Mention of firm names and commercial products does not imply the endorsement of ITC.

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Report and Pictures by: Cynthia Zijlstra-Adriano, ITC
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Cover photo: Sedefitex technical team members demonstrating the use of certified cotton picking bags, Kédougou, Senegal

Project INT/75/24E
Introduction

Within the framework of ITC cotton development activities and under the EC All ACP Commodities Programme, the International Trade Centre organized a South-South Cooperation Mission on Cotton Contamination, in close collaboration with SODEFITEX, “Société de Développement et des Fibres Textiles”, in Senegal from 13 to 18 December 2010.

ITC led a delegation composed of nine cotton stakeholders from the government, ginnery and farming sectors in Tanzania, Uganda and Zambia. The mission was implemented through the following objectives:

- Build capacity in the fight against cotton contamination by Polypropylene (PP);
- Learn from the Senegalese experience in successfully controlling contamination;
- Exchange and share information on cotton production and marketing;
- Facilitate technology transfer from Senegal to East African countries;
- Strengthen intra-African cooperation.

The ITC team was led by Ms. Cynthia Zijlstra-Adriano, Research Assistant and Mr. Adrien Ranchon, Consultant.

The European Commission provides financing to the ITC Cotton Programme under the EU All ACP Agricultural Commodities Programme.

The cotton producing countries of Tanzania, Uganda and Zambia are among those East and Southern African countries that face many challenges in producing cotton which is free from contamination. As a result, cotton exports from these countries may not fetch premium prices in major cotton importing markets.

Sodefitex has successfully controlled contamination by Polypropylene since 2000 through its Quality Charter Programme and enjoys a good reputation among spinners for its high quality cotton. The ITC, in their efforts to improve the competitiveness of African cotton, has seized the opportunity to facilitate technology transfer from Senegal to East and Southern African countries through a South-South cooperation programme.
Participants

Group picture taken at Sodefitex, Tambacounda with participants, members of Sodefitex, ITC staff and translator.

<table>
<thead>
<tr>
<th>TANZANIA</th>
<th>UGANDA</th>
<th>ZAMBIA</th>
</tr>
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<tbody>
<tr>
<td>Mr. Jones BWAHAMA</td>
<td>Mr. Badru ADIGA</td>
<td>Mr. Michael BANDA</td>
</tr>
<tr>
<td>Zonal Director</td>
<td>Cotton Classifier</td>
<td>Vice-Chairman</td>
</tr>
<tr>
<td>Western Cotton Growing Area</td>
<td>Cotton Development Organization</td>
<td>Farmers’ Ginning &amp; Processing Co.</td>
</tr>
<tr>
<td>Tanzania Cotton Board</td>
<td></td>
<td>Cotton Association of Zambia</td>
</tr>
<tr>
<td>Mr. Igoro G. MARONGA</td>
<td></td>
<td>Mr. Danford SIMUIKA</td>
</tr>
<tr>
<td>Senior Cotton Inspector</td>
<td></td>
<td>Programme Officer</td>
</tr>
<tr>
<td>Tanzania Cotton Board</td>
<td></td>
<td>Cotton Association of Zambia</td>
</tr>
<tr>
<td>Eng. Simon B.F. HYAGILA</td>
<td></td>
<td>Mrs. Mary MWANZA</td>
</tr>
<tr>
<td>Principal Ginnery Inspector</td>
<td></td>
<td>Farmer</td>
</tr>
<tr>
<td>Tanzania Cotton Board</td>
<td></td>
<td>Cotton Association Zambia</td>
</tr>
<tr>
<td>Mr. John Seni MADUHU</td>
<td></td>
<td></td>
</tr>
<tr>
<td>General Manager</td>
<td></td>
<td></td>
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<tr>
<td>Shirecu Ltd.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sinyanga Region Cooperative Union</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mr. Twahiru SHEMAHONGE</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cotton Grower</td>
<td></td>
<td></td>
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<tr>
<td>Tanzania Cotton Growers Association (TACOGA)</td>
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SODEFITEX – Resource Persons

<table>
<thead>
<tr>
<th>Mr. Boubacar KAMISSOKHO, Director, Cotton Operations</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mr. Magnang NIANG, Chief, Department of Cotton Production</td>
</tr>
<tr>
<td>Mr. Aliou Yoro NDIAYE, Chief, Industrial Department</td>
</tr>
<tr>
<td>Mr. Idrissa Harouna TIREIRA, Sales Director</td>
</tr>
<tr>
<td>Mr. Idy KA, Chief, Cotton Quality Section (Cotton Classification)</td>
</tr>
<tr>
<td>Mr. Pape Fata NDIAYE, Head, Quality Management, Safety and the Environment</td>
</tr>
<tr>
<td>Mr. Boly Gaye SECK, Chief, Logistics, Production and Training Section</td>
</tr>
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Translator: Mr. Paul Marie DIAGNE
Meeting with SODEFITEX, Tambacounda

The workshop provided a forum for knowledge and experience-sharing on issues of contamination and quality. The participants gained insight into the strategies deployed by Sodefitex in successfully controlling contamination at all stages of cotton production. These include rigorous sensitization programmes and stringent measures to avoid contamination during harvesting, ginning, storage and transportation processes. Moreover, the participants learned that listening to the client, the importance of communication, the value of transparency and a confidence framework are part and parcel of the key success factors of Sodefitex’s strategy.

