SOUTH-SOUTH COOPERATION WITH THE COTTON SECTOR IN TURKEY

TURKEY 17-21 OCTOBER 2011
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Report and Photos by: Cynthia Zijlstra-Adriano, ITC

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Cover photo: The cotton fields in Antakya (Hatay Province)
ITC AFRICAN COTTON DEVELOPMENT INITIATIVE
DEVELOPING THE COTTON VALUE CHAIN IN AFRICA THROUGH SOUTH-SOUTH COOPERATION

ITC’s Cotton Development Initiative uses south-south cooperation to make Africa a stronger competitor in the international cotton trade. It has two major focus areas. We facilitate learning and collaboration with countries that have successfully built a cotton and T&C sector and build sustainable trade linkages (exports and imports).

- FACILITATE LEARNING AND COLLABORATION

  - *Learning from success.* Training programmes organized by ITC allow successful cotton producers in e.g. China, India and Turkey to share their knowledge with cotton professionals from Africa.

  - *Developing capacity to transform cotton.* Successful textile and clothing producers in Asia are relaying their experiences to African countries. Closer linkages with cotton consuming spinning mills will lead to closer partnerships between spinners, ginner and farmer groups. These partnerships in turn will lead to major improvements along the value chain, including on the quality of cotton, and ensuring long-term stable markets.

  - *Encouraging intra-African cooperation.* Extensive knowledge and know how is available in Africa but often neglected.

- DEVELOPING SUSTAINABLE TRADE LINKAGES

  - *Sourcing from other developing countries.* Finding new suppliers in the developing world promotes savings on items ranging from seeds and fertilizer to ginning and textile technology.

  - *Promoting African Cotton:* ITC assists African cotton companies, independent ginners and producers to benefit from closer linkages with cotton-consuming countries in Asia not only to learn what their clients expect from them but also to promote their cotton.

  - *Reducing cotton contamination* in Africa remains an important issue even though in many cases the reputation of African cotton is “more contaminated” than the actual cotton itself. To overcome this we identify interested spinning mills willing to assist selected ginning factories to produce clean lint.

- OTHER TECHNICAL ASSISTANCE UNDER ITC’S COTTON DEVELOPMENT INITIATIVE:

  - *Sector strategy development*

  - *Capacity Building of Cotton-related Associations at National and Regional Level*

  - *Capacity Building in Cotton Trade and Marketing*
Introduction

Within the framework of the ITC cotton development initiative and under the sponsorship of the EU-funded All ACP Agricultural Commodities Programme, the International Trade Centre (ITC) conducted a six-day training programme in Turkey to enhance the skills of cotton ginners and producers as well as regional representatives from 8 West and Central African countries.

ITC led a delegation of 12 participants comprising industrial directors of cotton producing and ginning companies from Benin, Burkina Faso, Cameroon, Central African Republic, Côte d’Ivoire, Mali, Senegal and Togo to Turkey from 17 to 21 October 2011. Other participants included key representatives from the Association of African Cotton Producers (AProCA), West African Economic and Monetary Union (WAEMU/UEMOA) and the African Cotton Association (ACA).

The training programme was jointly organized with the Aegean Textiles and Raw Materials Exporters’ Association under the supervision of Mr. Matthias Knappe, ITC Programme Manager for Cotton, Textiles and Clothing, Sector Competitiveness Section, Division of Market Development.

Mr. Sebahattin Gazanfer, National Consultant provided technical support, coordinated training activities and ensured high-level participation of key cotton stakeholders at meetings.

Ms. Delphine Odabaşı and Ms. Figen Öztürk, National Consultants provided interpreting services during conference meetings and field visits.

Ms. Cynthia Zijlstra-Adriano, ITC representative, co-facilitated the training event and prepared this activities brochure.

In cooperation with the Aegean Textiles and Raw Materials Exporter’s Association (AEA), delegates made several site visits to the Izmir and Söke Mercantile Exchanges, cotton unions and credit cooperatives, the Nazilli Cotton Research Institute, ProGen Seed facilities, UZ Pamuk - a newly established spinning company catering to high-end textile markets, Balkan Makina and Sümer – leading manufacturers of sophisticated rotor bar/roller-ginning and cotton processing machinery.

Delegates had meetings with Turkish experts and board executives to gain first-hand knowledge in cotton trade and cooperative movements as well as experience using modern technologies in cotton processing and agricultural research. Other topics of discussion included possible areas of future collaboration in the cotton sector. The onsite technology transfer training provided opportunities for the delegates to draw lessons from the successful Turkish experiences in the following areas: cotton research and seed development; innovative ginning technology adding value to fibre; cotton
processing techniques and by-products; the input system for the procurement of seeds, fertilizers and machinery. The training also provided insights into how cotton prices are fixed in Turkey and how cotton trade is carried out.

