


## Cotton Production in Ethiopia



Country Report 2012

Ethiopian Cotton Producers Ginners and Exporters Association      Prepared by: Zerihun Desalegn (PhD)



## Background

Cotton (*Gossypium spp. L.*) has been cultivated in tropical and sub tropical climates of the world.

- world's most important textile fiber crop
- Important oil seed crop after soybean
- As a multi-purpose crop it has many more uses

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## The Cotton Textile Value Chain





Cotton Farming  
00000000



Spinning  
0000



Kolling  
000000



Cotton Ginning  
00000000



Transport  
000000



Finishing  
00000000




Garment Manufacturing  
0000000000



Transport & Shipping  
000000

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## Ethiopia Geography

**Land area:** 432,310 sq mi (1,119,683 sq km);  
**Total area:** 435,186 sq mi (1,127,127 sq km)  
**Population (2010 est.):** 88,013,491  
**Capital City:** Addis Ababa, 2,716,200  
**Monetary unit:** Birr

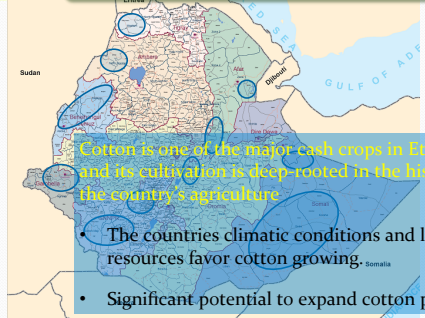
### Potential for Cotton Cultivation

Land : 3.0 million Ha Suitable for Cotton  
 Water Resources:  
   12 River Basins, 10 Lakes  
   Surface Water 123 billion m<sup>3</sup>  
   Ground water over 90 billion m<sup>3</sup>  
 Manual and Trained Manpower: Abundant  
 Finance : Limited Project Financing Available from DBE  
 Market : Sizable Internal market of 80 Million People and Proximity to major world Markets

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## Potential Areas for Cotton Production



Cotton is one of the major cash crops in Ethiopia, and its cultivation is deep-rooted in the history of the country's agriculture

- The country's climatic conditions and land resources favor cotton growing
- Significant potential to expand cotton production

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In Ethiopia handloom village spinners and weavers traditionally woven cloths made of homemade cotton fabrics, mostly consume cotton produced by smallholders.

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### Elevation: Dallol to Dashed

- Ethiopia enjoys an extremely varied climatic conditions (-500 to 3600 m a.s.l).
- Cool Zone-Areas above 2,600 m (8,530 ft).
- (Temperate Zone)- Areas between
  - 1,500 m (4,920 ft) and 2,600 m (8,530 ft)
- Hot Zone-Areas below 1,500 m (4,920 ft)

In Ethiopia, cotton is produced

- In large scale commercial farms at altitudes of 350 to 1200 meters
- In small scale farm holding in the mid altitude areas ranging from 1000 to 1800 meters.

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### Metorological Information

Rainfall: two rainy seasons one Short and One Long

- Meher:** Main Rainy season lasts from mid-June to mid-September (longer in the southern highlands)
- Belg:** intermittent showers from February or March;
- Remainder of year is generally dry.


Data source: WorldClim, University of California, Berkeley  
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### Current Cotton Production Situation

- Area: 95-111,000 ha
- Productivity:
  - 7.5-17.0 Qt/HA in Rain fed
  - 25 Qt/HA in Irrigated Farms
- Products:
  - 79,471 MT of Lint Cotton
  - 124577 MT of Oilseeds
- Variety : Mostly Deltapine 90 and Stam 59A
- Quality: Medium Staple Length
- Dominated by Private Ownership


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### Area planted, seed cotton produced 2011/12 (MT)

| Producer                 | Area hectares | Total Seed cotton production (MT) | % share |
|--------------------------|---------------|-----------------------------------|---------|
| Private commercial farms | 68608         | 150563                            | 70      |
| Smallholders             | 43278         | 64224.6                           | 30      |
| Total                    | 118886        | 214787.6                          | -       |


