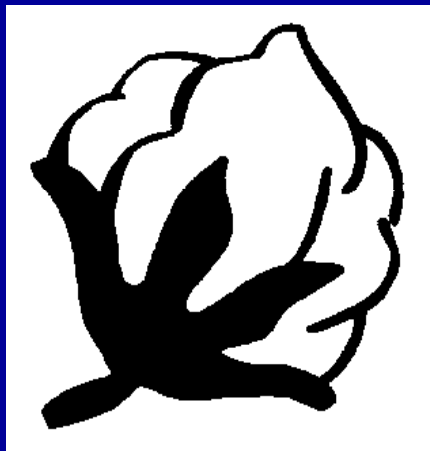


Structure of the World Cotton Market



Alejandro Plastina, PhD
Senior Economist



International Cotton Advisory Committee

Agricultural Economics Lecture Series
Dept. of Agricultural and Applied Economics
Texas Tech University
13 August 2013

Thanks to

- *The Agricultural Economics Graduate Student Association*
- *The Department of Agricultural and Applied Economics*

Overview

- ICAC
- Supply chain
 - Cost structure
 - Pass-through of prices
- Market Structure
 - Supply & demand
 - Prices
 - Government interventions
- End-use consumption
 - Determinants
 - Inter-fiber competition



INTERNATIONAL COTTON ADVISORY COMMITTEE

40 Governments

Formed in 1939

\$1.8 million

9 employees, 9 countries

Washington, DC



ICAC MISSION

Assist governments in fostering a healthy world cotton economy, by

- Providing transparency**
- Clearinghouse for technical information on cotton production**
- Forum for discussion of cotton issues of international significance**



ICAC

FOUR PRIMARY FUNCTIONS

Statistics

Technical Information

**Forum for Discussion and
Cooperation**

Liaison with International Community





72nd Plenary Meeting of the International Cotton Advisory Committee

Cartagena, Colombia, September 29 to October 4, 2013

The preliminary agenda includes non-traditional topics for a cotton industry meeting, such as encouraging younger entrepreneurs, giving visibility to women and the impacts of land ownership patterns on investments in irrigation, soil conservation and other infrastructure.

Building upon the successful experiment with the World Café at the Plenary Meeting in Switzerland, all participants will have an opportunity to contribute to the Statement of the Meeting via discussions during a World Café on Tuesday morning, followed by a consensus-building World Café session on Wednesday.

[Registration and for more details](#)

Upcoming Events

[World Cotton Research Conference — 6](#)
20 Jun, 2016 Goiânia, Goiás, Brazil

[72nd Plenary Meeting](#)
29 Sep, 2013 Cartagena, Colombia

[525th Standing Committee Meeting](#)
22 Aug, 2013 Cary (NC), USA

[524th Meeting of the Standing Committee](#)
06 Jun, 2013 Washington, DC, USA

[All Meetings >](#)



Bookstore



Standing Committee



ICAC Statistical Database



World Cotton Map



CSITC Round Trials



Surveys

UPDATE

The data have been updated on May 1st, 2013. Order Now: [Cotton: World Statistics](#), [World Textile Demand](#), [World Cotton Trade](#), [Plenary Package](#).

Cost of Production of Raw Cotton

The Technical Information Section is updating the data on cost of production to prepare a report for the 72nd Plenary Meeting. [Purchase the new report](#).

World Cotton Supply and Distribution

| (million tons) | 2012/13 | 2013/14 |
|----------------|---------|---------|
| Production | 26.39 | 25.01 |
| Consumption | 23.78 | 24.33 |
| Imports | 09.79 | 09.19 |
| Exports | 09.79 | 09.19 |
| Ending Stocks | 17.88 | 18.57 |

Press Releases

[Effects of the Great Recession on Apparel Fibre Consumption](#)
24 Jul, 2013

[Technical Tour Descriptions](#)
19 Jul, 2013

[Metrics for Measuring Sustainability](#)
11 Jul, 2013

[All Press Releases >](#)

Cotton Supply Chain

Fiber



Yarn



Fabric



Garment

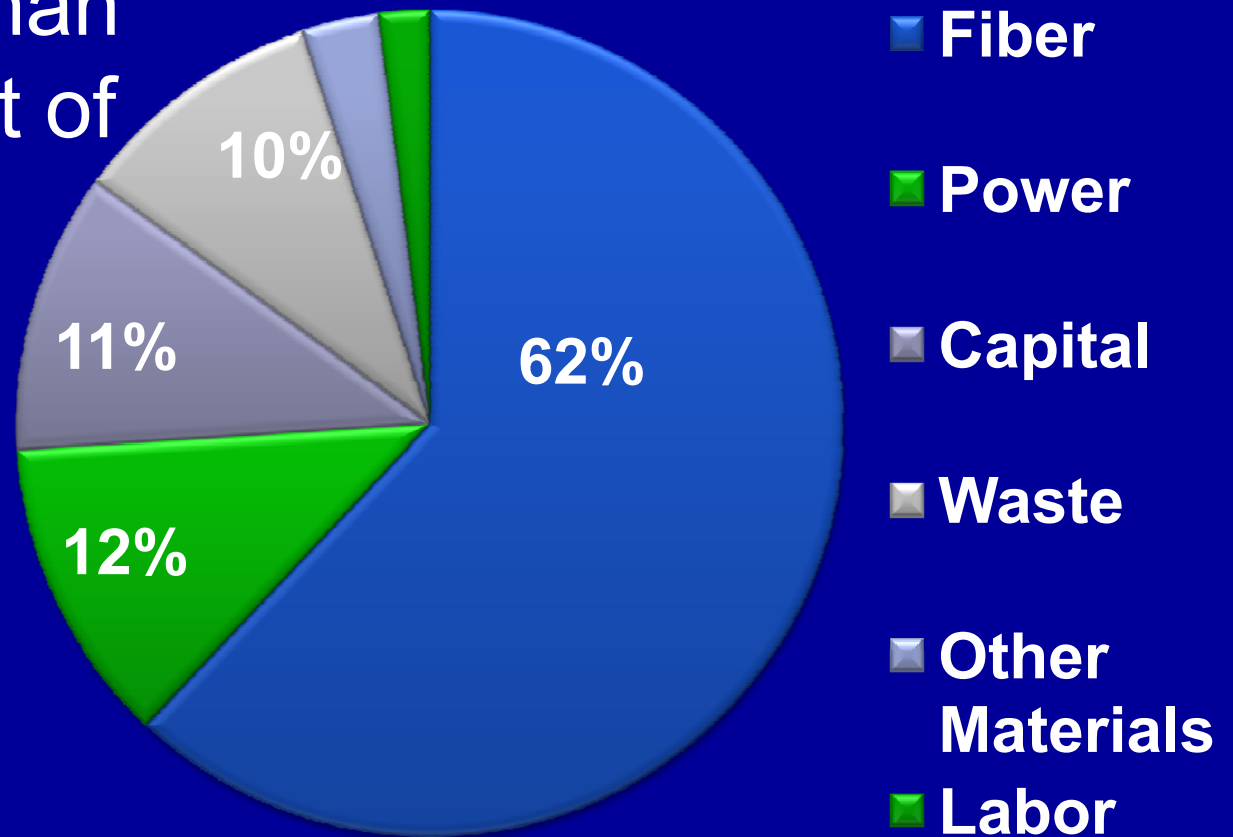


Retail



Costs Structure of Ring-Spun Yarn in China

- Fiber is more than 60% of the cost of making yarn

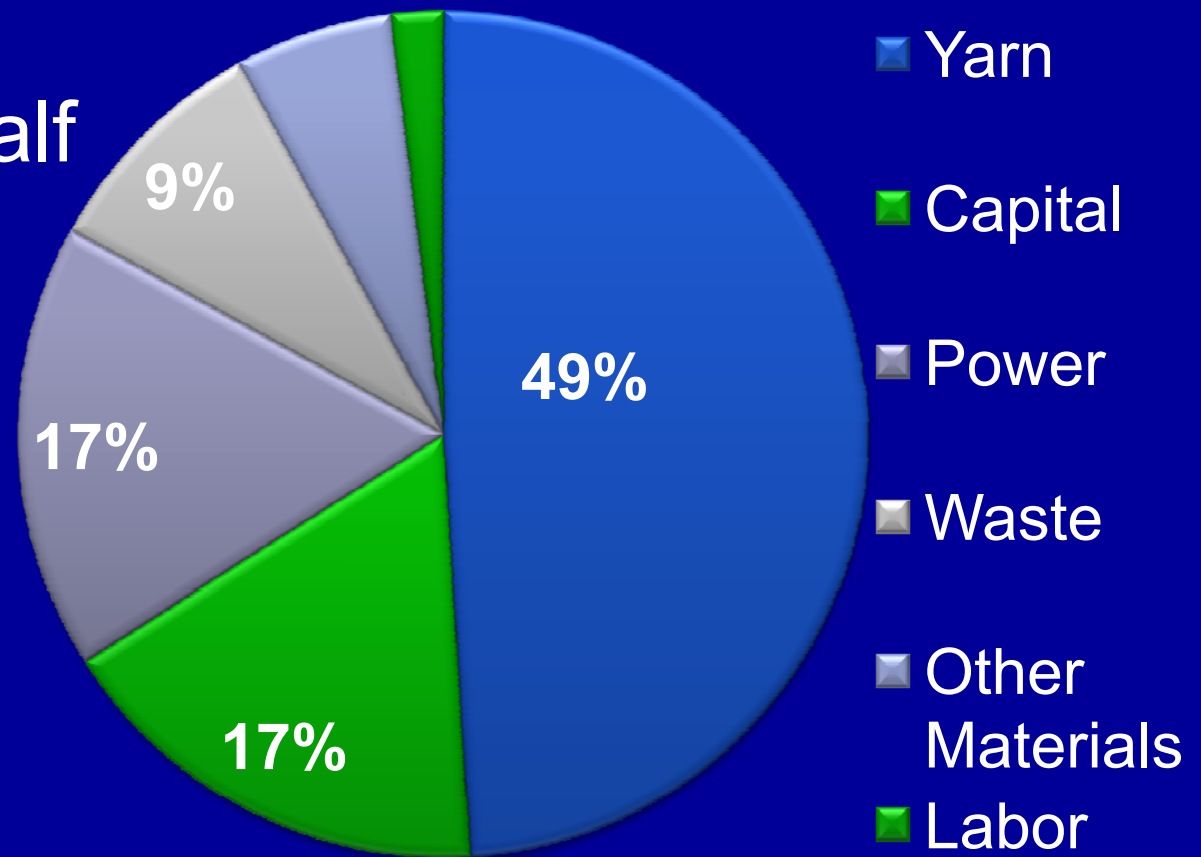


Source: International Textiles Manufacturers' Federation (ITMF) International Cost of Production Comparison (2010)



Costs Structure of Woven Fabric Manufacturing in China (Ring)

- Yarn is about half of the cost of making woven fabric



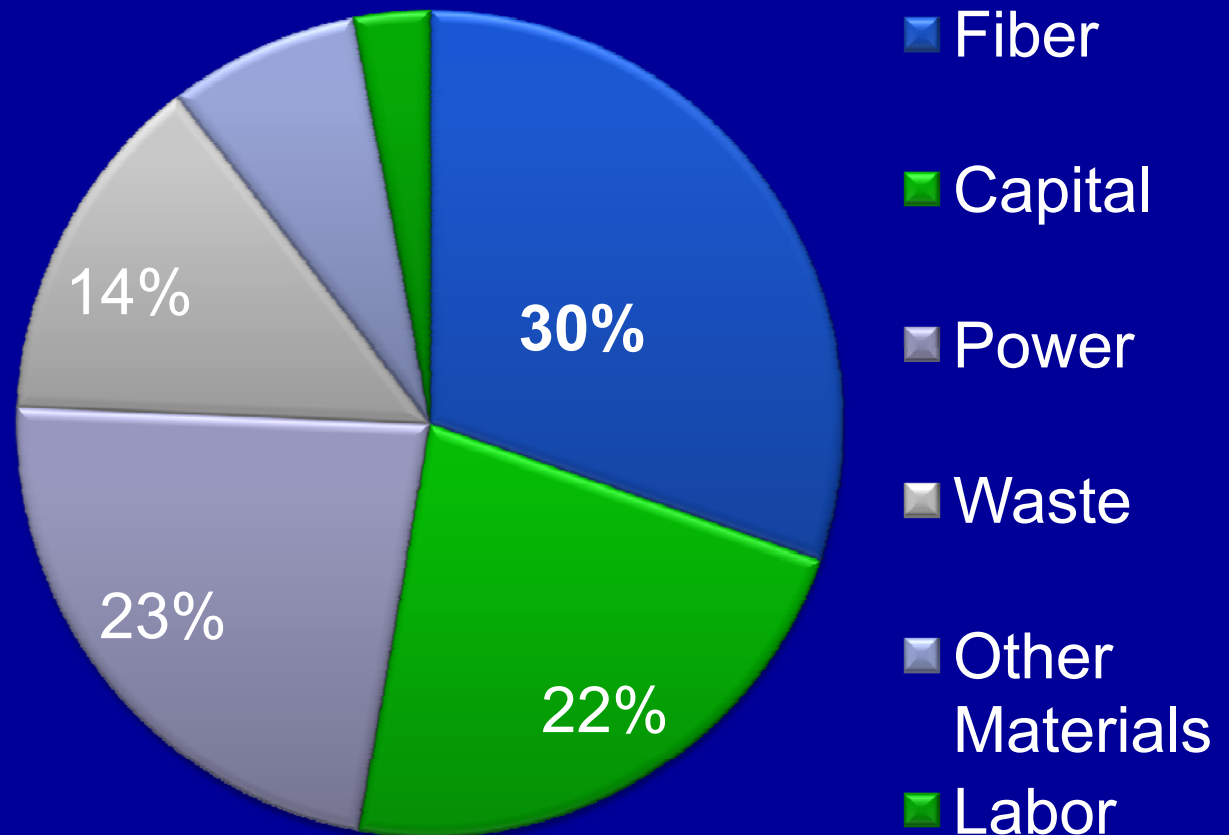
Source: International Textiles Manufacturers' Federation (ITMF) International Cost of Production Comparison (2010)