Sodefitex delivers presentation on their achievements in 10 years of fight against cotton contamination. Translator services are provided from French to English to facilitate exchange of information. The areas of Sodefitex’s intervention for cotton production and marketing are explained ahead of the field visits.

Field Visits – Cotton Fields in Kédougou and Tambacounda
Cotton Markets in Afia and Sitaoulé

The participants visited the cotton fields in Kédougou and Tambacounda to observe harvesting operations and commercialization of seed cotton, including measures to avoid contamination during harvesting and storage processes. The participants also had interactive discussions with the heads of villages, sharing views on the structure of cooperatives, how farmers are organized and how credit is accessed. Plant spacing, pest management, and methods of fertilizer application were also discussed.

Head of Village extends a warm welcome to the participants. Participants inquire about crop growing such as plant spacing and fertilizer used. Farmers are trained to distinguish seed cotton quality grades while picking.
**Field Visits – Cotton Fields in Kédougou and Tambacounda**  
**Cotton Markets in Afia and Sitaoulé**

<table>
<thead>
<tr>
<th>Image 1</th>
<th>Image 2</th>
<th>Image 3</th>
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<tbody>
<tr>
<td>Harvesting is mainly done by hand. Women harvesters are seen picking cotton using cotton bags. During harvesting, sorting and quality grading are done by placing the “A” grade cotton in the larger compartment of the bag, while “B” grade cotton is placed in the smaller pocket.</td>
<td>To avoid contamination, seed cotton is placed on a rack well above the ground. The best quality is placed on top of the heap.</td>
<td>Participants observe seed cotton being transported from the village to the market in baskets on a donkey cart. Alternatively, seed cotton is transported in metal grids and horse-drawn to the market.</td>
</tr>
<tr>
<td>Participants observe seed cotton being transported from the village to the market in baskets on a donkey cart. Alternatively, seed cotton is transported in metal grids and horse-drawn to the market.</td>
<td>The central buying market is kept clean at all times</td>
<td>Seed cotton brought to the market is stored on a raised platform in an open fenced-in area.</td>
</tr>
<tr>
<td>The central buying market is kept clean at all times</td>
<td>Open market operations. Farmer’s union members check the cotton and team leaders confirm the quality.</td>
<td>Seed cotton is then graded according to 3 choices of quality and placed in a sample box as a yardstick of quality.</td>
</tr>
<tr>
<td>First grade cotton is packed in white bags, second grade in red bags and third in green bags.</td>
<td>Participants from the cotton boards of Tanzania and Zambia observe weighing of seed cotton before loading</td>
<td>Seed cotton is loaded in containers for transport to the nearest ginning factory. Cotton mats are placed on the ground to prevent contamination.</td>
</tr>
</tbody>
</table>
### Outcomes of the field visit

The Tanzanian Delegation purchased the eco super-seeder from Sodefitex for their farmers. The machine will be used for direct row seeding during planting, which will ensure the cotton seeds to thrive at a depth that will increase the likelihood of germination and yield.
Field Visits – Cotton gins and mills in Vélingara, Kédougou and Tambacounda

Visits were made to well-known ginning factories located in Vélingara, Kédougou and Tambacounda. In Vélingara, participants learned that the plant has ginned a total of 427,000 tonnes in 37 years. Since plant modernization in 2004, the ginning capacity has increased considerably to 25,000 tonnes in a 100 day production campaign. The participants gained insight into protection strategies and regular practices to avoid contamination during ginning and baling processes, as well as barcode technology employed to trace and detect the source of contamination.

Group picture with participants and resource persons from Sodefitex and ginnery plant.

Transfer of seed cotton from the truck to the ginnery. Pre-cleaning and sorting is done by aspiration. Trucks are sheltered from dust and rain during the process.

Ginnery manager explains the barcode system employed in ginneries to trace and detect the source of contamination. Barcode data captures producer details.

Participants observe ginning processes. Ginnery technician explains the functioning and regulation of ginning machines to control moisture and protect fiber quality (right).

Members of Sodefitex display cotton material used for bale packaging.

Participants observe an automated bale pressing machine and note specifications for weight and size.

Once a week, bales are randomly selected and checked for contaminants such as PP materials and seeds.

Cotton samples are weighed to collect data on the arrival of bales, net weight, market and variety.

