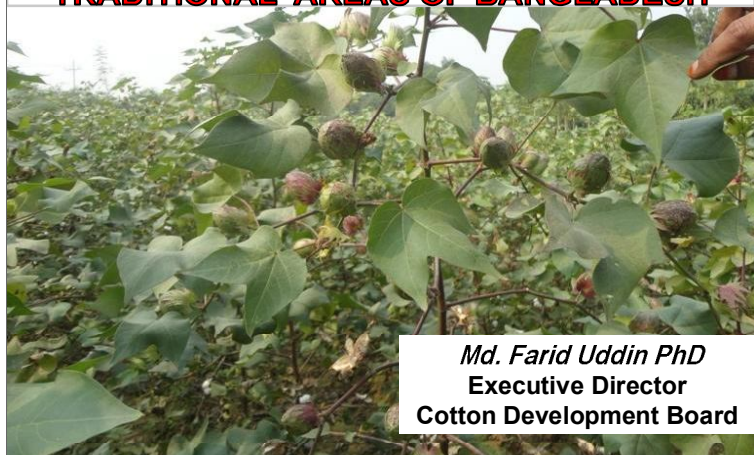


COUNTRY PAPER COTTON PRODUCTION IN NON TRADITIONAL AREAS OF BANGLADESH



Md. Farid Uddin PhD
Executive Director
Cotton Development Board

History of Cotton Cultivation in Bangladesh

❑ Historically Bangladesh, particularly south-eastern Bangladesh, produced best quality cotton and cotton products.

❑ **Muslin (the finest cotton)** of Bengal was famous having high demand worldwide.

❑ Rising population and increased food demand caused expansive production of rice pushing cotton to marginal land.

❑ **Cotton practically lost its importance during Pakistan era**, Bangladesh was fully dependent on her.

❑ **Attempts to reinvigorate cotton production creating Cotton Development Board in 1972 to reflect the intent of Bangladesh government to become self-reliant immediately after independence in 1971.**

Challenges during post-independence phase

- Chronic food deficits in the face of population
- Development of HYV rice
- Rapid expansion of irrigation
- Rice area increased and rapid expansion of rice area
- Tends to decrease the area and production of cotton in Bangladesh

OPPORTUNITIES IN COTTON PRODUCTION

- ❖ RMG sector contributing national economic development
- ❖ Bangladesh will be the world leader in supplying readymade garments
- ❖ Expanding garment industry created a huge demand of cotton
- ❖ Sustainability of RMG in Bangladesh also depends largely on domestic supply of cotton
- ❖ **Given the increasing food demand, expansive culture of cotton can be possible through harnessing potentials of non-traditional areas where rice and other economic crops are not being profitably grown.**

Bangladesh at a Glance

- **4th** position in Rice production of the world
- BRRI developed 62 HYV rice varieties including Zinc enriched variety
- Development of golden rice is under process
- **3rd** position in vegetable production of the world
- 4th position in fish production of the world
- **Self sufficient in food production-** 34.45 m. tons of rice in 2014
- Bangladesh became **lower middle income** country and target to be **middle income** country in vision 2020-2021

BANGLADESH COTTON: CURRENT SCENARIO

- **2nd** largest apparel producer in the world
- **2nd** largest cotton fibre consumer in the world
- **2nd** largest Raw cotton importer in the world
- **Fibre Imports** from- India, Uzbekistan, USA, other CIS and some African countries
- **30.50 billion** US dollar business achieved by **RMG and Textiles** in 2014
- Target to do business **50 billion dollar** in Vision 2020-2021

BANGLADESH AGRICULTURE

1.	Cultivable Area	: 8.5 m. ha
2.	Area Suitable for Cotton Cultivation	: 250,000 ha
3.	Net Cropped Area	: 8030,000 ha
4.	Total Cropped Area	: 14200,000 ha
5.	Cropping Intensity	: 190
6.	Growth Rate	: 3.5-4.12%
7.	GDP contribution	: 18.70%
8.	Total Farm Family	: 15.18 million
9.	Major Crop	: Rice, Jute, Maize, Sugercane, Pulses, Tea etc.
10.	Climatic variability	: Tidal surge, Cyclone, Flood, Salinity, Drought