**Objectives of the South-south cooperation programme:**

- Gain knowledge of cotton production and cultivation, crop improvements and seed development (research)
- Gain knowledge of cotton processing techniques (ginning technology, seed crushing, delinting operations and spinning)
- Gain knowledge of Turkish input systems (seeds, chemical fertilizers and machinery)
- Gain a better understanding of how cotton is traded in Turkey (Mercantile Exchange, credit cooperatives)

**Overview**

Turkey consumes around 1,500,000 tons of cotton annually. Exports for textile and apparel reached US$ 6.355 billion and US$ 14.203 billion respectively in 2010. The textiles and apparel industries are the main key drivers contributing significantly to the Turkish economy for growth and employment.

According to statistics, lint cotton production in Turkey peaked at 935,000 tons in 2001/2002, followed by a fall in production to as low as 400,000 tons in 2009/2010, and in the 2011/2012 season, production increased to 700,000 tons of cotton lint, making Turkey the seventh largest cotton producer. This increase in cotton production is due to the use of high-yielding non-GMO seeds. However, owing to government policies and high production costs including labour, local cotton production is not likely to achieve full self-sustainability. In order to sustain Turkey's strong textile base, its raw material requirements need to be ensured. Turkey imports cotton mainly from the United States, Greece, Central Asia, Syria, Egypt and India. Cottons from these origins are preferred by Turkish spinning companies for reasons of cleanliness, colour, proximity, competitive prices, payment terms, quality and fibre length. Besides saw-ginned cotton, hand-picked roller-ginned cotton remains a top preference among Turkish spinners, who cater to high-end textile companies producing luxurious fabrics. Turkey transforms all its cotton production into major export items such as yarn, fabrics, made-ups and garments, thereby fully optimizing its value chain.

Cotton from West Africa is mainly hand-picked and saw-ginned. This choice of ginning method treats fibres more aggressively than roller-ginning. West African cotton represents a small percentage of imports into Turkey. During the 2010/2011 season, Turkey imported about 6,000 tons of cotton from this region mainly through international agents.
Participants

Photo by: Courtesy of the Turkish Press.

Group photo taken at the Host Institute in Izmir - The Aegean Textiles and Raw Materials Exporters’ Association (AEA) with Mr. Barış Kocagöz, (3rd from left), Chairman of the National Cotton Council and Vice-Chairman of the Izmir Mercantile Exchange, and Mr. Sabri Ünlütürk, (2nd from right) Chairman of the Aegean Exporters’ Association, ITC Staff and West African participants from cotton companies and regional associations.

<table>
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<tr>
<th>BENIN</th>
<th>BURKINA FASO</th>
<th>CAMEROUN</th>
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</table>
| Mr. Luc ABADASSI  
Industrial Director  
Société de Coton  
SODECO | Mr. Paul Henri SEDOGO  
Industrial Director  
Société Burkinabé des Fibres  
Textiles  
SOFITEX | Mr. ISMAÏLA  
Ginnery Manager  
Société de Développement du Coton du Cameroun  
SODECOTON |

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<tr>
<th>CENTRAL AFRICAN REPUBLIC</th>
<th>CÔTE D’IVOIRE</th>
<th>MALI</th>
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| Mr. René N’DOROMA  
Agricultural Engineer  
ACDA/Cellule Coton | Mr. Vamara SORO  
Ginnery Manager  
Compagnie Ivoirienne pour le Développement des Textiles  
CIDT | Mr. Moussa TRAORE  
Chief Industrial Technical Adviser  
Compagnie Malienne pour le Développement des Textiles  
CMDT |
| Mr. Thiero ABDRAHAMANE  
Programme Coordinator  
INTERCOTON  
Association Interprofessionnelle de la Filière Coton | | |

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<tr>
<th>SENEGAL</th>
<th>TOGO</th>
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| Mr. Boubacar KAMISSOKHO  
Director of Cotton Operations  
Société de Fibres et Textiles  
SODEFITEX | Mr. Tohoé A. ADJANOR  
Director  
Nouvelle Société Cotonnière du Togo  
NSCT |
Participants

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<th>ACA</th>
<th>AProCA</th>
<th>UEMOA/WAEMU</th>
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<tr>
<td>Mr. George OSEIKU</td>
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<tr>
<td>Representative</td>
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<td>Association</td>
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<td>Mr. Youssouf Djime SIDIBE</td>
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<td>Coordinator, Cotton Project</td>
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<td>Associations des Producteurs de Coton Africains</td>
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<td>Mr. Charles G. NOUATIN</td>
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<tr>
<td>Economiste</td>
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<td>Commission de l'Union Economique et Monétaire Ouest Africaine</td>
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Contributing Associations and Companies