Importance of Fiber Prices Decreases as Value is Added

Cost Structure of Woven Fabric
Manufacturing in China

- Fiber is about a third of the cost of making woven fabrics

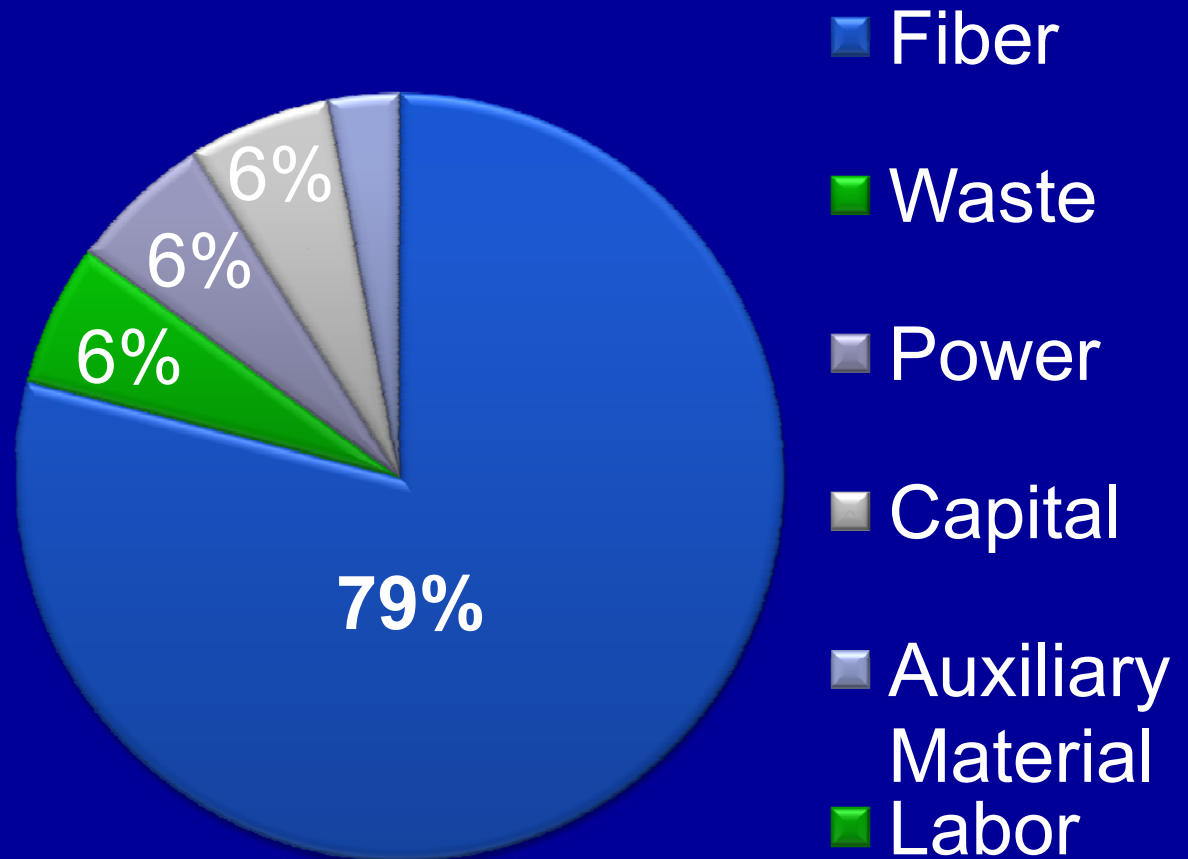


Source: International Textiles Manufacturers' Federation (ITMF) International Cost of Production Comparison (2010)



Costs Structure of Open End Yarn Manufacturing in China

- Fiber is about 80% of the cost of making OE yarn

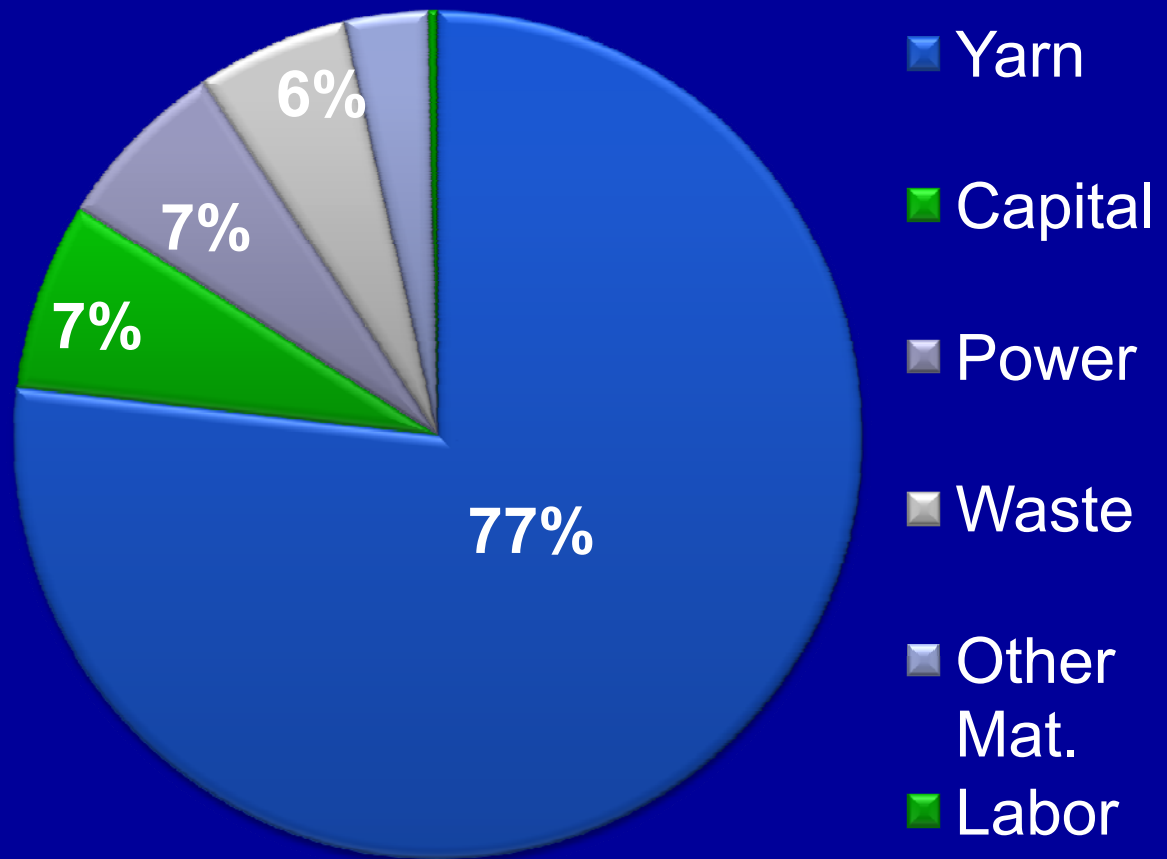


Source: International Textiles Manufacturers' Federation (ITMF) International Cost of Production Comparison (2010)



Costs Structure of Knit Fabric Manufacturing in China (OE Yarn)

- Yarn is about 80% of the cost of making knit fabric with OE yarn



Source: International Textiles Manufacturers' Federation (ITMF) International Cost of Production Comparison (2010)

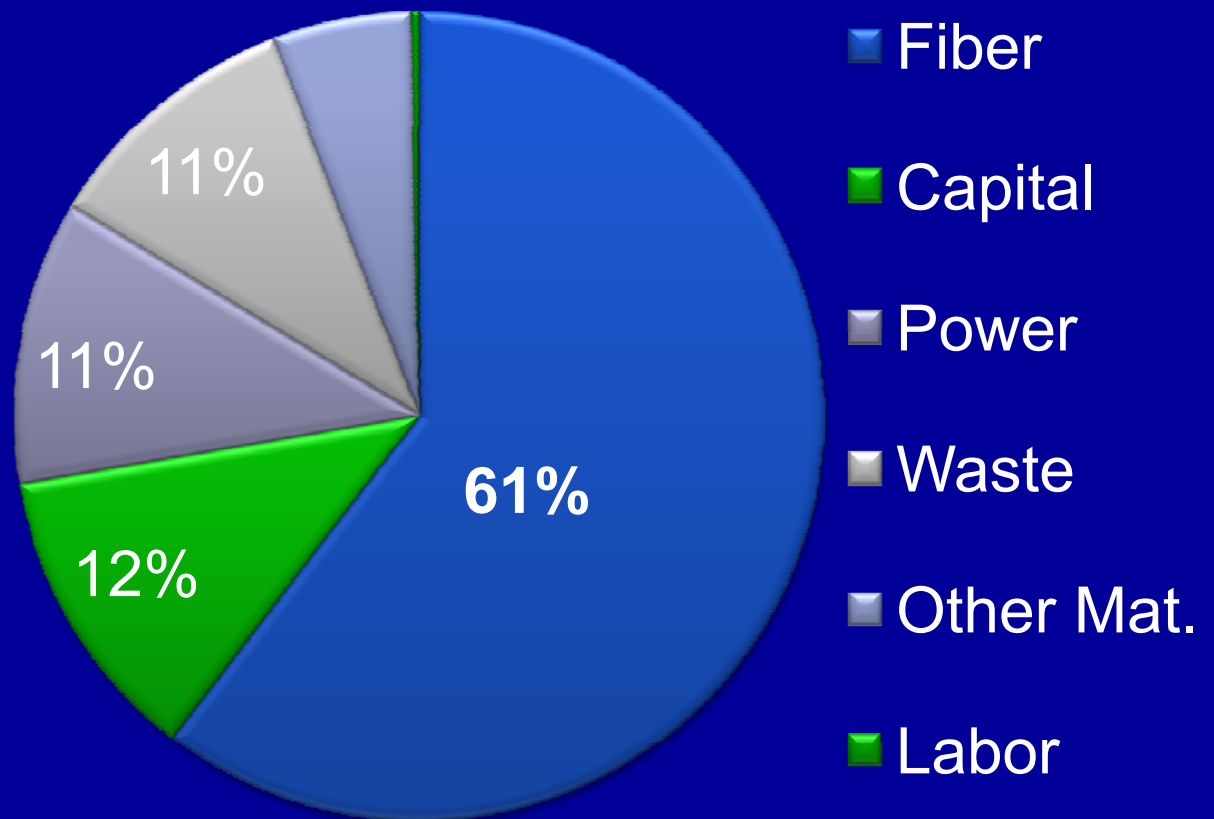


Importance of Fiber Prices

Decreases as Value is Added

Cost Structure of Knit Fabric
Manufacturing from OE yarn in China

- Fiber is about 60% of the cost of making knit fabric from OE yarn

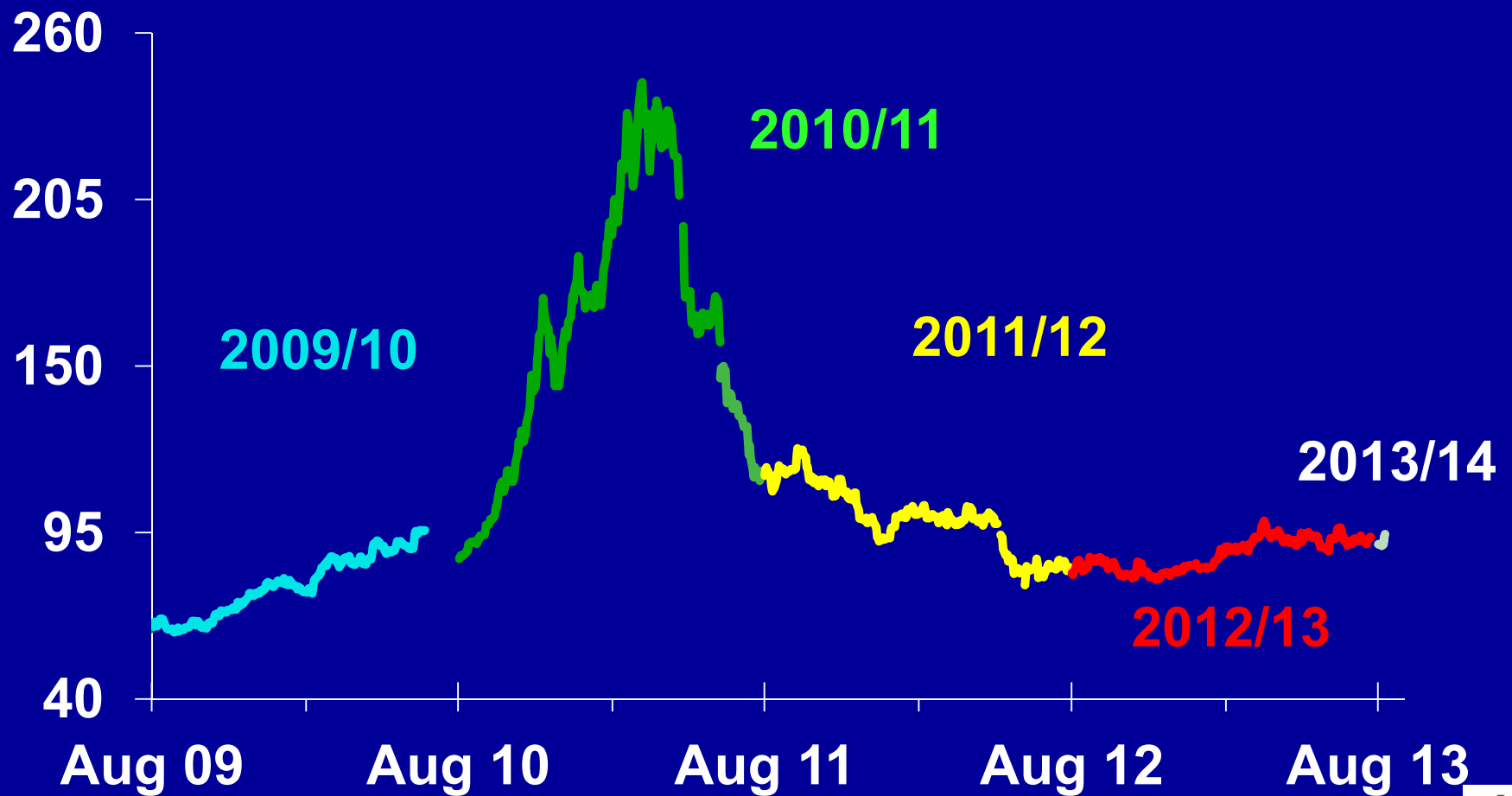


Source: International Textiles Manufacturers' Federation (ITMF) International Cost of Production Comparison (2010)