STATE OF COTTON PRODUCTION IN BANGLADESH

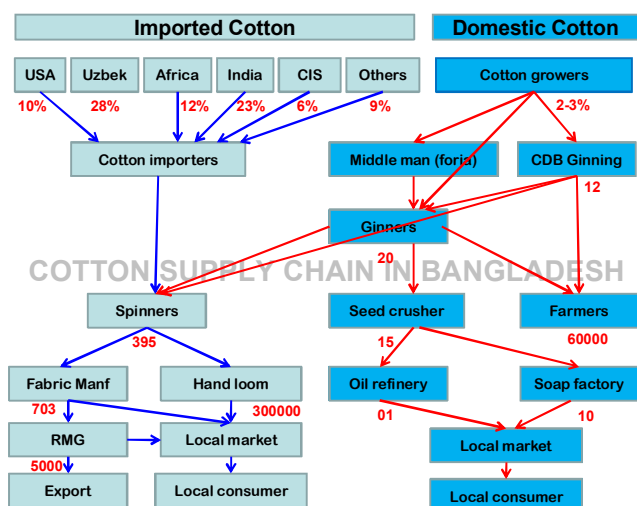
Establishment of CDB	: December, 1971
Field Level Cultivation	: 1974-75
Cotton Research under CDB	: 1991
Current Production	: 27000 tons
Area under Cotton Production	: 40000 ha
Farmers involved in Cotton Prod ⁿ	: 70000
Cultivated <i>G. hirsutum</i> Variety	: HYV- CB-12, CB-13 and CB-14
	: Chinese Hybrid- Rupali-1
Cultivated <i>G. arboreum</i> Variety	: HC-1 and HC-2
Average Yield Potentiality of HYV	: 2.5-3.0 ton ha ⁻¹ with 39-40 GOT
Average Yield Potentiality of Hybrid	: 3.5-4.0 ton ha ⁻¹ with 40-42 GOT

COTTON SECTOR IN BANGLADESH

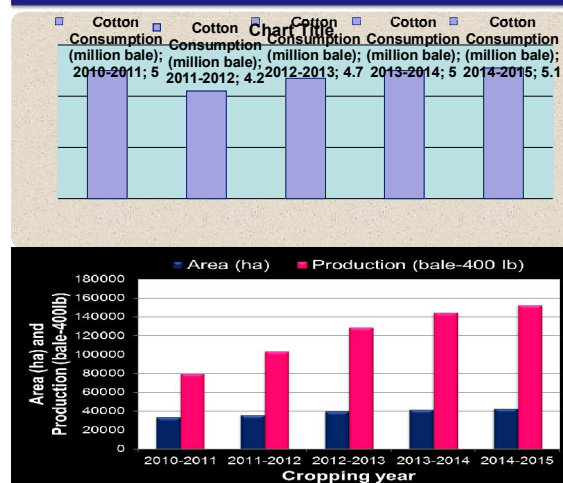
A. READYMADE GARMENTS	Garments unit	: 5000
	Total Work Force	: 5 million
B. TEXTILE	Knit wear industries	: 1700
	Weaving mills	: 1343
	Hand loom	: 300000
C. SPINNING	Spinning mill	: 407
D. GINNING	Ginning Centres	: Private-20, CDB-12
	Saw ginning	: 104
	Roller ginning	: 25
E. OIL EXTRACTION	Crude oil expeller	: 15
	Oil refinery	: 01
F. PRODUCTION OF COTTON FIBRE		
	- Current Annual demand	: 800,000 tons
	- Current Domestic production	: 27,000 tons
	- Projected Demand for 2020	: 25 00,000 tons