Although PP materials are not used for harvesting and storage purposes, they are used for bagging cotton seeds for delinting. To avoid contamination, the use of PP materials is only allowed in clearly marked zones reserved for this purpose.
Sensitization strategies at production and factory level

Posters and visuals are displayed in production and factory premises to sensitize and motivate workers to continue the fight against polypropylene and maintain cotton quality. Inspirational quotes and signs targeting all cotton stakeholders have been a successful strategy in the prevention of accidents, protection of the environment, increase in quality seeds and fight against contamination by polypropylene.

Use of the local radio “Bamtaare Dowri FM” to disseminate information to farmers

“Bamtaare” means development and “Dowri” rural. Located in Vélingara, Baamtare Dowri FM communications are used to transmit information on cotton contamination to the rural farming communities.

Participants learned that radio programmes are used to train cotton farmers to improve their skills in producing higher quantity and better quality of cotton.
Heads of Delegations from Uganda, Tanzania and Zambia are interviewed by radio journalists, during which they share their experiences and challenges on quality issues and cotton production in their respective countries. They also inform on the lessons learned from the Senegalese experience and the way forward.

Classification of cotton and quality control

Cotton samples from the ginning factory are classified in the laboratory for metrology and cotton classification in Tambacounda. The cotton is inspected for a variety of characteristics such as fibre length, colour, strength, etc. Cotton is also tested for inconsistencies and graded. If required, settings of ginning machines may have to be adjusted according to test results. Records are being kept of each batch of cotton for traceability and to allow for corrective action if contamination is detected.

A variety of cotton samples arrive at the laboratory to be classified according to fibre parameters such as length, colour, strength, etc.

Each cotton fibre sample bears data on the type and number of the bale, time, date, weight and production sector.

When inconsistencies are found in the fibres, the information is reported back to the producer for rectification.

According to fibre characteristics of the samples tested, the cotton classifier will advise if ginning machines need to be adjusted.

The Chief cotton classifier in Tambacounda explains that if there are neps in the fibres, the cotton will be declassified to a lower grade.

The laboratory keeps logs of the origin of every batch of cotton to facilitate quality control and corrective measures.
Mission Roundup - Evaluation and Action Plan

At the closing ceremony, participants sought clarification with the technical team on price fixing, farmers’ share in cotton prices, marketing of lint fibers and the processes involved in selling at international level; research on cotton; price and marketing arrangements before planting; extension services, etc.

Drawing from the experience gained and lessons learned from the mission, participants expressed their commitment to set up awareness campaigns on cotton contamination with all country stakeholders.

For the mission roundup, journalists were invited from leading Senegalese newspapers.

Mr. B. Kamissokho, Director, Cotton Operations, of Sodefitex, explains the objectives of the training event.

The participants answered questions from the journalists and explained which lessons were learned and next steps.

The Tanzanian delegate inquires of the collaboration between the Senegalese government, Sodefitex and farmers organizations.

Mr Diop, Director General of Sodefitex, summarizes the measures that were taken and the success of the cotton contamination programme.

At the end of the program, participants met with delegates from the African Cotton Association Strategy Meeting, held in Saly.

The delegates were presented with traditional silver bracelets in remembrance of the training course and as a mark of partnership with the Senegalese hosts.

The President Director General of CMDT Mali at the closing dinner.
### Lessons learned and follow-up activities

<table>
<thead>
<tr>
<th>LESSONS LEARNED</th>
<th>FOLLOW UP</th>
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<tbody>
<tr>
<td><strong>COTTON QUALITY AND PRODUCTION</strong></td>
<td></td>
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</tbody>
</table>
| • Cotton contamination reduction requires an integrated approach, taking measures at every step of the production process | • Share lessons learned in Senegal with stakeholders  
• Raise awareness among cotton stakeholders through training programmes  
• Take protective measures during harvesting, storing and transport of cotton  
• Improve quality control programmes and strategies  
• Create specialized teams of quality inspectors  
• Contamination issues should be included in the inspection check list of ginneries |
| • All cotton stakeholders, government, SODEFITEX and the farmers work together to reduce contamination  
• The success of the Senegalese marketing system is rooted in having one buying company and strong farmers associations | • Lobby with governments to install a cotton quality grading system  
• Work closely together with farmers associations  
• Forge linkages between farmer and ginner organizations |
| • Lessons learned from Senegal’s successful contamination reduction programme. | • Separate grade “A” from grade “B” cotton during harvesting, using specific picking bags  
• Avoid use of polypropylene, (e.g. in harvest bags)  
• Use special, certified cotton picking bags to reduce contamination  
• Advocate the use of a barcode system to trace sources of seed cotton  
• Use carts to transport cotton.  
• Protect cotton at all times.  
• Conduct spot checks of cotton quality  
• Re-open bales regularly to check on contamination |
| • Farmers and factory workers are constantly being educated and reminded of the importance of contamination production. | • Mobilize local radio and press as a means to educate farmers to reduce contamination  
• Place posters in strategic places to remind farmers of the importance of contamination reduction |