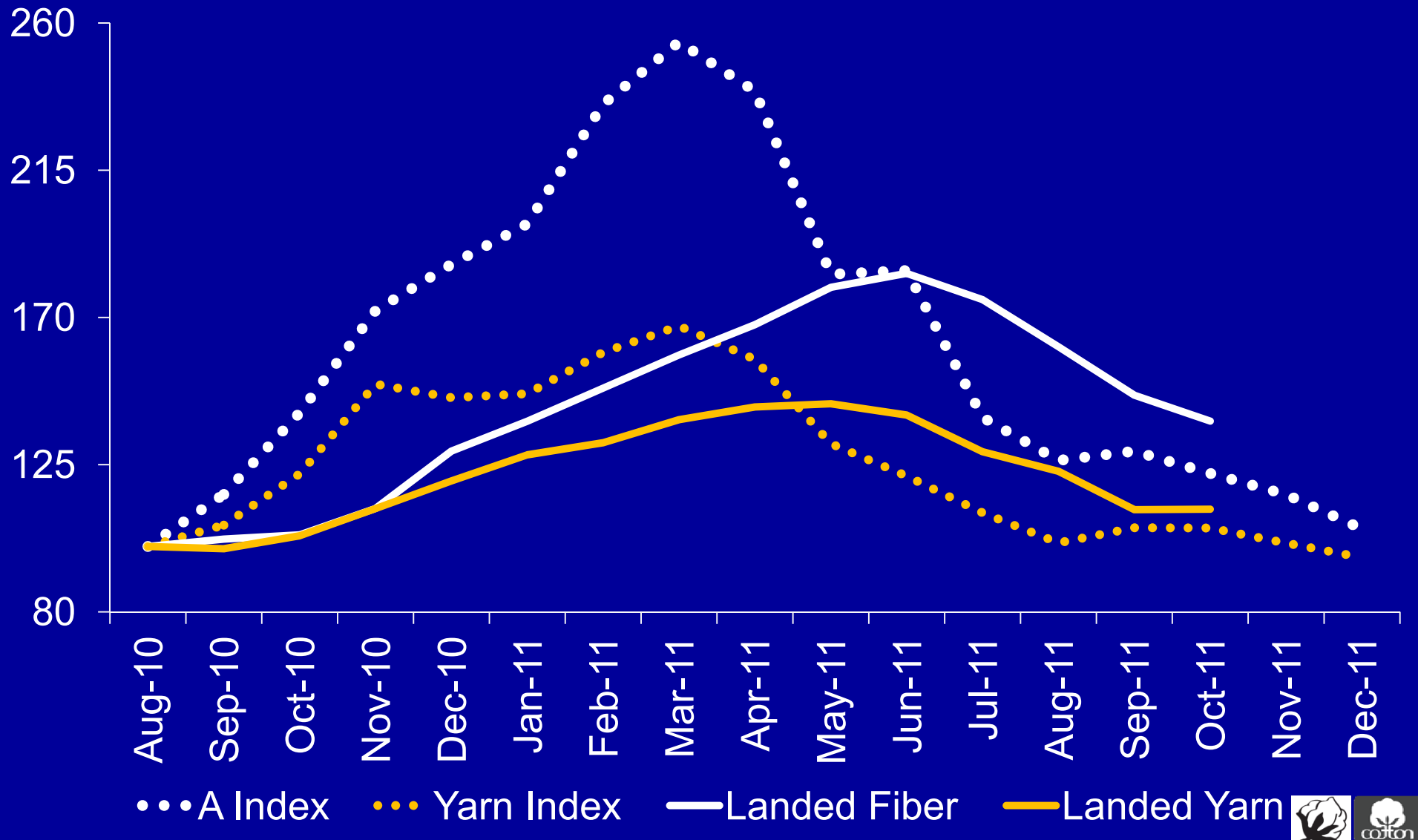
Cotlook A Index

U.S. cents/lb



Fiber and Yarn Prices

Index August 2010=100

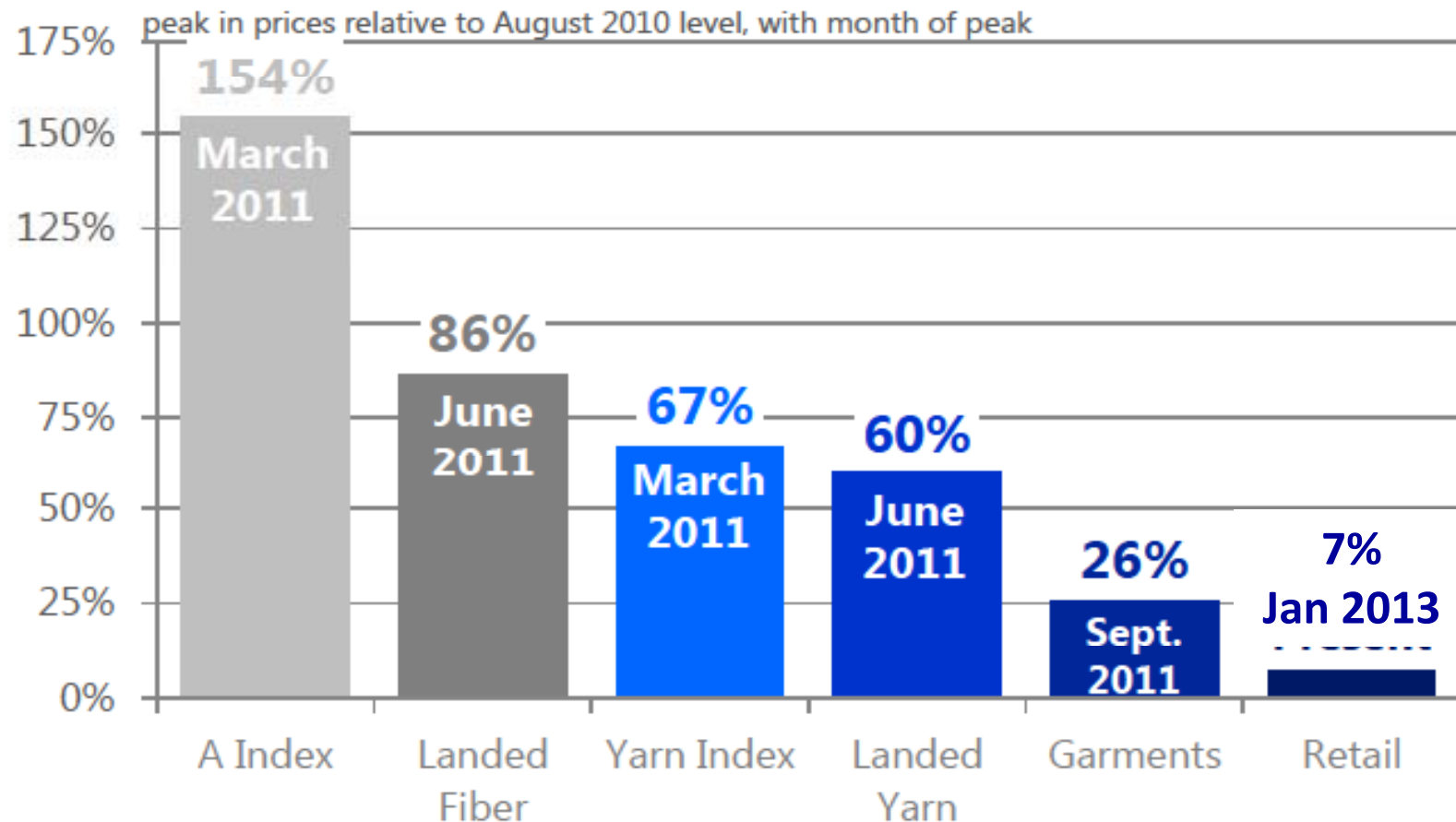


Yarn, Fabric, Garment, Retail Prices

Index August 2010=100



Summary of Pass-Through: Aug10 through Peak



Cotton Incorporated analysis, garment and retail price data seasonally-adjusted
Sources: Cotlook,, GIIS, U.S. Department of Commerce, U.S. Bureau of Labor Statistics