- AEGEAN Textiles and Raw Materials Exporters’ Association (AEA)
- IZMIR Mercantile Exchange (IME)
- TARIŞ Cotton Cooperative Union
- SÖKE Mercantile Exchange
- SÖKE Credit Cooperative
- ÖZALTIN Group
- BALKAN Cotton Ginning Machinery Ltd.
- SÜMER Manufacturers of Double Roller Ginneries
- NAZILLI Cotton Research Institute
- PROGEN Seed Development Company
Inaugural Session

The opening ceremony on South-South Cooperation with the cotton sector in Turkey was held at the Aegean Textiles and Raw Materials Exporters’ Association. Turkish participants came from the Izmir Mercantile Exchange, Aegean Exporters’ Association, and Representative of the Prime Ministry for Foreign Trade, Republic of Turkey - Textiles Department, Tariş Cooperative Union and the Turkish Press.

Opening Ceremony, Keynote speeches and Introduction to the Programme

- Mr. Barış Kocagöz, Chairman of the National Cotton Council and Vice-Chairman of the Izmir Mercantile Exchange (IME) welcomed the participants to Turkey. He mentioned that Turkey has a strong textile industry with an annual cotton consumption capacity of 1.5 million tons. With an expected 700,000 tons of locally-produced cotton, the textile industry needs to secure the availability of its raw material base in order to sustain the sector. He also shared insights into Turkey’s recent cotton yield progress achieved by new varieties of GMO-free seeds and encouraged the African visitors to adopt modern production technologies and to develop their own textile industries.

- Mr. Sabri Ünlütürk, President of the Aegean Textiles and Raw Materials Exporters’ Association (AEA) welcomed the participants to Turkey and thanked the International Trade Centre for organizing the event. In his speech, he said that the AEA was pleased to meet with the representatives of African cotton producing countries to share their experiences with them and to evaluate the cotton sector together. He mentioned that in recent years, more and more farmers have turned to cotton growing in view of attractive prices. Mr. Ünlütürk also added that the Turkish government is attributing greater importance to trade relations and developing cooperation with Africa. Moreover, new embassies and consulates have been opened in the African continent to facilitate visits to Turkey by African businessmen.

- Ms. Cynthia Zijlstra-Adriano, ITC representative, welcomed the African Delegates and the officials from the IME and AEA. She described ITC’s role in the UN system and the objectives of the training programme. She encouraged the participants to actively engage in discussions with cotton stakeholders during site visits to the mercantile exchange, cotton and credit cooperatives, ginning plants, cotton seed research institutes, etc. She thanked the AEA Secretariat for hosting the event and facilitating entry visas for the delegates, as well as the Turkish Press for newspaper coverage of ITC’s cotton initiatives.

- Mr. Sebahattin Gazanfer, ITC National Consultant and Advisor to the Turkish Textile Exporters’ Association moderated the Opening Ceremony. He gave a comprehensive presentation on “The Overview of the Turkish Cotton Industry”, which included an historical account of the cotton sector in Turkey, followed by statistical information on production, consumption, exports, imports and the roles of the major players in overall functioning of the Cotton to Clothing Value Chain.
Seminar Presentations

The following seminar presentations were delivered at the Aegean Exporters’ Association:

- **Characteristics of the Turkish Cotton Market: A Cotton Trader’s View**, G. Pagy
- **Turkey’s Textiles and Clothing Sector and the Role of the Aegean Exporters’ Association**, Director, Aegean Textiles and Raw Materials Exporters’ Association
- **TARIŞ Cotton Cooperatives Union**, M. Karayel, Coordinator of Cotton Products, TARIŞ
- **Overview of the Turkish Cotton Industry**, S. Gazanfer, ITC
- **Country Presentations on West African cotton sector situations**, African Delegations

Mr. Pagy’s presentation delivered by a French interpreter focussed on cotton quality fibre characteristics preferred by Turkish spinners, their sources of cotton imports and Ring Spinning technology used. Advice was also given on how to promote West African cotton sales in Turkey.

Ms. Çigdem Önsal, Director, of the Aegean Exporters’ Association (AEA) presents the role of the AEA in textile exports and highlighted AEA’s achievements and recent export performances in textiles and clothing.

Mr. Karayel, coordinator of cotton products presents the activities of Tariş Cotton Cooperatives Union, one of the largest cotton cooperatives in the Aegean region.

