sub Mission V b: Transfer of Technology	
Components	Proposed Fund Requirements (In Rs. Crore)
5. Technology Dissemination	
<i>Organisation of Front Line Demonstration (FLDs) on Suvin Cotton</i>	0.67
<i>Promotion in Forum, Fairs & Branding "Suvin" cotton</i>	0.15
6. Contingencies	0.14
Total	5.79

ESTABLISHING A BOARD FOR THE DEVELOPMENT OF SPECIALITY COTTON (ORGANIC, SUVIN AND ELS)

- 8.3.56. The proposed Speciality Cotton Board can help to carry forward the interests and address the challenges the speciality cotton sector faces helping it to adapt to the changing needs of the market. The board will function as an apex body, with policy, administrative, implementation and financial power to look at the various aspects of development in the long run. The apex body or board can be formulated on the lines of other already existing boards such as the Central Silk Board (CSB), the Coffee Board etc. It is envisaged that the society formulated in the first year for managing the technology mission on speciality (Organic, Suvin and ELS) cotton could be converted into a board. The proposed Speciality Cotton Board, while pursuing matters related to Organic Cotton & Suvin, would also consider the recommendations made by SIMA - CITI in its ELS vision statement. Upon formation of the Board, a separate mission to handle other ELS cotton can be pursued.
- 8.3.57. The board will comprise of equal number of stake holders from both the public (the ministries of agriculture, textiles and commerce) as well as the private sectors (farmers, traders, and industry). It is envisaged by the sub-group that the board would function as a corporate body and will be financially sustained on a self financing model. A major part of the boards' revenue will come from its role of implementing and ensuring refuge seeds in GM agriculture practices. The other source of income for the board will be from its labs and testing activities. The board could also generate revenues through branding efforts, by creating a brand for Organic Cotton, and deriving royalty from its usage.
- 8.3.58. Although suggested below, the final objectives, form, structure and working of the proposed board for Organic cotton could be developed with the participation of a private player / research organisation

(such as the IIM Bangalore), which could study the existing commodity boards, and imbibe their best practices.

8.3.59. **Structure and Functions of the Board**

- The board of speciality cotton will take on the role of development, extension and promotion of organic cotton and Suvin in India.
- The board will comprise of representatives from the Ministries of Agriculture, Textiles and Commerce, stakeholders of the value chain (Industry, traders, farmers, civil society) and representatives from all cotton growing states. This broad representation of stakeholders and concerned departments will help in inter-sectoral convergence and ease the process of decision making.
- The Board could have Financial, Implementing, monitoring and advisory role. It will be the sole implementer of the National Agenda. The board will also have an advisory role, where it will advise the government on matters relating to the production, supply, distribution and trade and commerce of organic cotton and Suvin. It has been envisaged by the sub-group that the board would be distinctively different from the already existing Organic Cotton Advisory Board.
- The board will have active participation from the private sector and stakeholders, basing the model on the lines of a public-private partnership
- The board of the development of speciality cotton will be an autonomous body and will have independence with regard to matters of its functions and roles, administration and finance.
- The board will be self-sustaining that will require it to depend on the centre only partially for funds.
- It will be the responsibility of the board to ascertain areas as organic zones/refuge zones in Bt cotton areas as per regulations and ensure the timely availability of variety seeds for this purpose.

Roles of the Board for the Development of Speciality Cotton (Organic, Suvin and ELS)

- 8.3.60. The board for the development of speciality cotton while taking on the responsibility of developing the organic cotton and Suvin sector had a development role, administrative role as well as a role of quality control.