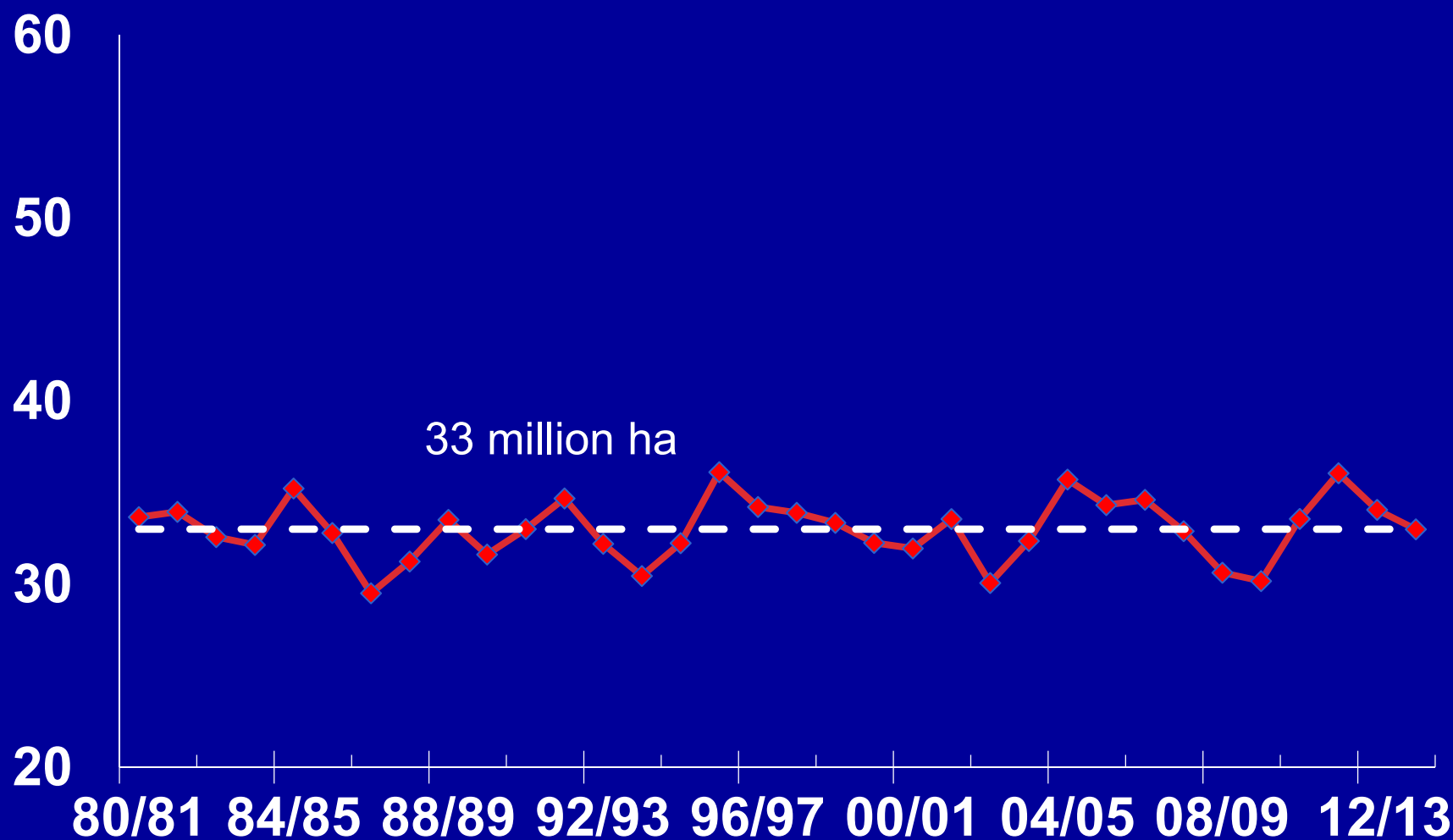


Market Structure

- Supply & demand
- Prices
- Government interventions

World Cotton Area

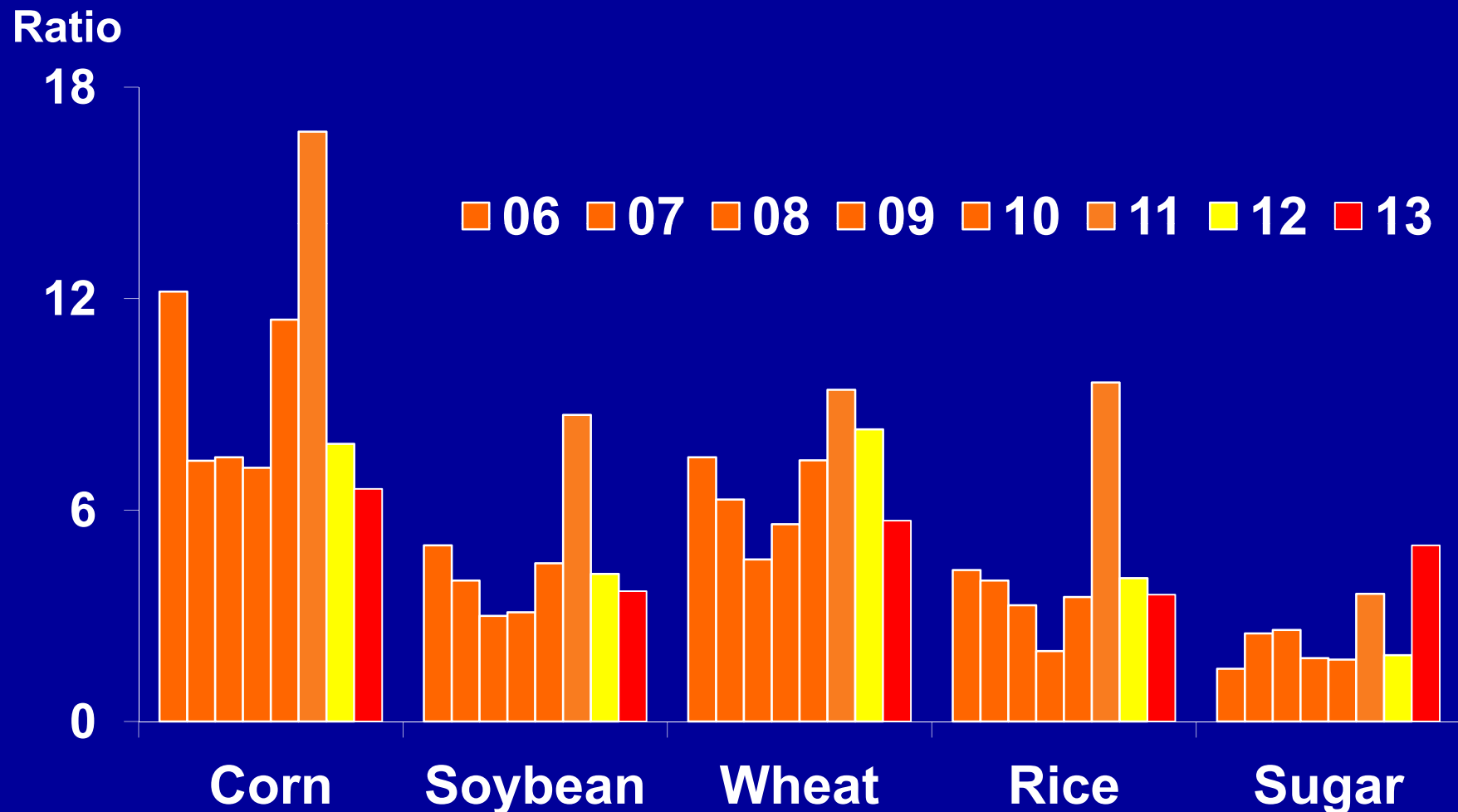
Million Hectares



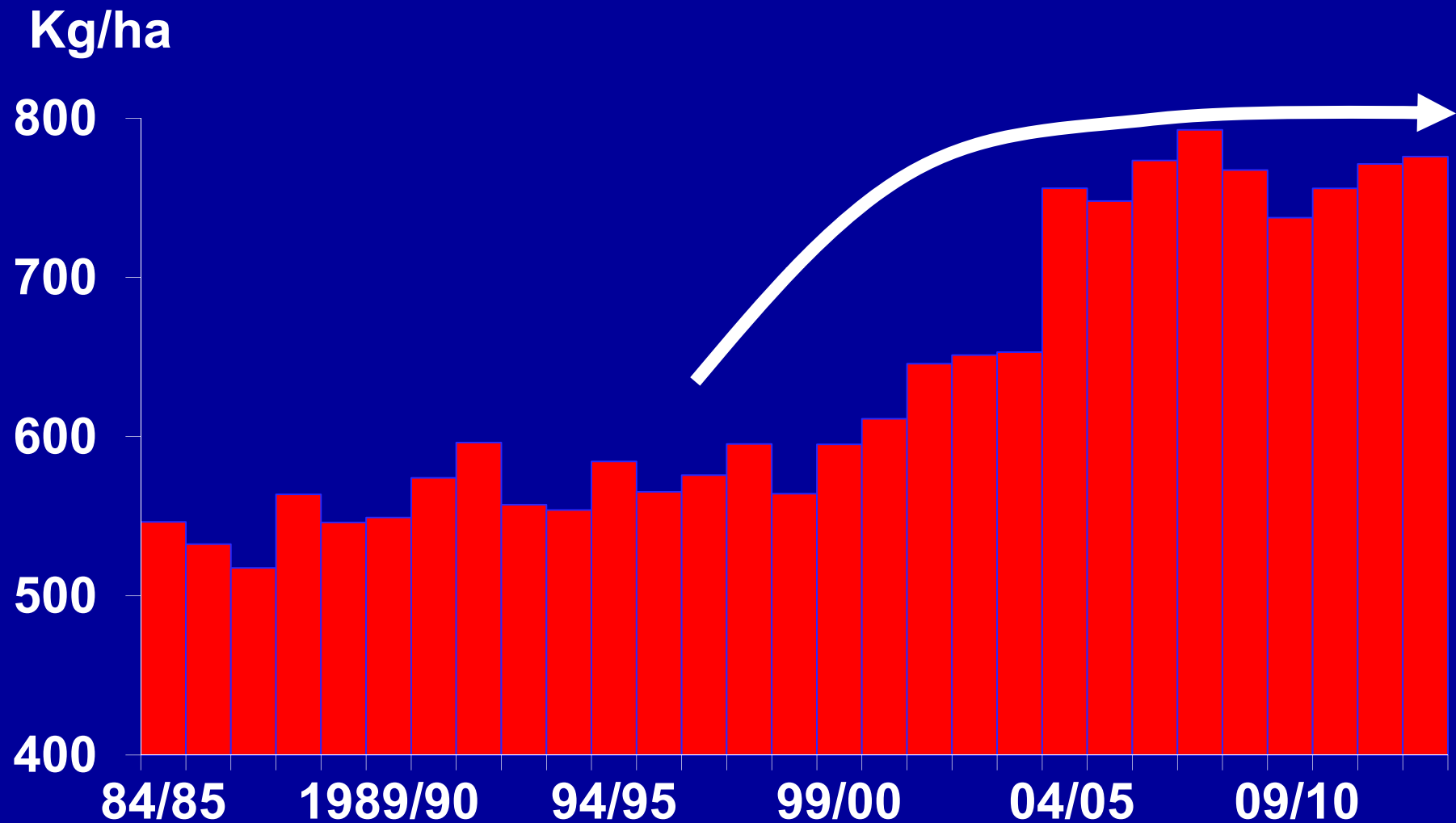
World Cotton Area and Prices



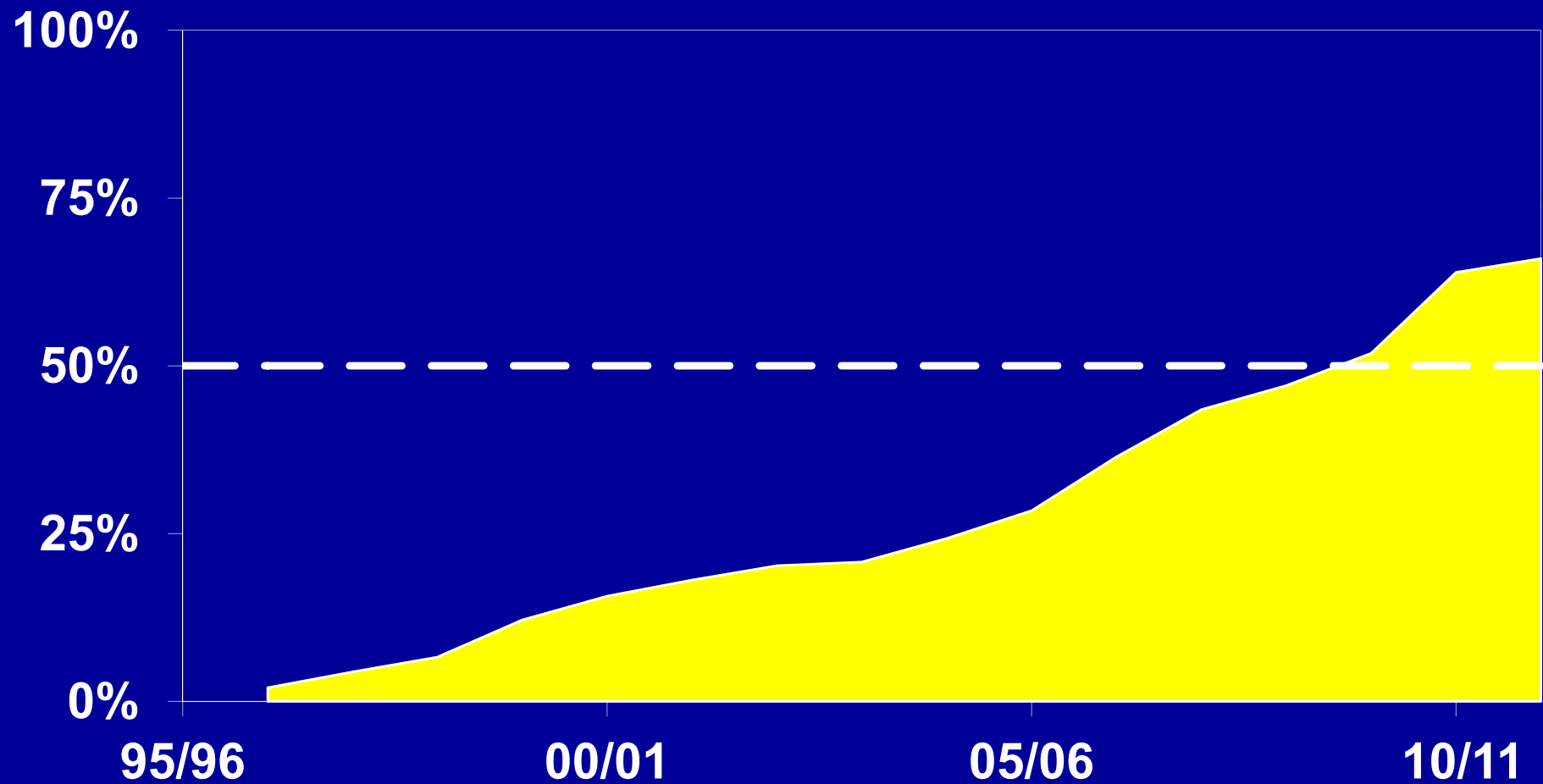
Price of cotton vs. competing crops at planting time



Average World Yield

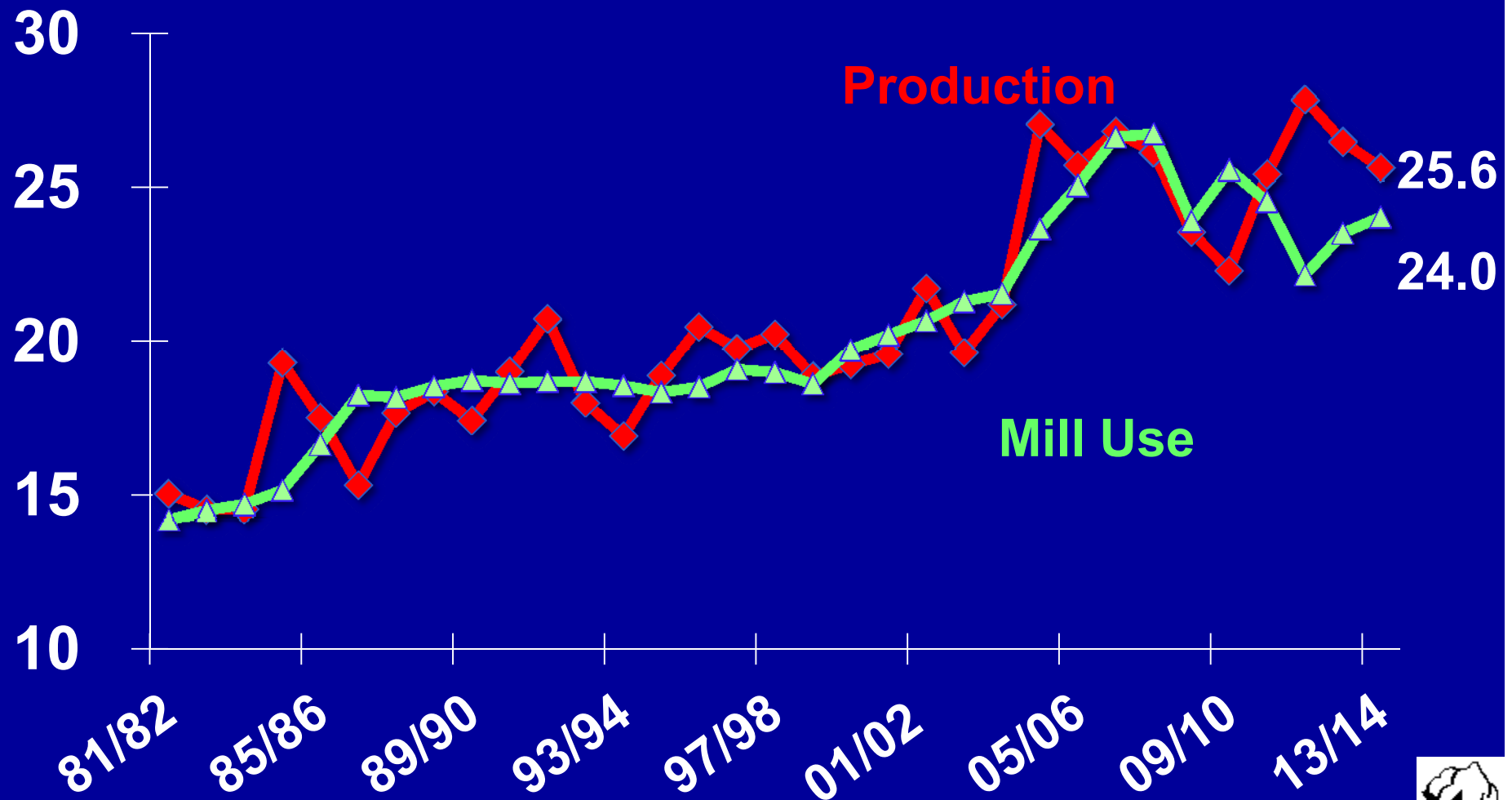


Biotech cotton area (percentage of world total)