Speaking of behalf of the African Delegation, Mr. George Oseiku, representative and Board Member of the African Cotton Association (ACA) mentioned that many cotton organizations and companies in most parts of the world have become members of the ACA. The delegate invited the Aegean Textiles and Raw Materials Exporters’ Association to join. He also presented ACA strategies for improving the competitiveness of its members.

West African Delegates from Bénin, Burkina Faso, Cameroon, Central African Republic, Côte d’Ivoire, Mali, Sénégal and Togo.
Information Sharing Session – African Delegates

During the information-sharing session, the delegations of Bénin, Burkina Faso, Cameroon, Central African Republic, Côte d’Ivoire, Mali, Senegal and Togo, gave an update of their respective cotton sectors. Their presentations provided information on production activities, cotton processing and ginning practices, fibre quality and cotton marketing operations. Presentations made by representatives from the ACA, AProCA and the UEMOA/WAEMU regional associations provided an overview of the strategies articulated for African cotton competitiveness. The presentations were followed by a Q&A session and lively and useful discussions on developments in the cotton sector.

Delegates from Bénin, Mali and Burkina Faso present the cotton situations of their countries

Delegate from Senegal shares developments in the cotton sector of his country

Representatives from the Association of African Cotton Producers (AProCa) and the West African Economic and Monetary Union (WAEMU/UEMOA) give an overview of the strategies for improving the competitiveness of the cotton sector at regional level
Visit to the Izmir Mercantile Exchange – Cotton Trading Activities

The Izmir Mercantile Exchange was founded in 1891 and is one of the first and largest commodity exchanges in Turkey. The price of cotton is determined on a daily basis at the IME Cotton Trading Pit, where traders, brokers, spinners and ginners gather to deliberate on the price through a bidding process known as the “open outcry” system. Participants observed live trading for cotton lint whereby prices are proposed, challenged and set. Daily prices are announced in the newspapers and on the Internet. Cotton samples brought by the participants were examined by brokers in the cotton classing room. These samples will be kept there for further testing and quality comparisons.

Following the cotton trading session, a meeting with the Manager of the IME Ginners Committee and the participants took place. Q&A session revolved around producer/ginner relationships, cotton processing techniques, different ginning systems and its effect on fibre quality as well as energy efficiency advantages, ginning capacity and percentage of ginning outturn (yield), price fixing for seed cotton used in oil crushing (by-products), cotton classing and how to manage price volatility.

<table>
<thead>
<tr>
<th>Participants arrive at the Izmir Mercantile Exchange carrying African cotton samples</th>
<th>Session on cotton trading begins. Participants observe live trading through open &quot;outcry&quot; method at the trading pit. Daily cotton prices are set through this bidding process</th>
<th>Participants receive information on the transactions of the trading session with regard to offers made and counter offers received</th>
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<tbody>
<tr>
<td>Brokers examine cotton samples from West Africa in the cotton classing room</td>
<td>Spinners provide feedback to participants on cotton samples as having good value, but HVI results need to be produced so as to provide details of the quality of the samples</td>
<td>In the standards room, IME Committee member retains cotton samples for further testing and comparison</td>
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<td>A meeting with the Manager of the IME Ginners’ Committee led to active discussions on cotton production, ginning methods, ginning outturn, seed cotton marketing and delivery, payments, agricultural inputs, etc.</td>
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Established in 1940 and located in the Aydin Province, Tariş Söke Cotton Cooperative is one of the largest cotton cooperatives in the Aegean region with 5,000 members. Tariş provides various services to its members such as agricultural inputs, credit and machinery. The cooperative also gins and bales cotton for its members. During discussions with the cooperative manager participants learned how profits are distributed to its members, how cotton is purchased and how price is determined.

Discussions with the Manager revolved around questions of how the union functions, membership, services, price calculation, etc. Participants witnessed procedures to determine cotton prices by calculating the ginning outturn (percentage ratio between seed and fibre). Employee first measures moisture in machine-harvested seed cotton and takes a one-kilo sample. Before ginning, this sample is dried, pre-cleaned and weighed.

The cotton sample is then roller-ginned and weighed again to determine the outturn of lint fibre. The quantity of the outturn is multiplied by the daily price set by the Izmir Mercantile Exchange and paid to the producers.

Participants show interest in a bulk seed cotton feeder.

The Bulk seed cotton feeder machine conveying cotton to the ginnery.

Participants at a modern saw-ginning plant with a ginning capacity of 120-150 tons per day.

Participants inspect quality of fuzzy seeds from saw-ginned cotton.

Measuring moisture content in bales using a cotton moisture tester.