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### Row/Seed and Lint Cotton Production (Ton)

| Year    | Seed Cotton | Lint Cotton | Local Consumption | Export | Imported |
|---------|-------------|-------------|-------------------|--------|----------|
| 2005/06 | 84,881      | 31,406      | 17,218            | 8,189  | 0.072    |
| 2006/07 | 44,808      | 16,579      | 18,516            | 1,228  | 9.165    |
| 2007/08 | 74,846      | 27,693      | 15,518            | 6,177  | 0.818    |
| 2008/09 | 92,389      | 34,184      | 16,426            | 11,760 | 0.497    |
| 2009/10 | 98,108      | 36,300      | 16,292            | 14,009 | 0.099    |
| 2010/11 | 67,568      | 25,000      | 25,000            | -      | -        |
| 2011/12 | 142,422     | 52,696      | 68,000            | -      | 1,000    |
| 2012/13 | 150,563     | 79,471      | ??                | -      | -        |

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### Number of Cotton Farmers

| Farmers              | Average Number | Land Holding Range (HA) |         |
|----------------------|----------------|-------------------------|---------|
|                      |                | Minimum                 | Maximum |
| Small Holders        | 52,754         | 0.25                    | 0.75    |
| Mechanized rain Fed  | 408            | 10                      | 3,500   |
| Mechanized Irrigated | 107            | 10                      | 15,323  |
| Total                | 53,269         |                         |         |

Estimate base on the Ministry of Agriculture Figures

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### Ginneries in the country

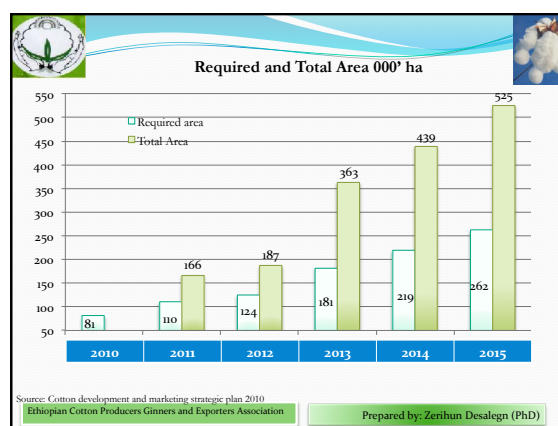
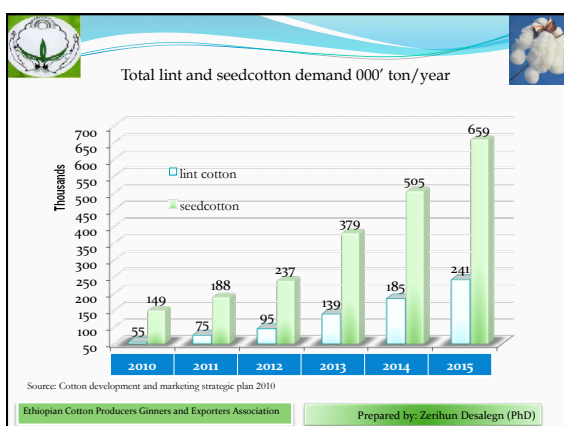
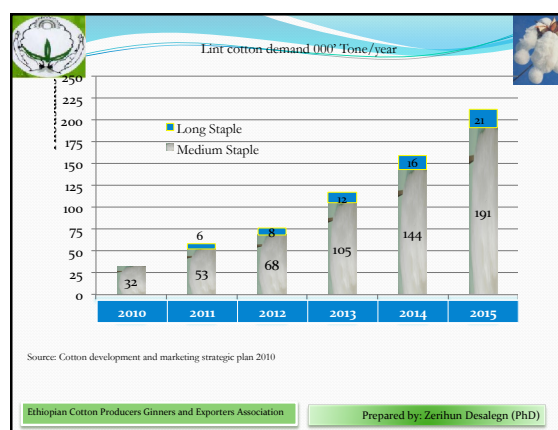
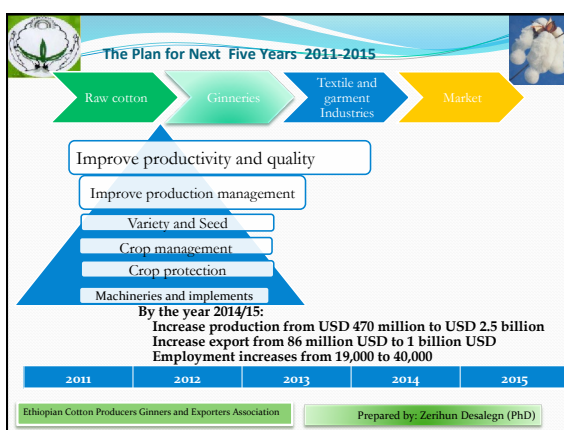
| Types of Ginnery    | Saw Gin   | Roller Gin | Total     |
|---------------------|-----------|------------|-----------|
| Stand Alone         | 8         | 1          | 9         |
| Part of Cotton Farm | 7         |            | 7         |
| Under Construction  | 3         | 1          | 4         |
| <b>Total</b>        | <b>18</b> | <b>2</b>   | <b>20</b> |