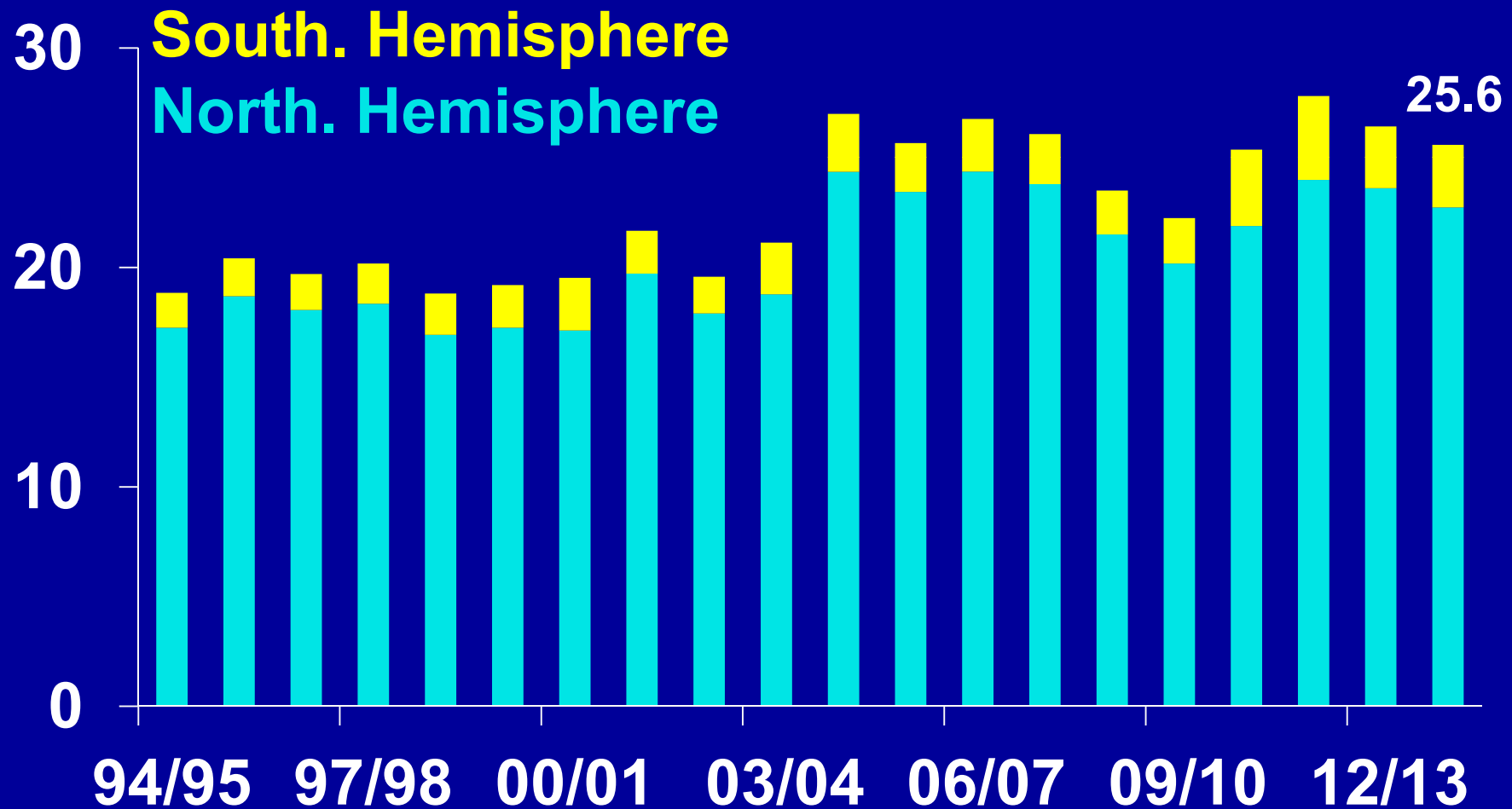
World Cotton Production & Mill Use

Million tons

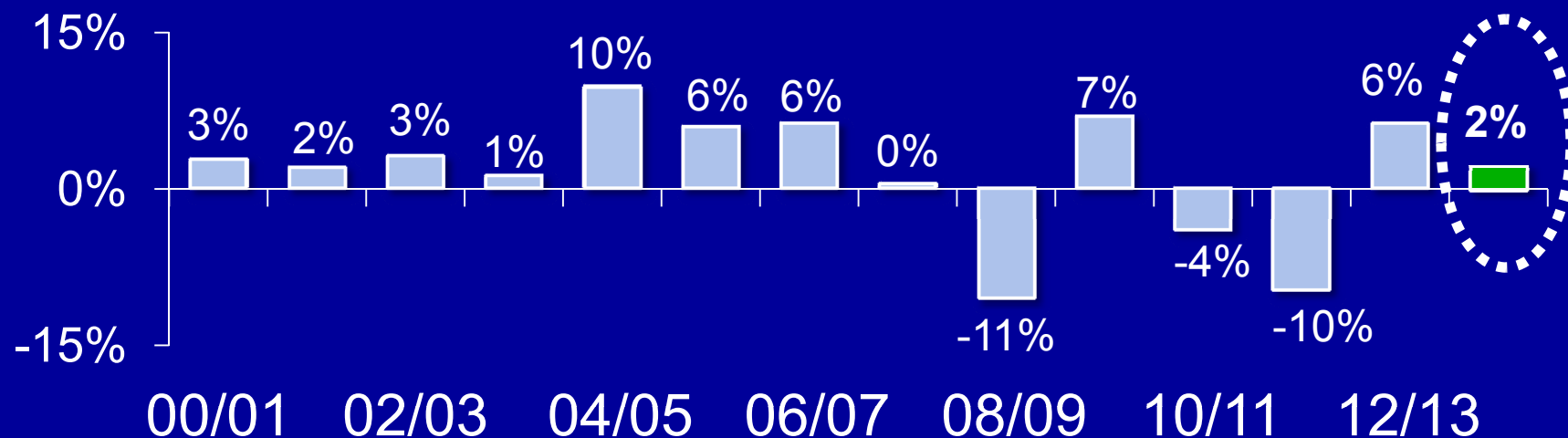


World Production

Million tons



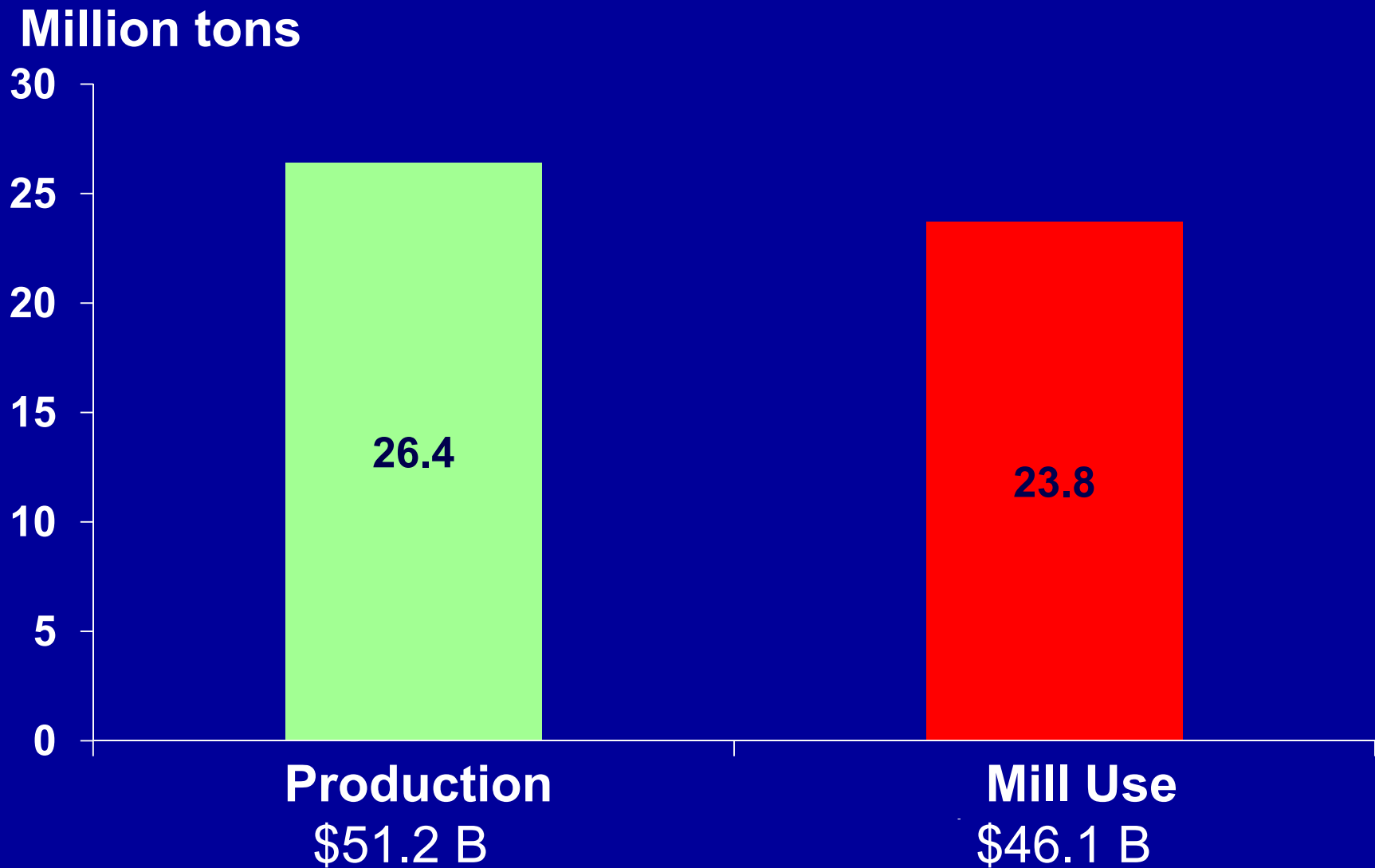
Growth in World Cotton Mill Use



Growth in World GDP



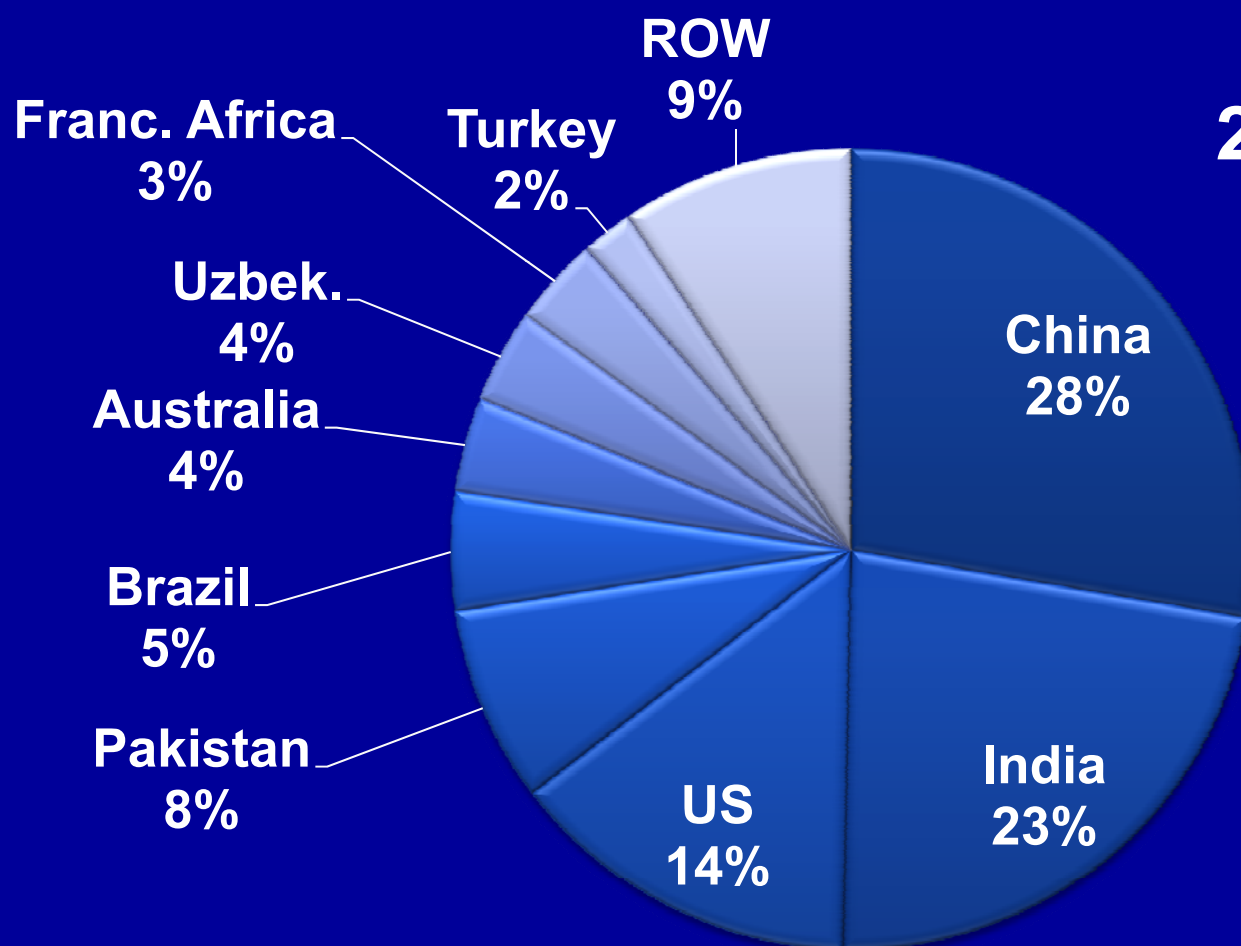
World Cotton Fundamentals 2012/13



Cotton Production by Country

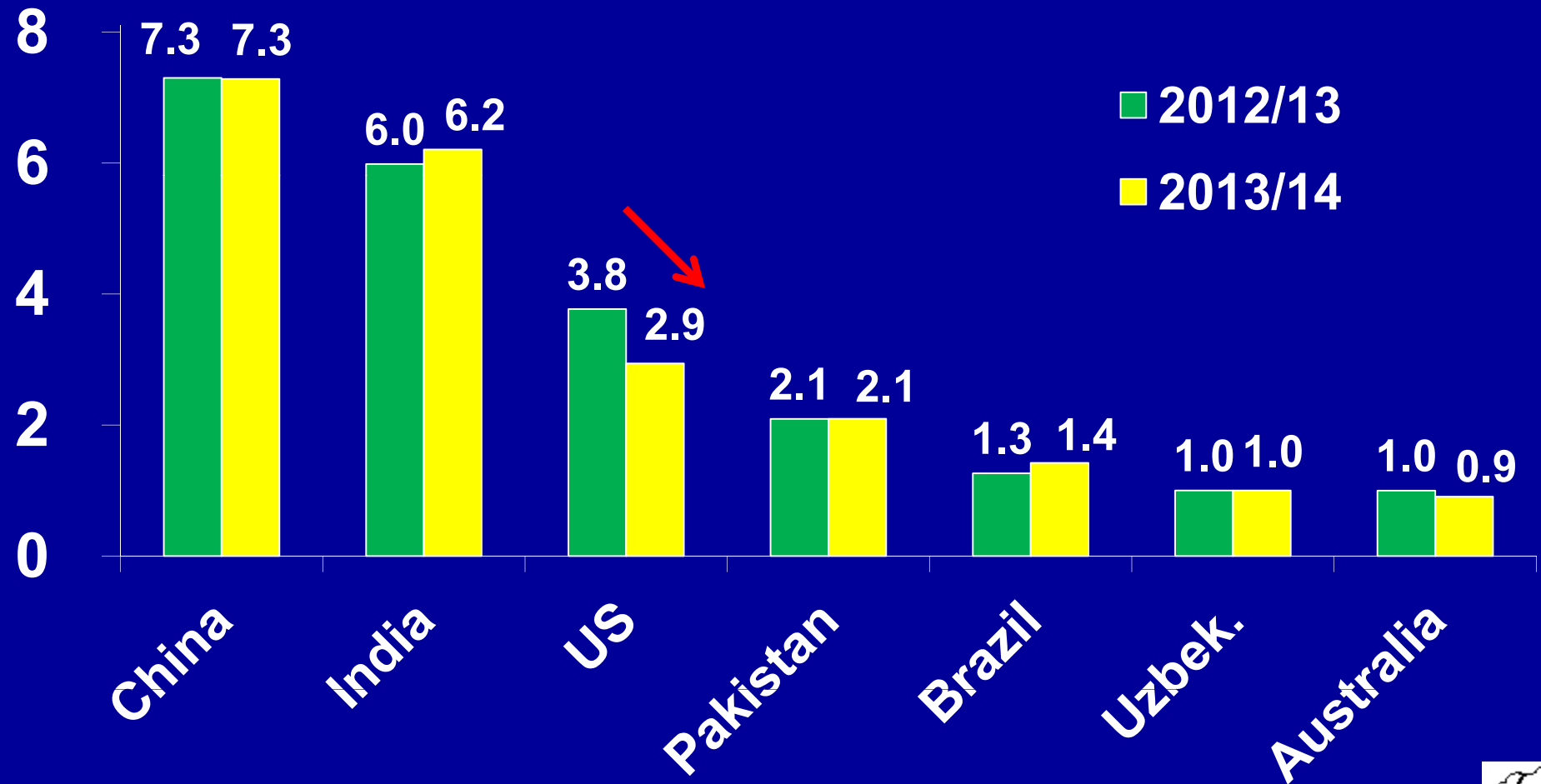
2012/13

26.4 Million tons