Manager shows cleaned cotton lint ready to be compressed into bales.
Participants observe fully automatic down packing hydraulic cotton baling press with power-saving features

The bales are wrapped up with cotton fabrics and further protected with blue plastic materials

Group picture with Tariş Manager, Mr. Mehmet Ramazan Karayel and Members of the Cooperative Board, African Delegates and ITC staff

Outcomes

- Ginnery Manager from the « Société de développement du coton du Cameroun » SODECOTON has contacted Tariş Cooperative to inquire about the technical characteristics for the manufacture of cotton and blue plastic protective materials for bale packing.
The Söke Mercantile Exchange established in 1966 is a regional commodity institution that determines **seed cotton prices** in relation to prices set by the Izmir Mercantile Exchange (IME) for cotton fibre, based on the standard formula of ginning outturn. The Price Index for seed cotton and fibre by both market exchanges is published daily in the “YeniSöke” Journal and also made available to all producers and ginners through the bulletin board at the Exchange and via the Internet.

A meeting with Mr. Ahmet Tuğrul Başer, Chairman of the Mercantile Exchange provided the participants with a brief introduction of cotton production in the area. He mentioned that the Söke Plains consisted of 400,000 hectares of arable land of which 370,000 hectares have been dedicated to cotton. But owing to adverse weather conditions, harvests yielded only 15 to 20 percent of the crop. One of problems encountered in seed cotton was high moisture content due to heavy rains.

Changes in world market prices together with local weather conditions, rising production costs of labour and inputs have led to fluctuations in cotton production in Turkey. However, recent significant increases in cotton prices have encouraged farmers to return to cotton farming, said Mr. Mr. Başer.

Turkey has a transparent system of price fixing. When the price is determined by the Commodity Exchange, producers are free to choose to sell their produce at the price offered and payment is usually rapid. The Turkish government supports the cotton sector by providing 42 kurus (0.42TL) per kilogramme of fibre to each cotton producer.

All cotton sales between farmers and ginners are registered at the Söke Mercantile Exchange. The Exchange also provides training to farmers on good storage practices and services such as instrument testing of lint cotton samples.

The Turkish Press reported on the visit of the African Delegation to the Söke Mercantile Exchange. The Chairman explains the interpretation of the price index for seed cotton and lint as well as the guaranteed price for extra long quality fibre, published daily in the “YeniSöke” Journal. Participants pose questions on the input system in Turkey regarding fertilizers, agricultural interest rates, financing, quality control during ginning, base price for cotton sales, etc.
The Özaltin Group is a holding company specialized in the production of high quality acid-delinted cotton seeds essential for cotton production. Annually, the company produces 10,000 tons of delinted seed. Besides delinting, Özaltin is equipped with modern machinery for ginning and baling. Participants observed cotton processing machines such as lint cleaners, roller gins and bale press. Özaltin has plans to start cotton production and cotton transformation in Ethiopia and Tanzania.

The General Manager leads the delegation to visit various cotton processing systems and a chemical delinting plant

At the ginnery, participants observe the removal of trash in cotton fibres by sophisticated cleaning machines

A sample of cleaned cotton is shown, indicating that ginning equipment functions properly, which is the result of well-managed ginning operations

A representative from a cotton company in Benin examines fibre quality of lint-flow from a roller gin

Participants observe baling operations using modern equipment and chrome-plated rods for tying bales

The bales are wrapped up using anti-contaminant materials. Participants observe labelling

At the chemical plant, Manager explains that 98% sulphuric acid is used to treat cotton seeds. Delinted seeds are packaged in 30kg bags and sold at US$ 50 per bag. Main markets are Greece, Colombia, Spain and Pakistan

Group picture with the General Manager of Özaltin, Mr. Kasim Külek and company associates
**Field Visit – Balkan Makina Cotton Gin Machinery Co. 18 Oct.2011**

*Balkan Makina designs and manufactures various types of cotton ginning machinery, including the full line of cotton processing machinery. Balkan has developed the *rotobar* system of roller gins, which is a high-speed ginning machine with optimum energy-saving capacities requiring lower-production costs and producing higher lint outturn with an impact on fibre quality. The rotobar system combines the advantages of both roller gin and saw gin technologies.*

**Mechanical Engineer explains that Balkan designs, manufactures and commissions ginnery units in Turkey and East Africa**

**Technician provides brochures on cotton ginning systems to ginnery managers**

**Mechanical Engineer gives details on the ginning capacity of the rotobar system**

**Participants discuss the possibility of acquiring spare parts from Balkan to upgrade their ginneries**

**Participants visit a newly-built ginnery installed by Balkan. The ginnery comprises of 12 gin stands using the rotobar system manufactured by Balkan, and has a production output capacity of 250 tons of cotton lint per day**

**Outcomes**

- *Société Burkinabè des Fibres Textiles* (SOFITEX) Burkina Faso has made a request for a quotation from BALKAN for ginning spare parts.
The Cotton Research Institute (CRI) in Nazilli was established in 1934 and its research activities are focused on the development and improvement of adapted varieties using different cotton cultivation and breeding techniques. The CRI has carried out studies to improve resistance to Verticillium Wilt. Approximately 700 acres of Institute land is used for conducting field trials and 100 hectares for seed production.