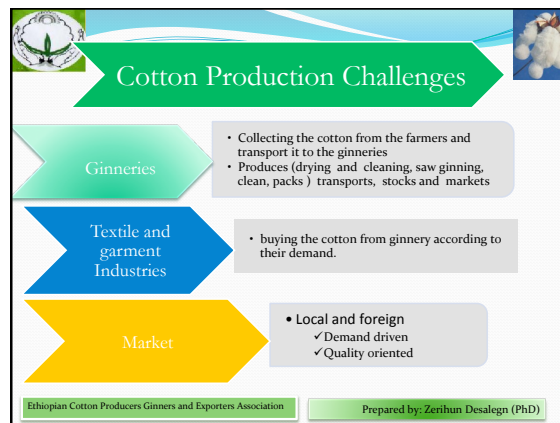
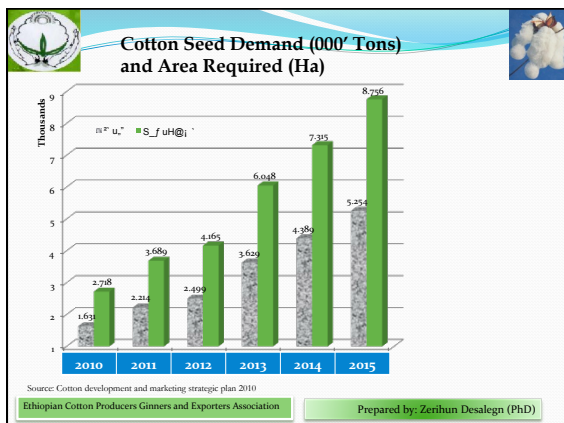
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### Spinning Textile and Garment Factories in the Country

| Major Textile Factories       | Level of Value Addition |             |             |         | Ownership     |              |
|-------------------------------|-------------------------|-------------|-------------|---------|---------------|--------------|
|                               | Yarn                    | Grey Fabric | Dyed Fabric | Garment |               |              |
| Arba minch Textile            | ✓                       | ✓           |             |         | Private       | Ethiopian    |
| Awasa Textile                 | ✓                       | ✓           | ✓           |         | Private       | Ethiopian    |
| Adei Ababa Textile            | ✓                       | ✓           | ✓           | ✓       | Private       | Ethiopian    |
| Bahir Dar Textile             | ✓                       | ✓           | ✓           |         | Public        | Ethiopian    |
| Dire Dawa Textile             | ✓                       | ✓           | ✓           |         | Private       | Ethiopian    |
| Kombolcha Textile             | ✓                       | ✓           | ✓           |         | Public        | Ethiopian    |
| Alemeda Textile               | ✓                       | ✓           | ✓           | ✓       | Private       | Ethiopian    |
| Ayka Textile                  | ✓                       | ✓           | ✓           | ✓       | Foreign       | Turkey       |
| Adama Spinning                | ✓                       |             |             |         | Private       | Ethiopian    |
| Edget Textile (Sewing Trade ) | ✓                       | ✓           | ✓           |         | Private       | Ethiopian    |
| Eise Textile                  | ✓                       | ✓           | ✓           |         | Foreign       | Turkey       |
| Saygin Dima                   | ✓                       | ✓           | ✓           |         | Foreign       | Turkey       |
| MAA Textile & Garment         | ✓                       | ✓           | ✓           | ✓       | Private       | Ethiopian    |
| <b>Project Stage</b>          |                         |             |             |         |               |              |
| Selendawa                     | ✓                       |             |             |         | Joint Venture | Ethio-Turkey |
| <b>Garment factories (38)</b> |                         |             |             |         |               |              |