Cotton Production

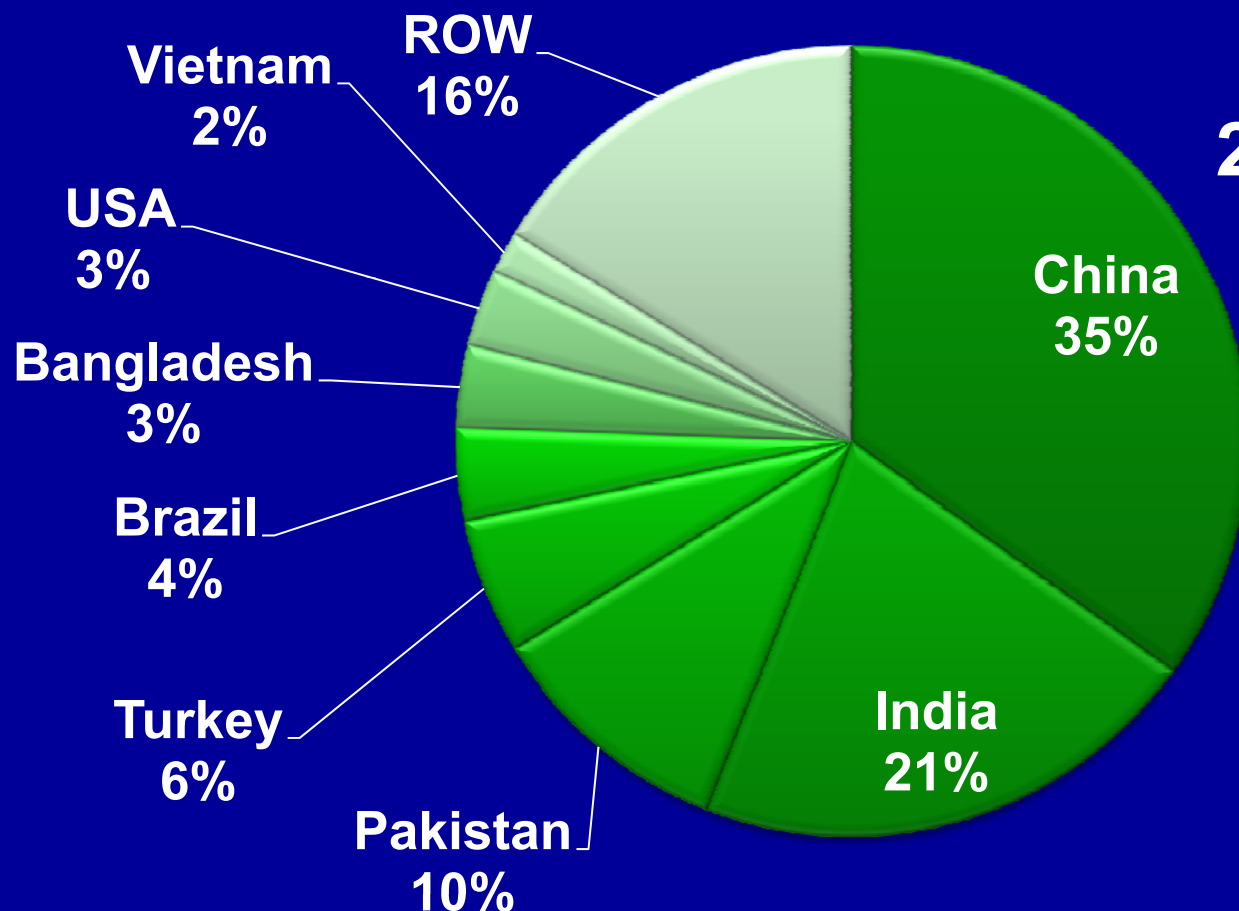
Million Tons



Cotton Mill Use by Country

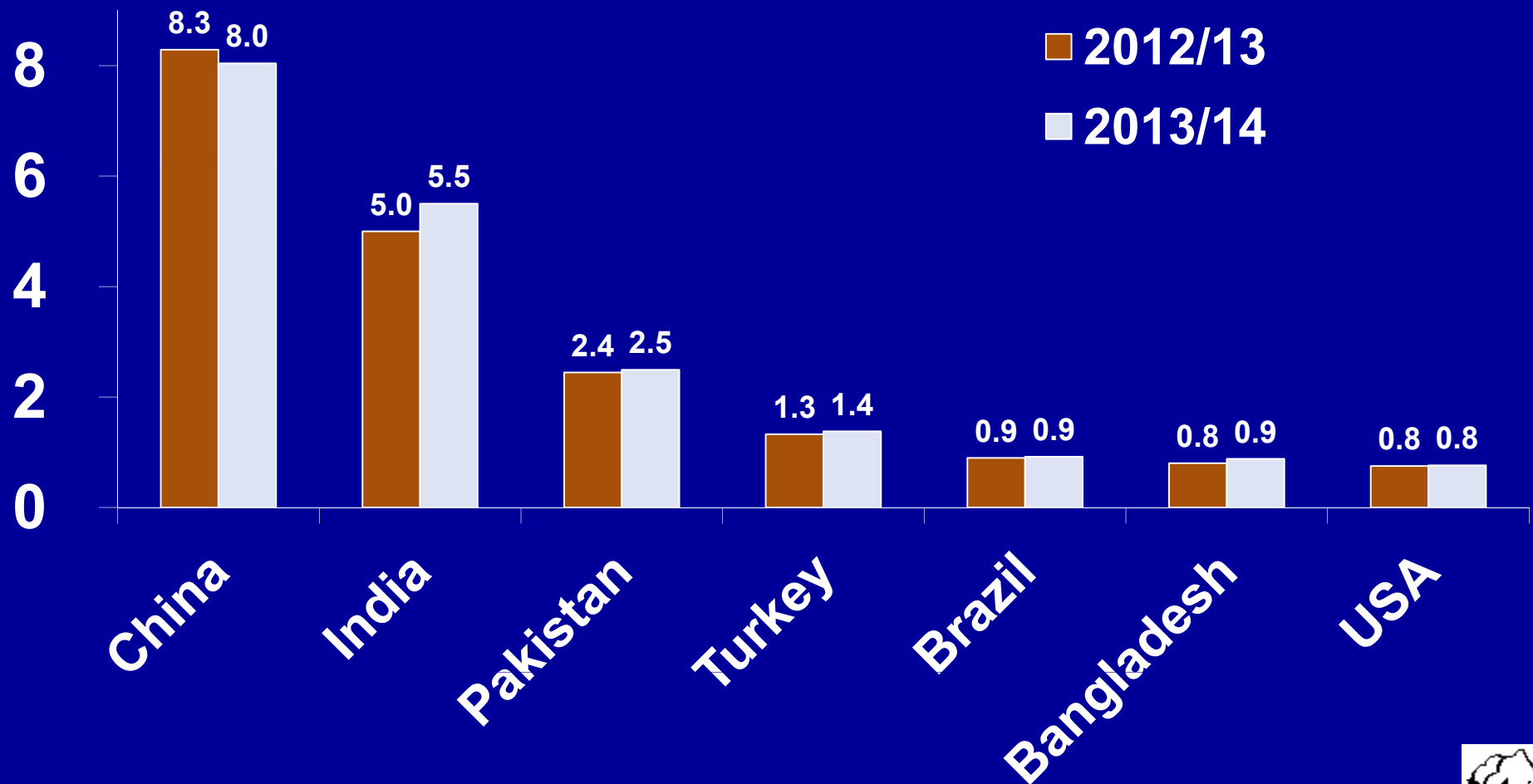
2012/13

23.8 Million tons



Cotton Mill Use

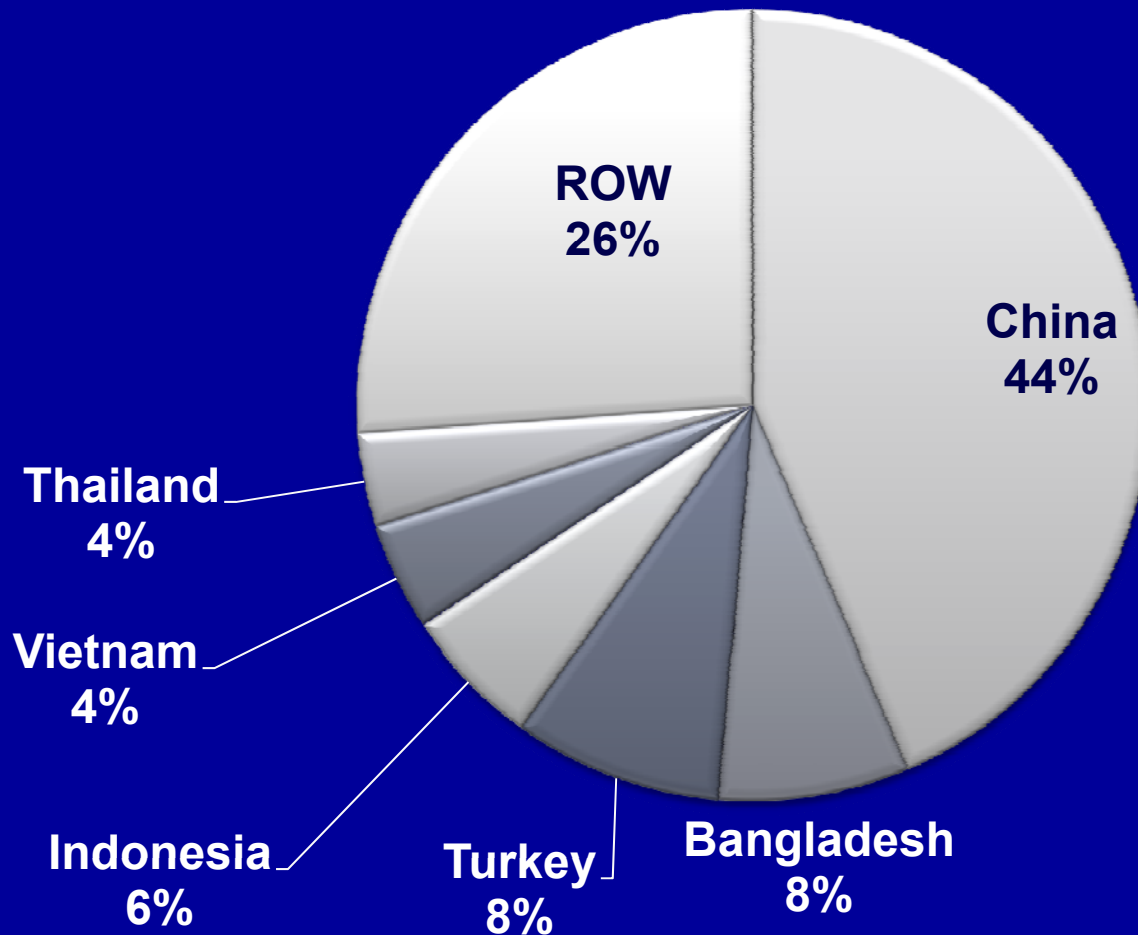
Million Tons



Cotton Imports by Country

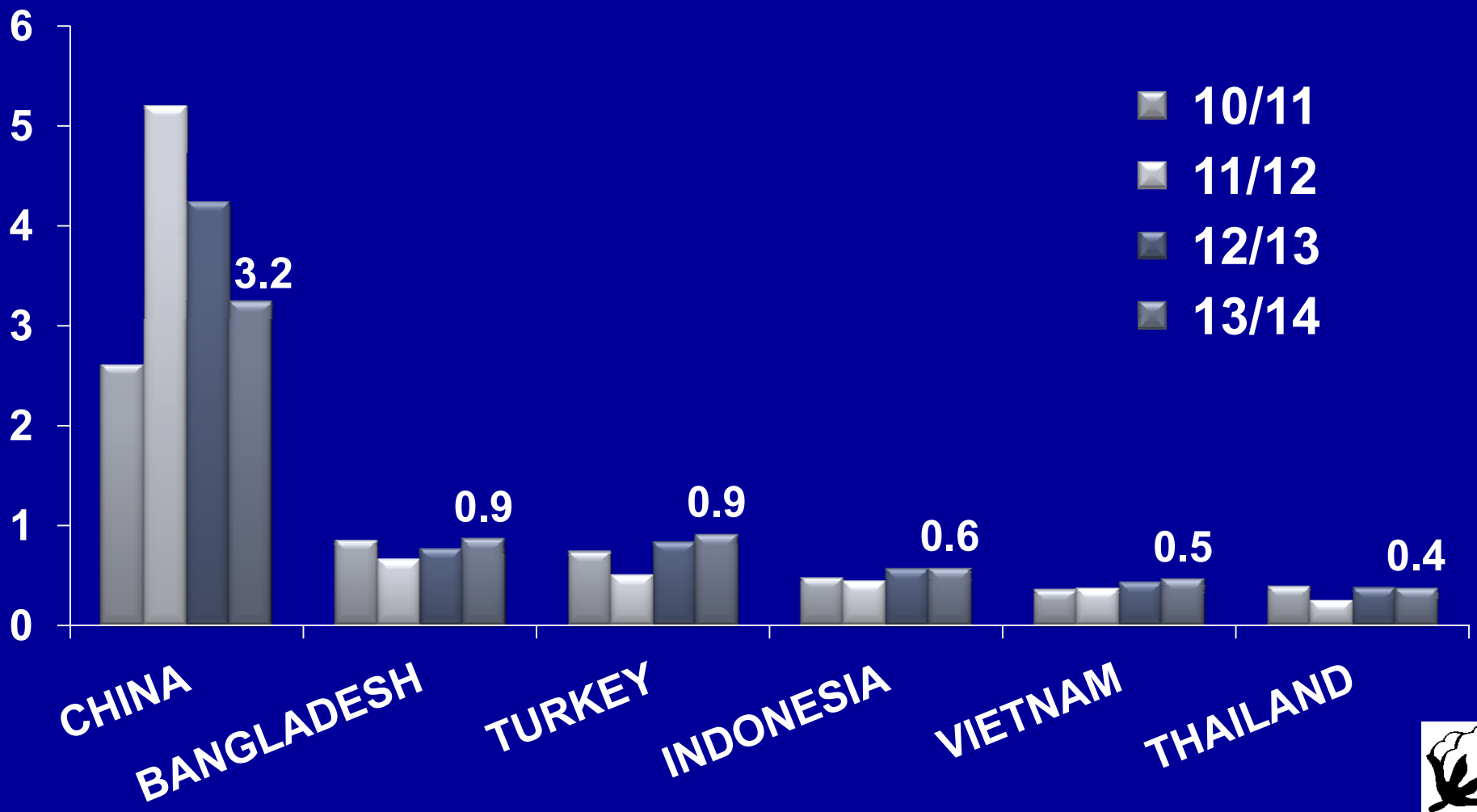
2012/13

9.7 Million tons



Cotton Imports by Country

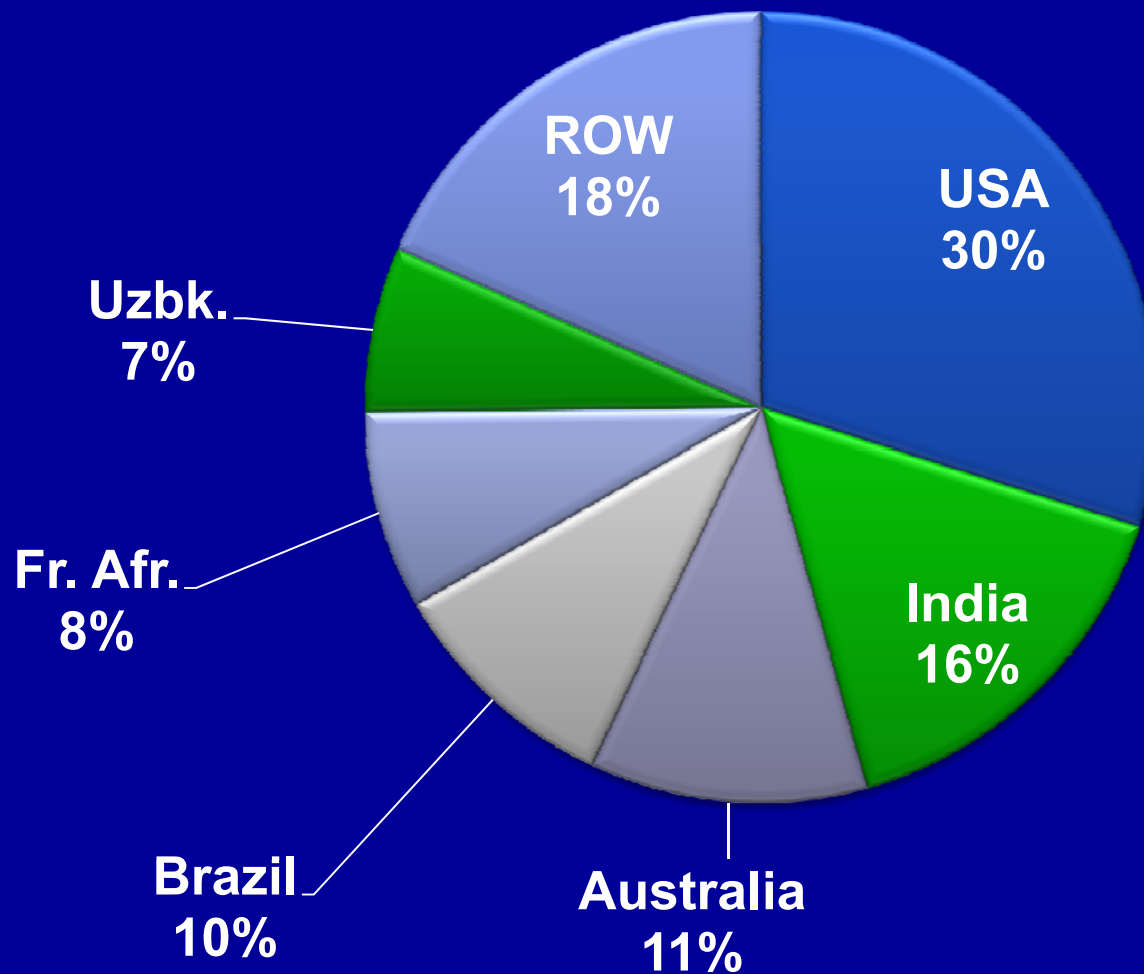
Million tons



Cotton Exports by Country