The participants learned of crop irrigation techniques that are economic and profitable and how controlled experiments are carried out in the field as well as pest management strategies. Moreover, the CRI has conducted recent seminars in Burkina Faso and Uganda and has experience in organizing field days in Africa to announce new varieties that are adapted to specific soil conditions.
Field Visit – Nazilli Cotton Research Institute 19 October 2011

Fibre testing, roller-ginning and weaving of experimental cotton varieties are carried out at the Institute.

At the fibre technology laboratory, experimental cotton is tested for its properties using high volume instruments (HVI)

Participants observe roller ginning, using a mini-gin and weaving of experimental cotton at the Institute

Outcomes

- The Cotton Research Institute has offered to send their scientists to Africa to carry out tests on different types of diseases of cotton.

Group picture taken with Mr. Sadettin Özturk, Institute Director, Dr. Oktay Erdogan, Phytopathologist, Dr. Volkan Sezener, Plant Breeder, African Delegates and ITC staff
The Söke Agricultural Credit Cooperative is an umbrella organization combining 2,000 primary cooperatives, 16 regional unions and a central union based in Ankara. The credit cooperative provides services such as financing, agricultural equipment including the supply of fertilizers and chemicals to farmers and cotton producers. The Credit Cooperative provides loans to its members up to TL 250,000 (USD 135,000) with interest rates ranging from 0% to 5%. Various forms of collateral offered by the producers may include land, a tractor, a house or a car as a guarantee for the loan. In case of insolvency, the recovery rate by the cooperative is 98% of the loan over a period of three months.

A Q&A session with the Deputy Chairman of the Central Union Board of Directors provided information on the role the government plays in the organization of credit cooperatives, different forms of collateral, interest rates, affiliation and membership.

The participants acquired knowledge on the functioning of the agricultural credit cooperative systems and learned that cooperatives are not in competition with traditional banks but are complementary to them.

On behalf of the delegation, the representative from the African Cotton Association addresses a vote of thanks to the Manager of the Credit Cooperative. Participants observe types of seeds and inputs such as chemicals and fertilizers, which the cooperative provides to their members.

Group picture with Mr. Adnan Güney, Deputy Chairman, Central Union Board of Directors, Söke Credit Cooperative, Mr. Nihat Çiftçi, Manager, Cooperative Members, participants and ITC staff.
The ginning industry in Turkey uses roller gins to a large extent. The main advantage of this choice of ginning technology is that it adds value to the fibre by conserving the intrinsic characteristics of the fibre in terms of whiteness and full staple length. Extra-long fibres are preferred by spinning mills in Turkey today. Other economic advantages of the use of this technology include less energy consumption and a higher ginning outturn. The visit to the SÜMER Company was of great interest to the participants in terms of observing the demonstration of the efficient performance of double roller gins with regard to capacity, lint flow speed and fibre quality.

Participants meet with the Manager of the roller ginning assembly line. Price of a roller gin stand is around US$ 3,500
Operator demonstrates the functioning of the ginning machine with a capacity of 100kgs of seed cotton per hour
Participants observe speed of lint flow and examine the quality of the fibre

Technician shows spare parts to African ginnery managers
Representative from a cotton company in Côte d'Ivoire exchange contact details with the sales manager
Export manager introduces an array of other cotton ginning machines including a high-capacity seed delinter

Ginnery manager from Cameroun shows interest in acquiring a delinting machine from the company
Participants were informed during discussions that the availability of spare parts and easy maintenance of roller gins and other cotton machines are part of the services provided by the company

Outcomes

- *Société Burkinabè des Fibres Textiles* (SOFITEX) Burkina Faso has made a request for a quotation from SÜMER for ginning machine spare parts.
UZ Pamuk is a newly-established spinning factory located in Torbali that caters to high-end textile companies manufacturing luxurious fabrics. UZ Pamuk has a preference for roller-ginned cotton for their spinning operations, as it produces better yarn characteristics with smoother surfaces and very little neps. UZ Pamuk has a spinning facility of approximately 20,000 spindles with a daily production of 10,000 kilos of yarn. The company produces combed, semi-combed and carded yarns.

At the spinning mill, the manager explains the plant’s spinning capacity and methods used to manufacture quality yarn.

Participants observe the cotton cleaning process at the blow room.

The types of contaminants found are shown to the participants.