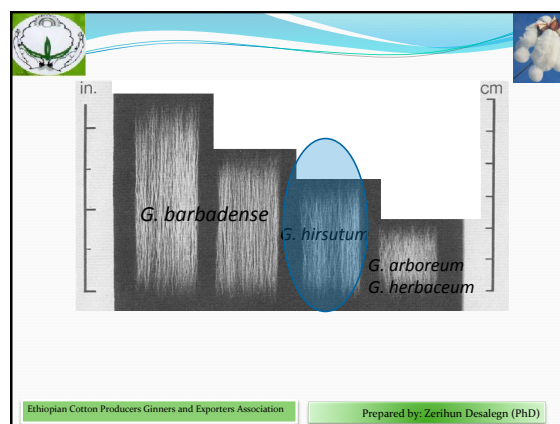
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- ### Challenges of Cotton Production In Ethiopia
- Improving Regulations Governing Cotton: a Need for Coordinating Agency: Production/Marketing/
  - Increasing Cotton Production Through Increased Land and Productivity
  - Improving Availability of Finance /Incentives/ Supports/ Subsidy
  - Improving Coordination of Research, Technology Transfer and Extension: in GMO and hybrid Varieties
  - Improving Availability of Inputs such as chemicals seeds and improved management and manpower.
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- ### (Contd)
- Improve Quality Standards and Cotton Classification Laboratory Services
  - Improving and Increasing Ginning Capacity /Storage
  - Training Human Resource tailored to the needs of the Cotton Sector
  - Improving ability to gather and disseminate Information on Cotton and textile.
  - Infrastructure development in Cotton growing area
  - Concern For Local Community & Environment
  - Development of Irrigation infrastructure
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## Ethiopian Cotton Quality Range

| Characteristics  | Range          |
|------------------|----------------|
| Staple length    | 26-31 mm       |
| Micronaire       | 3.8-4.4        |
| Maturity         | 80-85          |
| Uniformity ratio | 48-50%         |
| Strength         | 18-24 (gm/tex) |
| Trash Content    | 2.0-4.5%       |

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## EMEGRGING ISSUES

### Cotton Mealy Bug damage

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## CURRENT RESEARCH STATUS

- Since the execution of cotton research in the country various recommendations were made in respect to breeding, agronomy, crop protection, soil and water management and socio-economic aspects.
- Research in cotton is still conventional
- Currently the research program has developed research projects for the next 5 years.

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## PROJECT COMPONENTS

This project part comprises seven main components:

- (1) Development of high yielding cotton varieties with acceptable fiber quality;
- (2) Development of agronomic practices and cropping system for irrigated and rain grown cotton;
- (3) Development of integrated pest management practices;
- (4) Technology multiplication and promotion;
- (5) Socioeconomic studies;
- (6) Post harvest handling, processing and by-product utilization; and
- (7) Capacity building.

- Source of budget: Government

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## General Goals/Objectives:

The general objective of the cotton research project is

- To generate improved technologies that contribute to the increased production and productivity of cotton and thereby to bring the country to self-sufficiency, promote export, contribute to economic development and poverty reduction, conservation of integrity of natural resources and the environment.