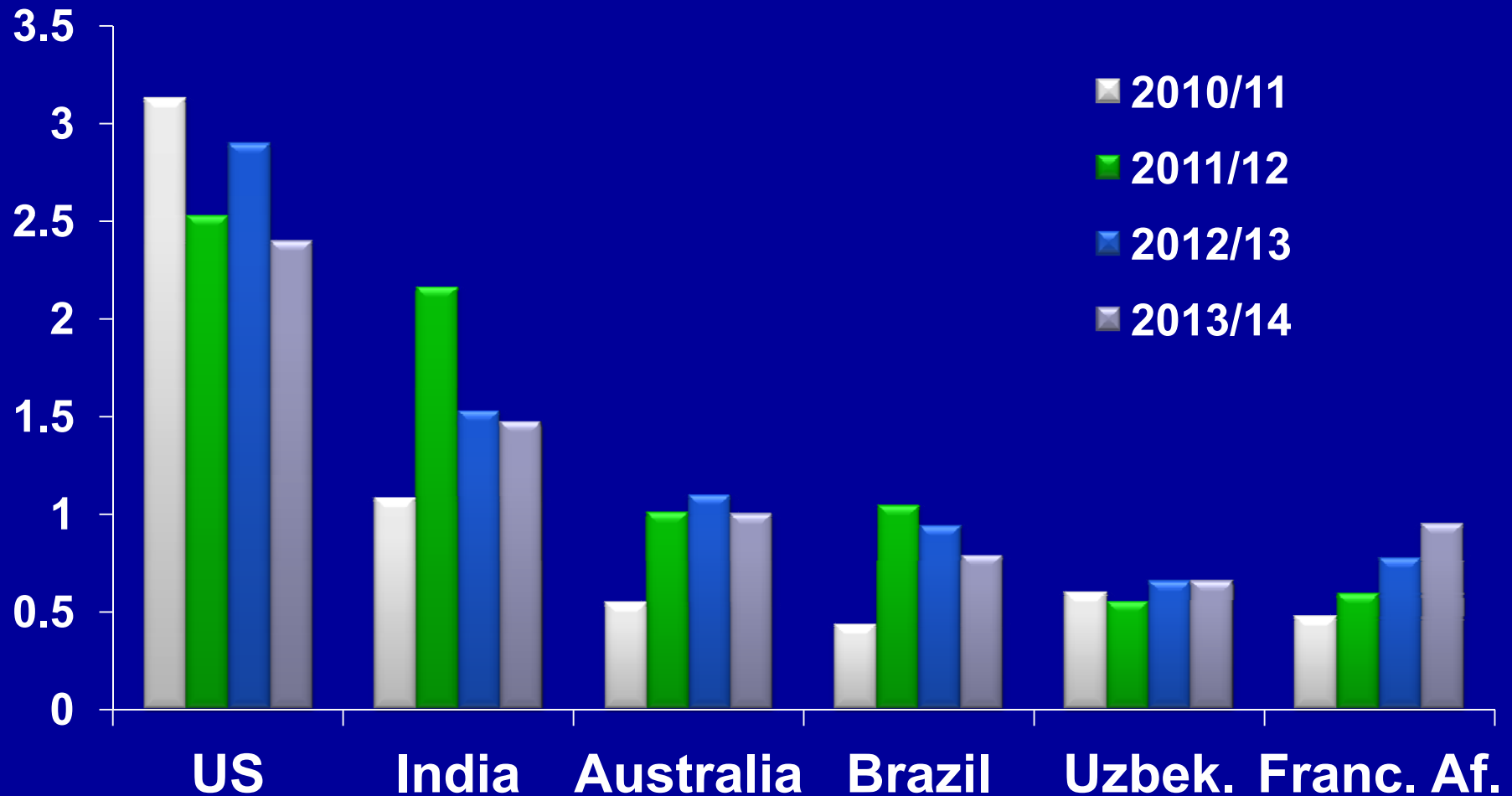
2012/13

9.7 Million tons



Cotton Exports

Million tons



World Supply =
Beginning Stocks + Production

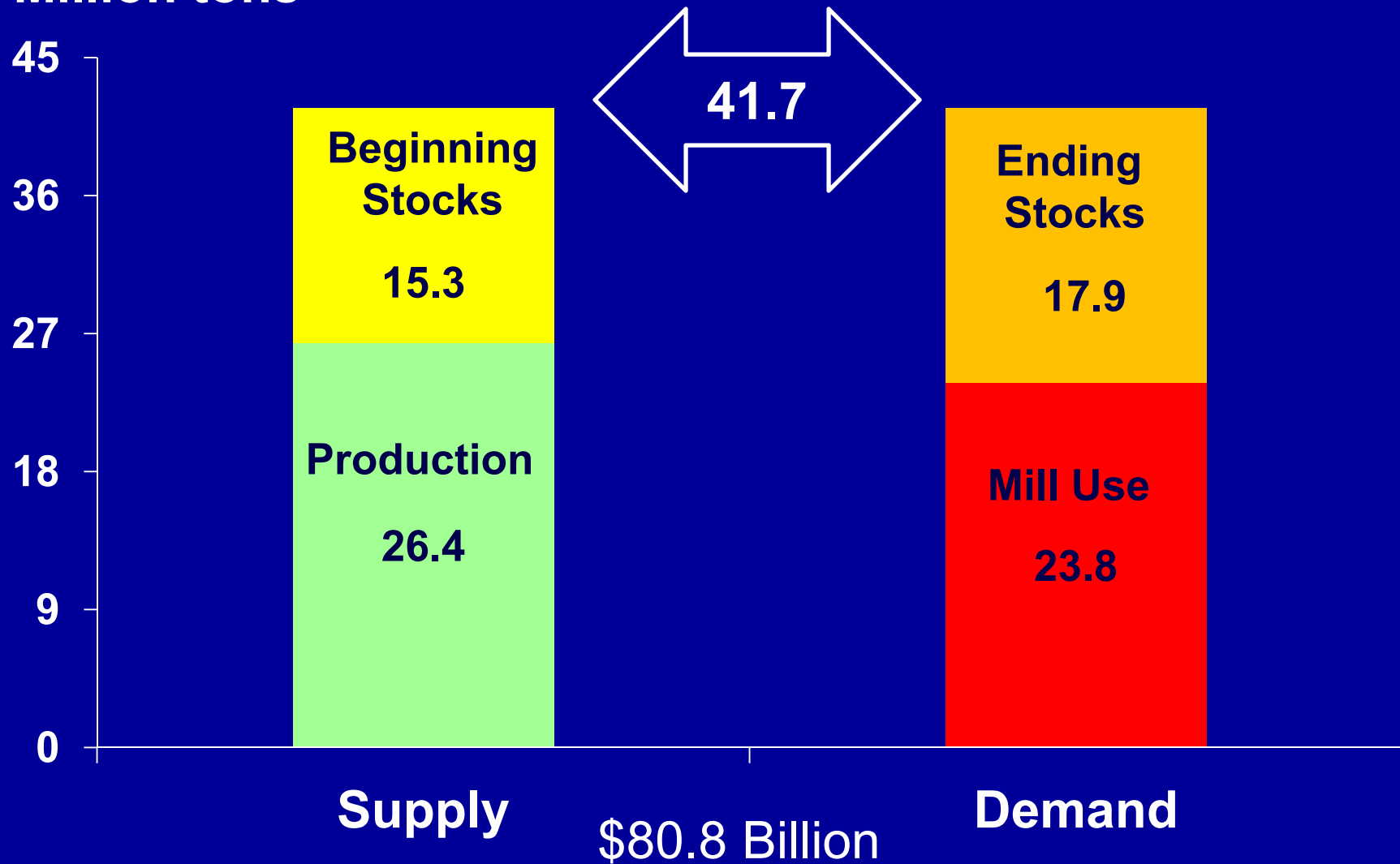
World Demand =
Mill Use + Ending Stocks

World Supply = World Demand



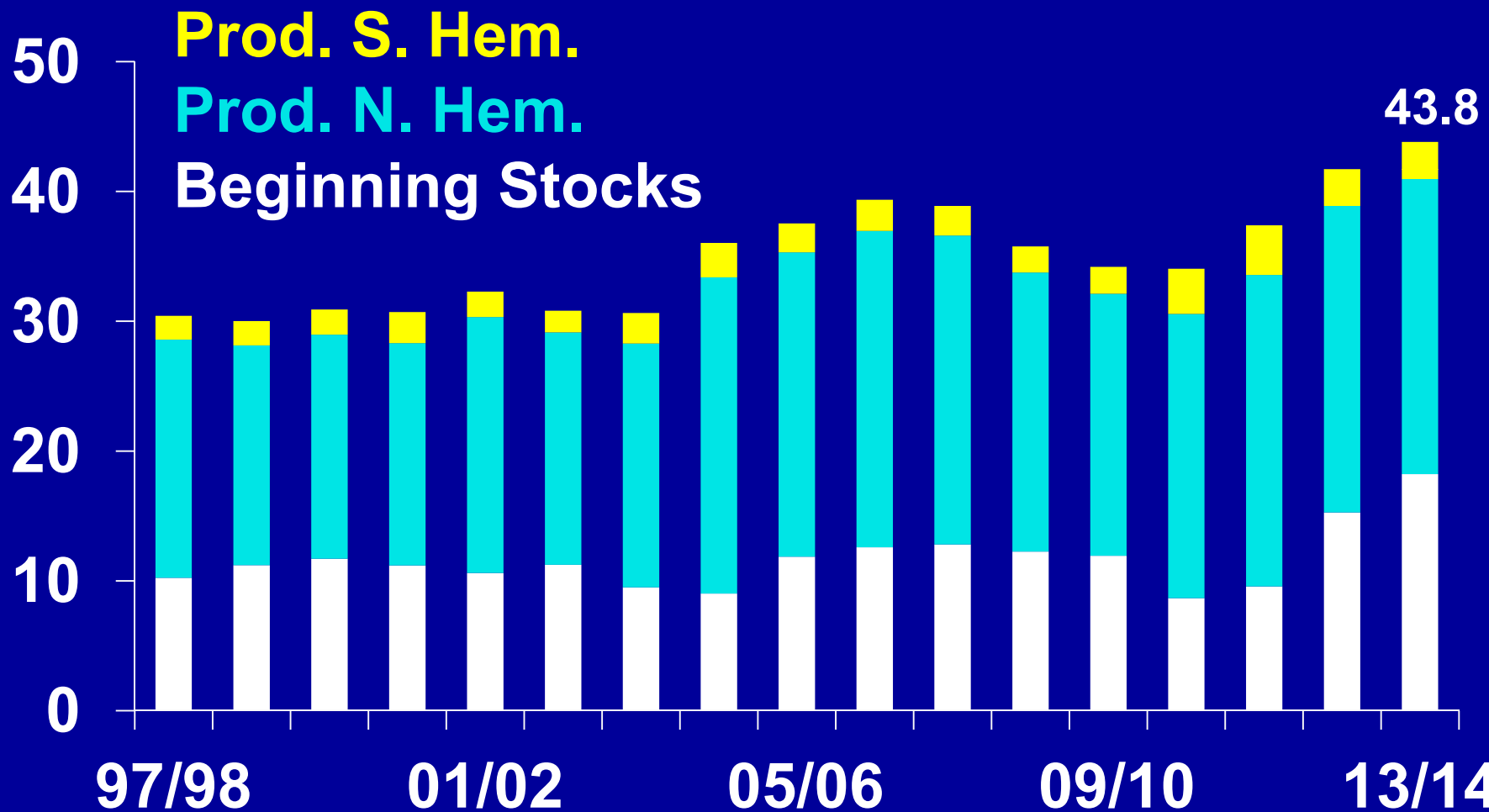
World Cotton Fundamentals 2012/13

Million tons



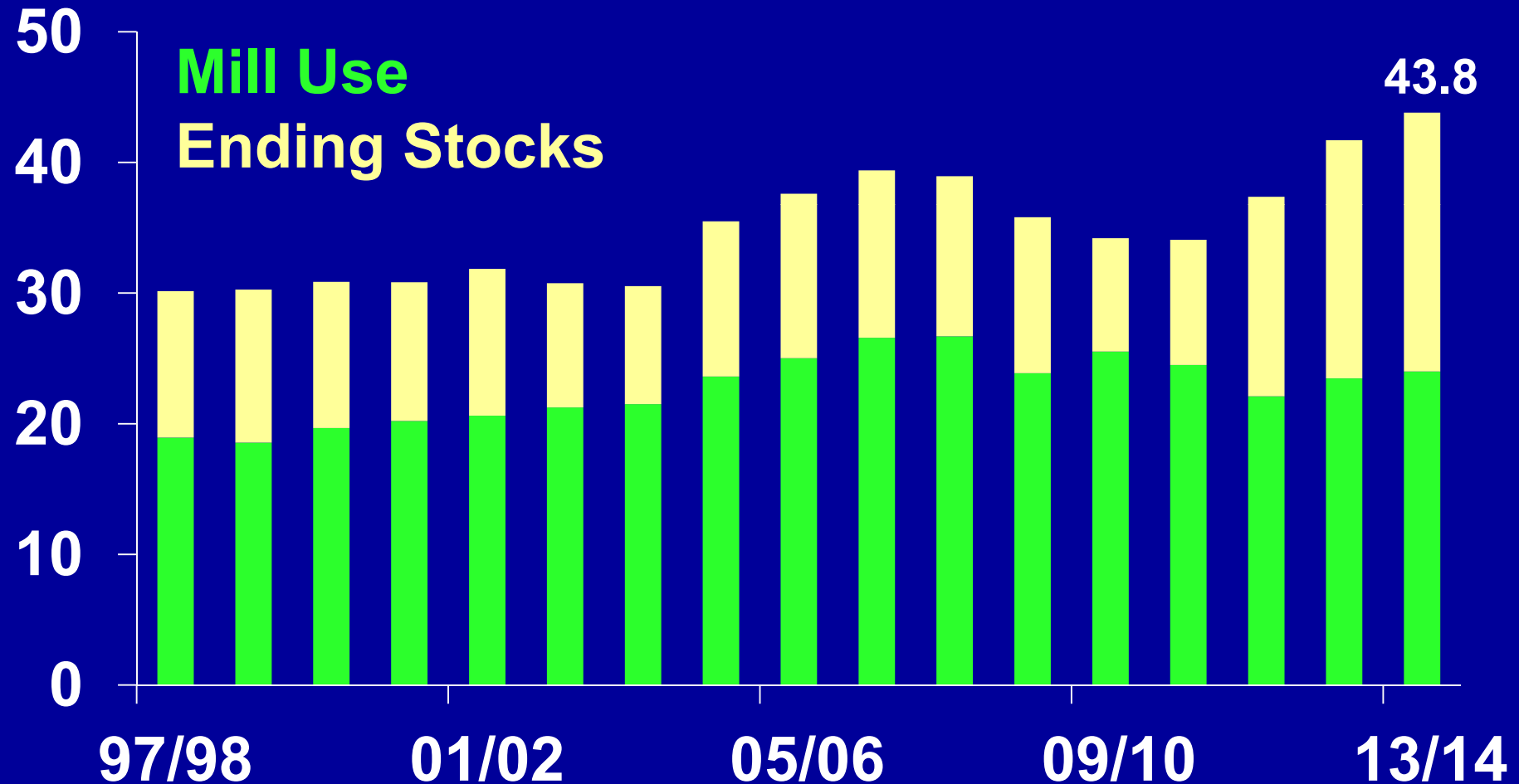
World Supply = Beg. Stocks + Production

Million tons