Development Role

- 8.3.61. Research and Development: in order to facilitate the growth and competitiveness of the organic cotton and Suvin sector, strong R&D in the fields of seed development, Organic pest management, integrated nutrition management, livestock development and other extension technologies is necessary. It will be the responsibility of the board to fund existing R&D institutions (both general and cotton specific) in the country to develop region specific organic technologies as per the need and challenges the sector faces. Seed development and ensuring the availability of organic seeds and Suvin seeds will also be an important role of the board.
- 8.3.62. Information Dissemination Mechanisms: the two channels of information flow are from “lab to farm” and from “farm to lab”. Taking technologies developed in labs and implementing them in farms requires an effective chain of information flow. The development of these technologies, educating the farmers through front line demonstrations (FLDs) and helping them implement it will be the responsibility of the Board. Similarly identification of farm level issues and bringing them to lab in the form of requirements and feedback will also be a part of its responsibility, enabling “farm to lab” flow of information.
- 8.3.63. Zone Determination: demarcation of organic zones in Bt cotton regions as refuge zones is very integral to prevent pest resistance to Bt. The role of the board will extent to determining zones as well as making available variety seeds and Suvin cotton seeds in these regions. Within these zones the board will also help and facilitate the development of group farming options.
- 8.3.64. Marketing and promotion: despite India being the largest producer of organic cotton with a fully integrated value chain, the market in India for organic goods is negligent. Urban India is large potential market where organic cotton products can enter. Studies by Organic Exchange show that the growing demand and awareness about organic products in the United States and Europe can be attributed partly to the role promotional activities and fairs. In India, the promotion activities of organic cotton can be taken up by the board for the development of speciality cotton. It can be given the role of organizing exhibitions nationally and internationally for the promotion and improved marketing of organic cotton.
- 8.3.65. Data and Statistics: the role of collecting and collating data and statistics from various regions of organic cotton cultivation will be done by the board. This is integral for the formation of a knowledge base essential for its advisory role and development of the sector. A database accessible by all stakeholders will be maintained by the board.
- 8.3.66. Publication: the board will bring out timely publications regarding its activities, data and statistics and recent and new developments in the organic cotton and Suvin sector.



Administrative Role

- 8.3.67. Finance, Accounts and Audits: the board will function through a partial self-financing model where it will depend only partially on the centre of funds. It will finance a part of its activities through the “Refuge Seed Model” and other services it provides like lab and testing services, registration of exporters, market cess and also registration of group farming initiatives.
- 8.3.68. Program Implementation: the task of implementing programs developed through R&D by coordinating with various government departments and other stakeholders will be the responsibility of the board. The role of follow-up and assessment of the programs will also be the responsibility of the board.
- 8.3.69. Legal Cell: the legal cell will form an integral part of the board and will take on the responsibility of preparing policy and legal frameworks along with the duties of grievance redressal, arbitration and litigation.
- 8.3.70. Registration of Traders and Initiatives: all group farming initiatives under organic, Suvin and ELS cotton cultivation need to be registered with the board for the development of speciality cotton. The board will also provide timely support and extension to these initiatives when necessary. Similarly, traders of organic cotton and Suvin also need to be registered and licensed by the board. This will enable tractability and also quality control.

Role of Quality Control

- 8.3.71. Conformity Assessment: Conformity to certification norms laid out by APEDA is one of the most important aspects of organic farming.
- 8.3.72. Lab and Testing Services: Testing of the physical, chemical and genetic properties is essential in organic cotton, especially for the purpose of exports. Lab facilities of the board can take up the responsibility of testing cotton and certifying them for export using quality marking.
- 8.3.73. Certificate for Export & Quality Marking: certification of organic cotton products with the help of a quality marking like the silk and spice boards can help in establishing and assuring quality of exports. This responsibility can also be modelled as a revenue generator for the board.



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Exhibit 8.3.5: Budget for Speciality Cotton Board: Head Office (in lakhs INR)						
	No.	Salary/ month	2011 – 2012	2012- 2013	2013 - 2014	2014 – 2015
Senior staff						
CEO	1	2.00	24.00	25.00	26.00	26.00
Admin Director	1	1.00	12.00	13.00	13.00	14.00
Coordinator - Research	1	1.00	12.00	13.00	13.00	14.00
Coordinator - ToT	1	1.00	12.00	13.00	13.00	14.00
Coordinator - Data / Info	1	1.00	12.00	13.00	13.00	14.00
Coordinator - Chain Development	1	1.00	12.00	13.00	13.00	14.00
Support staff						
Secretary	3	0.15	5.40	6.00	6.00	6.00
Accountant	1	0.15	1.80	2.00	2.00	2.00
Office Manager	1	0.13	1.50	2.00	2.00	2.00
Driver	2	0.08	1.92	2.00	2.00	2.00
Office Assistant	2	0.04	0.96	1.00	1.00	1.00
Total Staff cost			95.58	103.00	104.00	111.00
Operational cost			63.00	67.00	70.00	73.00
Total Recurrent Cost			158.58	170.00	174.00	184.00
Investments		Cost/unit				
Computers	11	0.50	5.50			
Office Equipments	11	0.50	5.50			
Vehicles	2	8.00	16.00			
Total Cost			185.58	170.00	174.00	184.00