TEXTILE SECTORS OF BANGLADESH

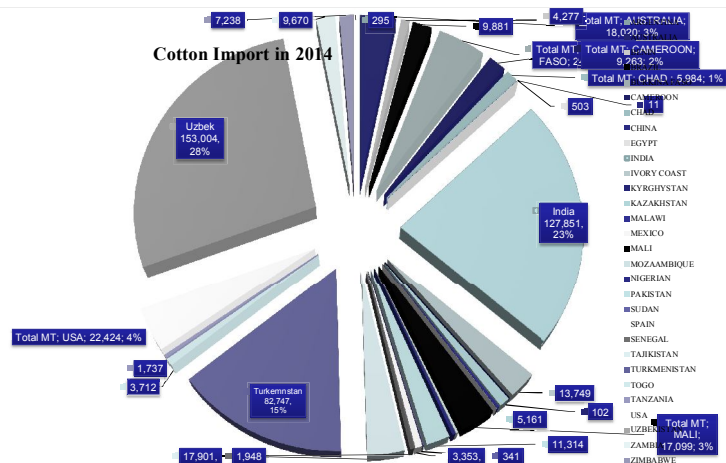
- **Spinning Mills** : 407 Nos.
- Annual Production of Yarn : 1800 million kg
- Weaving Mills : 1343 Nos.
- Annual Production of Woven Fabric : 1,000 million metres
- Knit Industries : 446 nos.
- Annual Production of Knit Fabric : 5200 million metres
- **Ready Made Garment (RMG) Units** : 5000 nos
- **Hand Looms** : 3 lakhs nos.
- Annual Production Capacity of Hand Looms : 92 million metres
- **Employment of Laborers in Textile sector** : 5 millions
- **Annual Requirement of Raw cotton** : 4.5-5.0 million bales
- **Total Yearly Expenses for Import of Cotton** : Tk 20,000 crores



Cotton Consumption and Local Production



Cotton Import in 2014



Growing Season of Upland Cotton



	July	Aug.	Sept.	Oct.	Nov.	Dec.
Land Preparation & Sowing						
Crop Management						
Harvesting						

UPLAND COTTON - USED FOR SPINNING



COMILLA COTTON / HILL COTTON



Cotton Species Grown in Bangladesh

American Upland Cotton (*Gossypium hirsutum*)

- New World Cotton
- Chromosome number 52
- Staple length long >29 mm
- Yield 2500 -3000 kg ha⁻¹
- Used in spinning mills



Hill Cotton (*Gossypium arboreum*)

- Old World Cotton
- Chromosome number 26
- Staple length short <21 mm
- Yield 250 -300 kg ha⁻¹
- Used in hand spinning