Participants observe the spinning process of cotton carding. Manager shows the aspects of combed cotton, which is used in clothing and bed linens for its softness and strength. It is slightly more expensive than carded cotton yarn.

The company uses ring spinning technology to produce textile yarns.

Participants inspect the quality of spun yarn.

Cotton yarns at the spinning mill ready for export to textile industries.

Turkish spinners require instrument test results for a thorough knowledge of cotton characteristics. Spinning manager gives feedback on Cameroonian cotton quality.

(Right) Mr. Nuri Uz, owner and manager of the factory keeps cotton samples brought by the participants that will be tested for its suitability in yarn manufacturing.
Cotton production in Africa is characterized by relatively low yield. Cotton culture improvements begin with research on seed development and seed production. A visit to ProGen research laboratories in seed breeding and biotechnology focused on the development of new, productive and high quality certified seed. Participants observe the various varieties created by ProGen and a recently installed cotton delinting plant using new technology.

<table>
<thead>
<tr>
<th>Arrival at ProGen and meeting with the President, Mr. Özbuğday. He provides a brief introduction to the main activities of the company and achievements in seed development</th>
<th>The president shows participants all parts of the cotton plant that are reused</th>
<th>Participants observe delinted seeds of various agricultural products of soy, wheat, hybrid corn and cotton</th>
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<tbody>
<tr>
<td>Participants discover a new technology for seed treatment, through a process of flame delinting consisting of singeing fuzzy cotton seeds. This process not only increases the speed of delinting, but also minimizes the use of acid</td>
<td>Participants examine quality of delinted cotton seeds which are likely to contribute to faster growth and germination. Samples of other delinted seeds produced by the company are presented to the participants for trials</td>
<td>Group photo with the President of ProGen Seed Development, Mr. Ali Özbuğday, participants and ITC staff</td>
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Agriculture in Turkey is highly mechanized. The use of sophisticated agricultural machinery has significantly contributed to more efficiency in farming practices and better productivity. Participants visited the Özbuğday farm to learn of modern techniques in land farming treatment, methods of tillage, soil levelling, ridge planting, and to familiarize themselves with recommended farming equipment used.

Agronomist explains pre-treatment of seed and soil before sowing. Important advice was given to apply irrigation 40 days after seeding and correct use of fertilizers

Participants learn of no-till farming methods, which is ideal for growing crops without disturbing the soil through tillage.

No-till is an agricultural method, which increases the amount of water and organic matter in the soil and decreases erosion

At the farm, participants examine agricultural machinery used and manufactured in Turkey. Questions posed related to the cost of tractors used for spraying insecticide, seeding machines, the amount of land needed to use such machines efficiently
Field Visit – Özbuğday Farm – Cotton Fields 21 October 2011

Participants visit a cotton field ready to be harvested and meet with the proprietor of the land. Mechanical harvesting of cotton yielded 4,500 to 5,000 kg/ha. The participants received advice on choice of seeds to be planted, price of delinted seeds, planting space, irrigation, etc.

Group picture taken in the cotton fields of Antakya, (Hatay Province), with scientists from ProGen, participants and ITC staff

Meeting with the owner of the land, Mr. Mehmet Reşit Kuseyrioğlu  
Participants observe mechanical harvesting in the cotton fields  
Participant from Senegal discussing pest management with Entomologist from ProGen

Özbuğday Group – Seed cotton storage and ware-housing facilities

Storage of seed cotton is a delicate process, necessitating utmost care in keeping different varieties separately in order to ensure consistency in fibre quality. At the warehouse, participants observe different grades of cotton stored in separate rooms according to colour and appearance
Field Visit – Özbuğday Group - Cotton by-products 21 October 2011

Participants visit the PAYMAR Company, an oil-crushing plant within the Özbugday Group. The company produces and markets cotton seed oil and by-products such as oilcake, linters and cotton linter fluff pulp. Participants observe methods of extraction and discover the marketing value of each of these by-products.

Cotton seeds before and after oil extraction are shown to participants
Participants observe oil crushing machines at the oil mill
Cotton oil is collected in the pit. Semi-refined cotton seed oil is used to make margarine

Oil cake derived from oil extraction is used as animal feed
Cotton linter derived from the delinting process is used for making explosives and viscose materials
Cotton linter pulp (fluff) is used in paper-making

ProGen – Seed varietal research

Seed plays an important role in increasing production and productivity with improved varieties contributing to the sustainable development of agriculture in Turkey and worldwide. Over the past 30 years, ProGen has developed 30 high-yielding varieties of cotton that are resistant to drought and diseases.