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Exhibit 8.3.6: Budget for Speciality Cotton Board: Regional Offices (in lakhs INR)						
	No	Salary / month	2011-12	2012-13	2013-14	2014-15
Senior Staff						
Madhya Pradesh	1	0.80	9.60	9.60	11.00	11.00
Maharashtra	1	0.80	9.60	9.60	11.00	11.00
Orissa / W Bengal / N E States	1	0.80	9.60	9.60	11.00	11.00
Punjab/Haryana/Rajasthan/Gujarat	1	0.80	9.60	9.60	11.00	11.00
Andhra Pradesh/ Karnataka/Tamil Nadu	1	0.80	9.60	9.60	11.00	11.00
Support staff						
Secretary	5	0.12	7.20	7.20	8.00	8.00
Office Manager / Accountant	5	0.12	7.20	7.20	8.00	8.00
Driver	5	0.06	3.60	3.60	4.00	4.00
Office Assistant	5	0.04	2.40	2.40	3.00	3.00
Total staff costs			68.40	68.40	78.00	78.00
Operational costs			46.00	48.00	50.00	52.00
Total recurrent costs			114.40	116.40	128.00	130.00
Investments		Cost/unit				
Computers	10	0.50	5.00			
Office Equipment	10	0.50	5.00			
Vehicles	5	6.00	30.00			
Total Cost			154.40	116.40	128.00	130.00

Exhibit 8.3.7: Consolidated Budget for Speciality Cotton Board (in lakhs INR)				
	2011-12	2012-13	2013-14	2014-15
A. Total Cost: Head Office	186.00	170.00	174.00	184.00
B. Total Cost: Regional Office	154.00	116.00	128.00	130.00
Grand Total	340.00	286.00	302.00	314.00



8.A. ANNEXURE

8.A.1. MEMBERS OF THE SUB-GROUP

S.No.	Name	Designation & Name of the Organisation representing
1.	Shri Manish Gupta	Convener of the Sub-group; Director, Ministry of Textiles, New Delhi
2.	Shri Mani Chinnaswamy	Co-Convener of the Sub-group; Partner Appachi Cotton, Pollachi, India.
3.	Dr. Anupam Barik	Director, DOCD, Mumbai
4.	Shri P.D. Mepani	GM (Raw Material), M/S Gokak Textiles, Mumbai
5.	Dr. P.V.S.M. Gouri	Advisor (Organic Product), APEDA, New Delhi.
6.	Shri B.A. Patel	Jt. Textile Commissioner, O/o Textile Commissioner, Govt. of India, Ministry of Textiles, Mumbai.
7.	Smt. Prabha Nagarajan	Regional Director of India, Organic Exchange
8.	Dr. A.K. Yadav	Director, National Centre of Organic Farming
9.	Mr. S.K. Bansal	Director, Pratibha Syntex Pvt Ltd
10.	Mr. Hasmukh Patel	Vice President, Agrocel Industries
11.	Mr. Sameer V Mehra	CEO, Suminter India Pvt Ltd.
Invitees/Advisors		
12.	Mr. Dirk Teichert	Managing Director, Control Union Certification.
13.	Mr. Mans Lanting	Managing Director, ETC Consultant India Pvt. Ltd,
14.	Mr. Umesh Chandrasekhar	Director, Institute for Marketecology (IMO) Control Private Limited
15.	Shri K. Sainathan	Project Manager, Agrocel Industries
16.	Dr. V. C. Reddy	Professor & Head of Research, Institute on Organic Farming, UAS, Bangalore.
17.	Shri A. Lakshmanan	Sri Santhalakshmi Mills (P) Ltd., Pollachi, Tamil Nadu
18.	Shri P. Mohan	Deputy Director of Agriculture, Deptt. of Agriculture, Karnataka.
19.	Shri Binay Kumar Choudhury	Certifier, Control Union Certification