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## Researchers currently engaged in cotton research on full time basis

| Field of specialization | PhD | MSc      | BSc      | Dip.     |
|-------------------------|-----|----------|----------|----------|
| Plant breeder           | -   | 2        | 2        | 1        |
| Agronomist              | -   | 2        | 2        | 1        |
| Physiologist            | -   | -        | -        | -        |
| Entomologist            | -   | 1        | -        | 1        |
| Pathologist             | -   | -        | -        | -        |
| Fiber technologist      | -   | -        | -        | -        |
| <b>Total</b>            | -   | <b>5</b> | <b>4</b> | <b>3</b> |

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## RESEARCH NEEDS

- Research to develop varieties with high yielding potential and especially higher fibre quality that meet world market standard.
- Established crop management practices for rainfed commercial cotton production systems.
- Research on developing better adaptable cultivars and management practices to smallholder cotton production.
- For newly developing potential areas, complete packages of production practices are needed.
- Ensuring provision of varieties on a continuous basis in order to meet the evolving needs of producers and requirements of textile mills.
- Research on crop protection practices that could cope-up with rapidly changing pest situation taking into account environmental friendliness



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## CONCLUSION

- To promote cotton production in general, government and major actors in the sub sector should play a great role in strengthening the cotton research in the country.
- An institute, which coordinate and monitor cotton production, processing, research and market in the country, should be established. This will enable to have:
  - Sufficient information on domestic and foreign market to smallholders.
  - Standardize outputs at a national level
  - Encourage production and export and training services.



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## Projected Five year Targets

- **Productivity:** Current Average Productivity 17 Qt/ ha to 25 Qt / ha a growth of 47%
- **Production: Seed Cotton** 129,000 MT to grow to 660,000 MT five fold growth
- **Production: Lint Cotton** 40,000 Ton to 241,000 MT a five fold growth
- **Area Currently** 110,000 Ha to 543,000 Ha a five fold increase
- **Ginning Capacity:** 30000 MT to 660,000MT



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## Requirements to Fulfill Projected Five year Targets

- **Seed:** 18,000 MT of Improved seeds
- **Machineries:** Tractors, Farm Implements, Planters, Sprayers, harvesters
- **Additional Ginneries:** 21 Combo Gin (With annual capacity of 30,000MT or Equivalent)
- **Finance:** An injection of !!! Billion USD

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## The Way Forward: Increased Production, productivity and quality

**Value:**

- See the Nations as one of the leading exporter of value added textile, garment and apparel in Africa.

**Mission**

- Supply the necessary volume and quality of lint Cotton with a competitive price to the booming traditional and modern textile garment and apparel sector by taking advantage of the nations abundant land, water and human resource with production system that cares to the community, workers and the environment.

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## The Way Forward: The Guiding Principles

**Objective**

- Disentangle the Cotton sector from its inhibitions and enable it to grow to its full potential.

**Values:**

- Private Owned
- Market Driven
- Cares to the community, workforce and the environment
- Internationally competitive in price and quality
- Keen to adopt relevant technologies

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## The Way Forward: Transformational

- Quantum Leap Experience in Flowers and Power Generation and host of other areas.
- Success Factors: Finance and Leadership

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## Contact Details

- Ethiopian Cotton Producers, Ginners and Exporters Association
- Tel: +251-11-515-7008/515-9441, Fax: +251-11-515-2488
- E-mail: [ethiopiancotton@ethionet.et](mailto:ethiopiancotton@ethionet.et)    Web-site: [www.ethiopiancotton.org](http://www.ethiopiancotton.org)
- P.O.Box: 100277, Addis Ababa, Ethiopia
- Physical Address: Room No. 52 10<sup>th</sup> Floor, Sahle-silassie Building Next to Lalibela Restaurant, near Addis Ababa Stadium.

Ethiopian Cotton Producers Ginners and Exporters Association      Prepared by: Zerihun Desalegn (PhD)