Participants visit the seed storage room where varieties of high-yielding certified cotton seeds resistant to drought and diseases are stored
In the Bio technology laboratory, participants observe germination tests of seeds
ProGen – Seed varietal research

The ProGen / Özbuğday Programme ends with discussions with the President of ProGen on areas of cooperation in seed development

Outcomes

- Discussed opportunities for cooperation between African and Research Institutes in Turkey in areas of cotton research and seed development that can be adapted to climatic conditions. Training of researchers in Africa could also be envisaged.
## 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>
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<tr>
<td>• Cotton production can be increased by using high-yielding and disease-resistant varieties</td>
<td>• Follow-up with Turkish public and private sector cotton research institutes to investigate cotton varieties adapted to African conditions</td>
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<td></td>
<td>• Establish cooperation between Africa and research institutes in Turkey in the areas of cotton research and seed development and training of researchers in Africa</td>
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<td></td>
<td>• Learn from Turkey's vast experience in cotton research, high-yielding seed production and varietal development, as well as cotton processing and transformation using modern production techniques</td>
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<td>• Develop a training programme on the development of a seed system, together with ProGen. Subsequently, provide the training in interested countries willing to cost-share activities</td>
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<td>• Turkey developed cotton plant varieties with increased tolerance to periods of dryness</td>
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<td>• The quality of seed cotton is most important for a high yield</td>
<td>• Improve techniques to clean seed cotton</td>
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<td>• Monitor storage conditions for seed cotton, e.g. protect seed cotton against humidity</td>
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<td></td>
<td>• Separate various seed cotton varieties and store them separately to ensure consistency in fibre quality</td>
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<td>• Roller ginning results in higher quality fibres with longer fibre length</td>
<td>• Study the feasibility of installing roller ginning machines in Africa</td>
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<td>• All parts of the cotton plant have commercial value</td>
<td>• Install cotton seed oil presses</td>
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<td>• Cotton production can be increased by advanced crop husbandry and mechanized farming</td>
<td>• Assure that seedlings are irrigated, if needed</td>
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<td>• Use fertilizers and pesticides at optimal moments of plant growth</td>
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<td>• Provide training for farmers on improving crop rowing and crop rotation</td>
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<td>• The importance of quality control at every step of the production process</td>
<td>• Establish national cotton quality standards</td>
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<td>• Improve quality control programmes and strategies</td>
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<td>• Improve cotton storage conditions</td>
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<td>• Develop joint Turkey-Africa training programmes</td>
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<td>• Adapt measures to reduce cotton contamination at farm and gin levels</td>
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<td><strong>COTTON TRADE</strong></td>
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<td>• There are opportunities for direct sale of cotton to Turkish factories</td>
<td>• Establish direct trade contacts with Turkish cotton importers and users</td>
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<td>• To enter the Turkish market, cotton supply has to be regularly available over a period of 12 months. The textile industry requires a constant import of cotton lint all year round</td>
<td>• Create stocks of cotton by placing cotton consignments in the Mersin Free Zone. Mersin Port is the main port of cotton importation as most spinning operations are concentrated in South East Turkey</td>
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### Lessons learned and follow-up activities

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| Turkish spinners have a poor perception of West African cotton | Improve on cotton storage conditions, avoiding contamination  
Provide cotton samples to spinners with instrument testing reports  |
| Turkey can supply cotton inputs and ginning technology | Create partnerships with Turkish companies for the installation of modern gineries and procurement of spare parts  |
| Cotton trade and information is predominantly in English | Improve knowledge of English |
| **PRODUCTIVITY AND ORGANIZATION** |          |
| The Turkish system of Agricultural Cooperatives provides credits to farmers and small enterprises | Organize visits of African bankers and the management of inter-professional organizations to Turkish Agricultural Cooperatives  
Test the viability of Cooperative Credits in Africa  |
| Cooperatives improve the efficiency and competitiveness of cotton producers  
Cooperatives can facilitate obtaining government support | Create and re-design existing cooperatives to provide common services, such as training, finance, insurance, procurement of fertilizers, pesticides, harvesting equipment, fuel, spare parts, etc.  
Create linkages between Turkish and African cotton cooperatives  |
| Turkish government involvement and policies actively support national cotton and textiles industry | Lobby with African government institutions to support the cotton industry and partner with research institutes |
| Turkey has a Commodities Exchange market where price is determined by open-outcry methods | Investigate the possibilities of creating cotton mercantile exchanges in Africa.  
Publish cotton prices |
| **INVESTMENT** |          |
| Turkish spinning factories are looking for investment opportunities abroad. (They have already built a solid base in Ethiopia) | Look at the available policy options to attract Turkish investments in West and Central Africa  
UEMOA to liaise with the relevant Turkish associations to promote the cotton-textile Agenda |