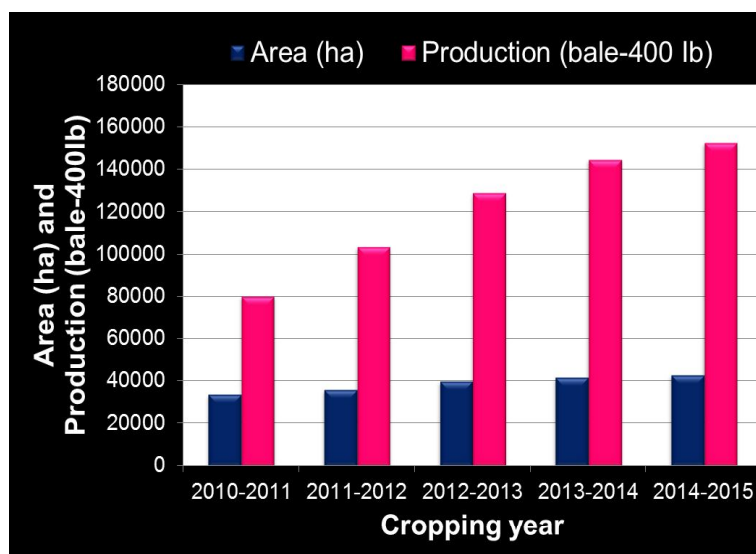


American upland Cotton area

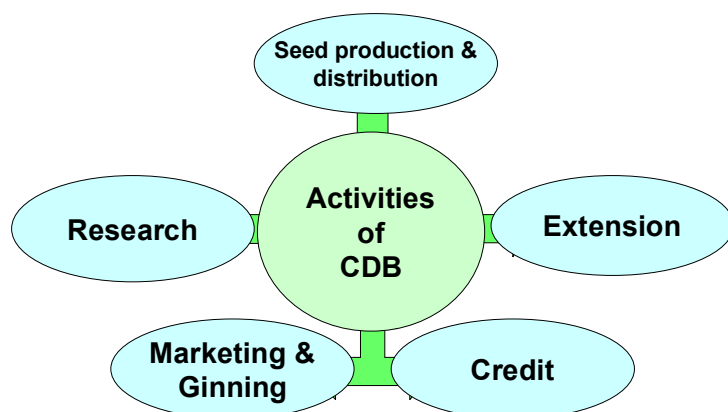
- Head quarter - 1
- Region - 4
- Zone - 13
- Research station - 5
- Res. sub station - 3
- Unit - 180
- Ginning Centres - 12



Hill Cotton Growing area



COTTON DEVELOPMENT BOARD: ACTIVITIES



COTTON RESEARCH IN BANGLADESH

1.	Cotton Research under CDB	: 1991
2.	No. of Research Centres/farms	: 5
	For <i>G. hirsutum</i> cotton	: 4
	For <i>G. arboreum</i> cotton	: 1
3.	Research Discipline	: Breeding, Agronomy, Entomology, Pathology, Soil Science
4.	Inclusion in NARS system	: 2012
5.	Developed HYV varieties	: 16 HYV variety
	For <i>G. hirsutum</i> cotton	: CB-1 through CB-14
	For <i>G. arboreum</i> cotton	: HC-1 and HC-2
6.	No. of Cotton Scientists	: 33
7.	No. of PhD in CDB	: 09



FIBRE QUALITY OF COTTON

Sl. No.	Fibre Characters	Bangladeshi Cotton	Indian Cotton	CIS Cotton
1.	Fibre length (mm)	28.79-30.40	27.5-29.5	27.64-28.68
2.	Micronair	3.87-4.20	3.20-4.90	4.81-5.15
3.	Fibre Strength (GPT)	29-30.53	28-34	27.1-30.60
4.	SCI	129-140	128-136	122-139

RECENT DEVELOPMENTS IN COTTON

- Member of National Agriculture Research System (NARS)
- Establishment of Laboratory Facilities
- Research and Extension of Cotton in new areas- Drought, Hill, Char and Saline
- Research Support from NATP and KGF-WB
- Approval of GOB funded new projects and program
- Established Oil refinery by the private sector
- Cultivation of Hybrid
- Introduction of GMO

PUBLIC-PRIVATE PARTNERSHIP

- Cultivation of Hybrid in last couple of years
- Established 20 private Ginneries with Expeller
- Newly established Oil refinery by the private sector
- some time contribution in providing credit to the farmers
- Introduction of Bt is under process

Introduction of GMO

- ❑ Bangladesh already released Bt brinjal variety in the farmers level for cultivation.
- ❑ Based on Biosafety rule NCB has approved for contained trial in Green House at BARI Green House
- ❑ MTA with Hubei seed Company, China for Bt seed
- ❑ Communication with Mahyco for Indian Bt hybrid
- ❑ Bt cotton seed will be available to the farmers in near future

Bt Cotton Contained Trial-2015



INTERNATIONAL LINKAGES

- Membership renewal of ICAC
- Bilateral programme with Hubei seed company of China for Bt seed through MTA
- Ministry of Agriculture hosted the 6th meeting of the Asian Cotton R & D Network in Bangladesh in 2014
- Participation in different international workshops and seminars

PROSPECT OF COTTON CULTIVATION IN BANGLADESH

- Huge domestic requirement
- Production per unit area is higher than the world average
- Good quality fibre could be produced
- Cash crop
- Contribute in food security
- Contribute in employment generation and income generation
- Profit can get at a time

MAJOR CHALLENGES

- Long duration
- Competitive with other high value crops
- High input cost
- Climate change specially erratic rainfall
- Price volatility/unstability
- Return after long time
- Marketing depends on limited private ginner
- Modern ginning facilities
- Cotton quality-lack of grading system

STRATEGIES FOR INCREASING COTTON PRODUCTION IN BANGLADESH

- Development of Modern Research for Technology generation
- Development of own hybrids under local condition
- Introduction of Bt cotton
- Providing Farmers led Extension Service
- Ensure Sustainable Marketing System
- Providing subsidy on seed and inputs to the farmers
- Increase Public-Private partnership
- Increase Linkages with International Organization

NON -TRADITIONAL AREAS FOR COTON CULTIVATION IN BANGLADESH

- Drought area
- Hill area
- Saline area
- Char area
- Cotton in Agro-forestry
- Tobacco replacement

Drought Prone areas (Barind Tract)



Cotton Cultivation in Drought Prone areas (Barind Tract)



Hilly areas of Bangladesh









Cotton cultivation in Charland areas



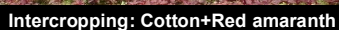
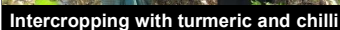
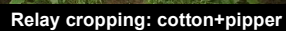
Cotton cultivation expanded in char



26 11 2014



06 12 2014



COTTON IN SALINE AREA

Cotton cultivation in summer season

Cotton in Southern part of Bangladesh



HDPS is a Global concept

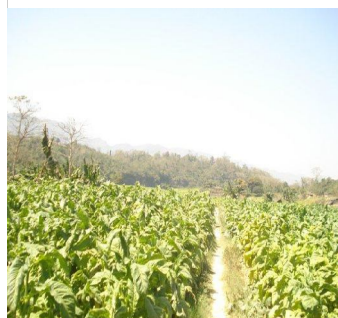


$$4 \text{ g boll} \times 5 \text{ bolls per plant} \times 200,000 \text{ plants/ha} = 40 \text{ Q/ha}$$

HIGH DENSITY PLANTING SYSTEM (HDPS)



Gradual Replacement of Tobacco by Cotton



Tobacco



Cotton





Tobacco as relay Crop



COTTON GROWN IN AGROFORESTRY



COTTON GROWN IN AGROFORESTRY



Bangladesh cotton used by Spinning mills

Sl. No.	Spinning/Textile mill
1.	Amber cotton
2.	Uttara Spinning
3.	M. Hossain
4.	Akij Spinning
5.	Square Textile

Contract Farming- A new concept for Bangladesh

- ❑ Ispahani Agro Limited (IAL)-
- ❑ Pilot project-300 bigha
- ❑ MOU

Both Horizontal and Vertical Expansion of Cotton

1	Cotton in Drought area	200,000 ha-100,000 ha
2	Cultivation in Char area	1,00,000 ha- 40,000 ha
3	Cultivation in Hill Valley	12,000-5000 ha
4	Use of hill slope by Jhum cultivation	40,000 ha- 20,000 ha
5	Extension in saline area of southern part	150,000-100,000 ha
6	Cotton based cropping pattern	70,000 ha-35,000 ha
7	Cotton in Agroforestry system	5000 ha-2000 ha
8	Replacement of Tobacco area	120,000 ha- 20,000 ha

Vertical expansion of Cotton
80% acreage covered by Hybrid and high yielding variety

VISION- 2021 of CDB

1.	Cotton acreage	200,000 ha
2.	Seed cotton yield (3 t ha ⁻¹)	300,000 ton
3.	Lint /Fiber yield (40-42%)	800,000 – 10,00,000 bale
4.	Cotton seed (60%)	180,000 ton
4.	Cotton Seed Oil (25%)	45000 ton
5.	Cotton Oil Cake (75%)	135000 ton
6.	Cotton stalk	480,000 ton



Honorable Prime Minister visited Cotton Stall at Agricultural Technology Fair, Gazipur- 2012



Agriculture Minister visited CDB stall at Seed Fair



Discussion with President of BTMA



GOVERNMENT ATTITUDE ON COTTON PRODUCTION

Hono'ble Prime Minister, Sheikh Hasina, made an appeal to the textile mill owners **to discover means to produce cotton domestically.**

She further said that, **they will have to locate regions within the country wherein, they can cultivate cotton,** as the country still depends on imports for raw materials required to manufacture yarn.

April 2010, Inaugural function of 'TEXBANGLA 2010', a three-day trade fair, organized by Bangladesh Textile Mills Association (BTMA)