World Demand = Ending Stocks + Mill Use

Million tons



Country Supply =
Beginning Stocks + Production +
Imports

Country Demand =
Mill Use + Ending Stocks +
Exports

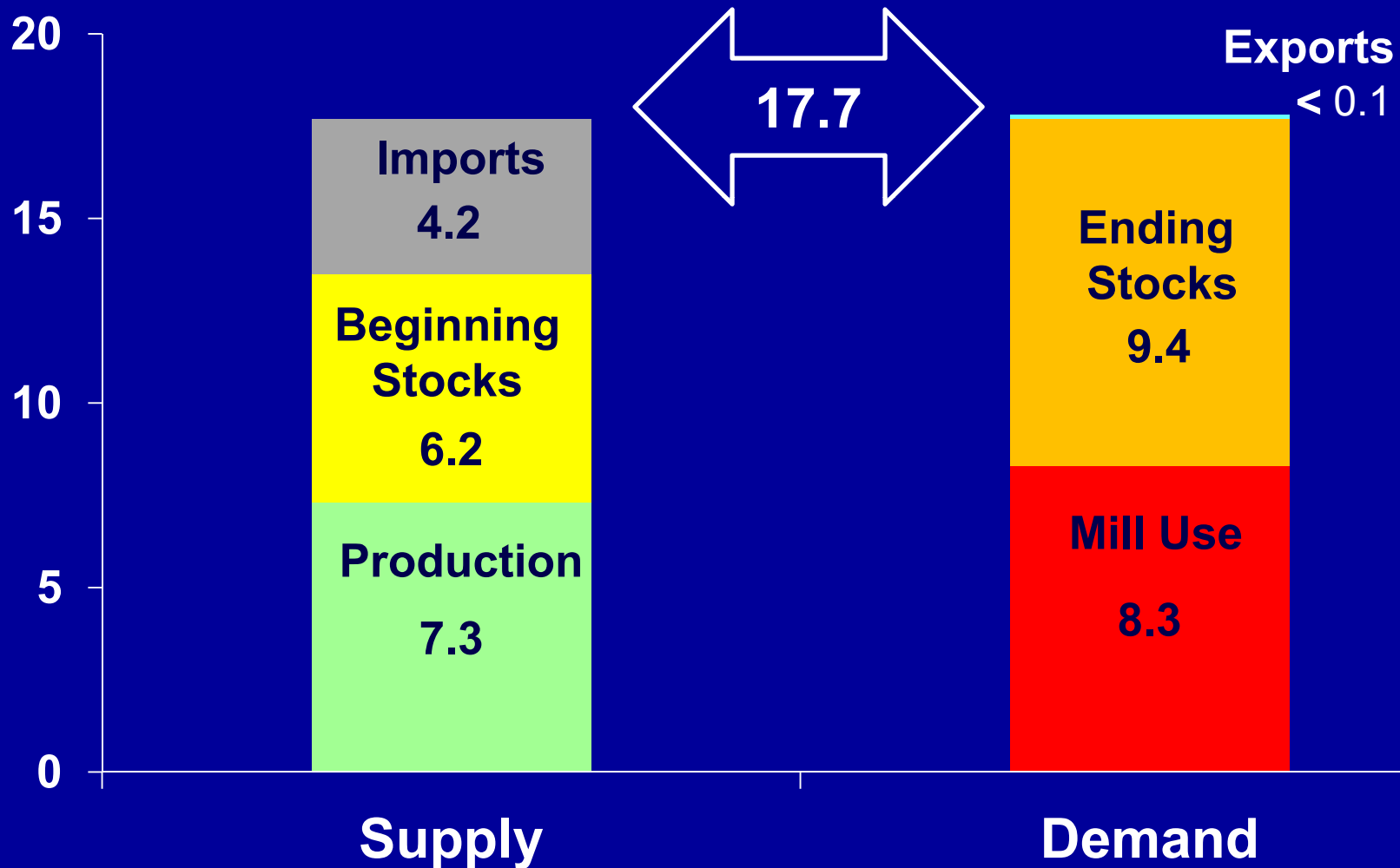
Country Supply = Country Demand



Cotton Fundamentals 2012/13

China

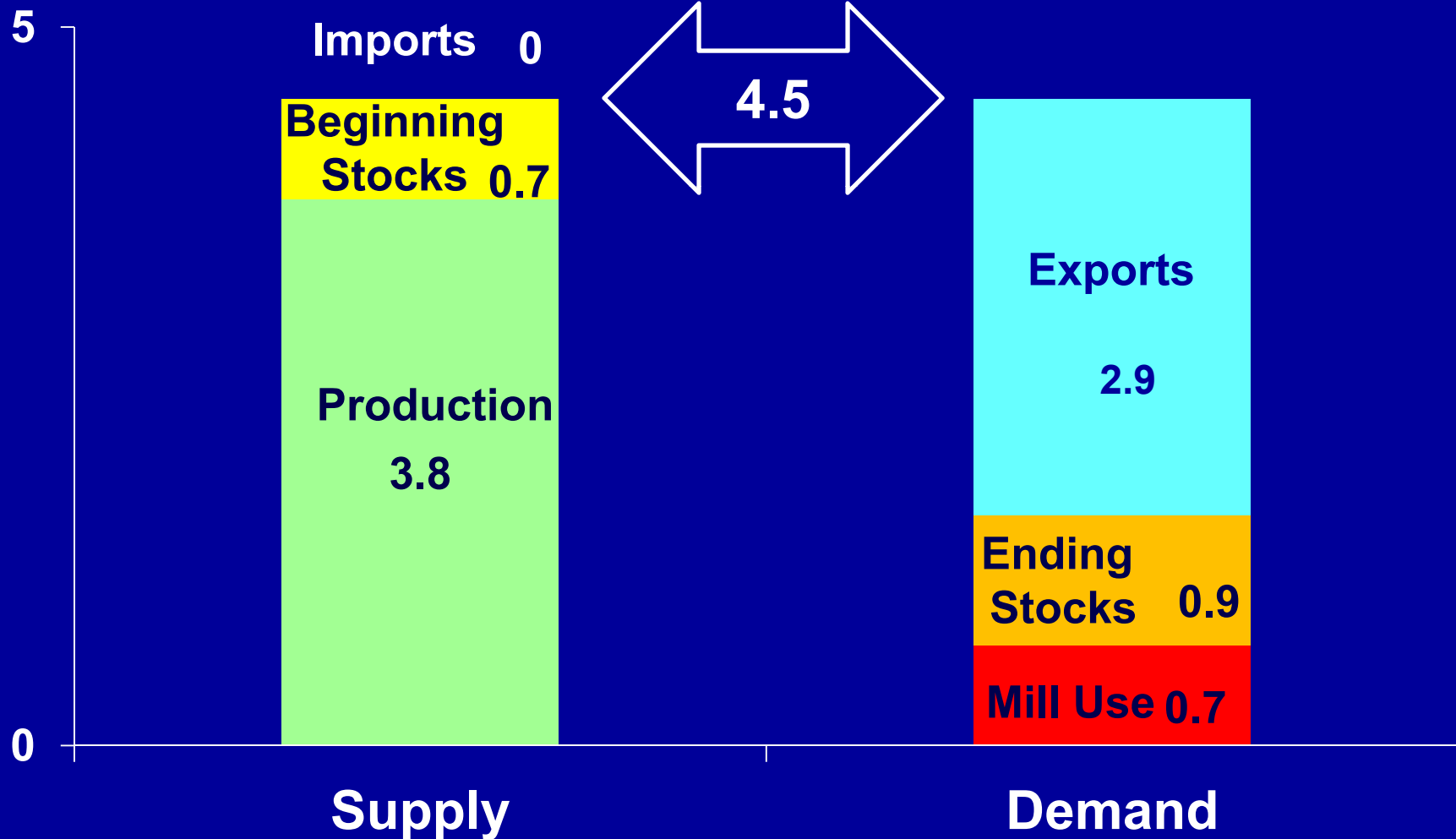
Million tons



Cotton Fundamentals 2012/13

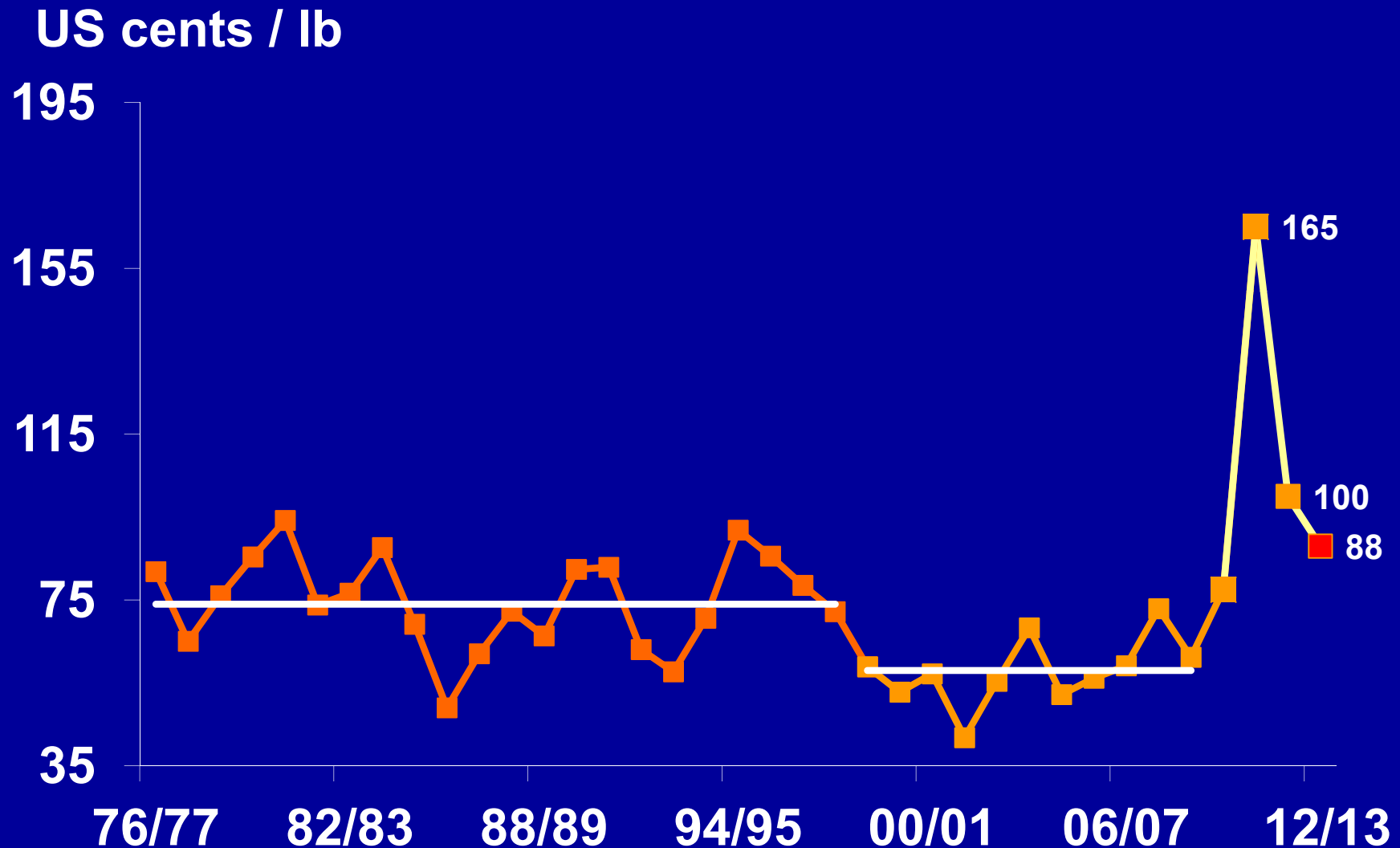
USA

Million tons



Season-Average A Index

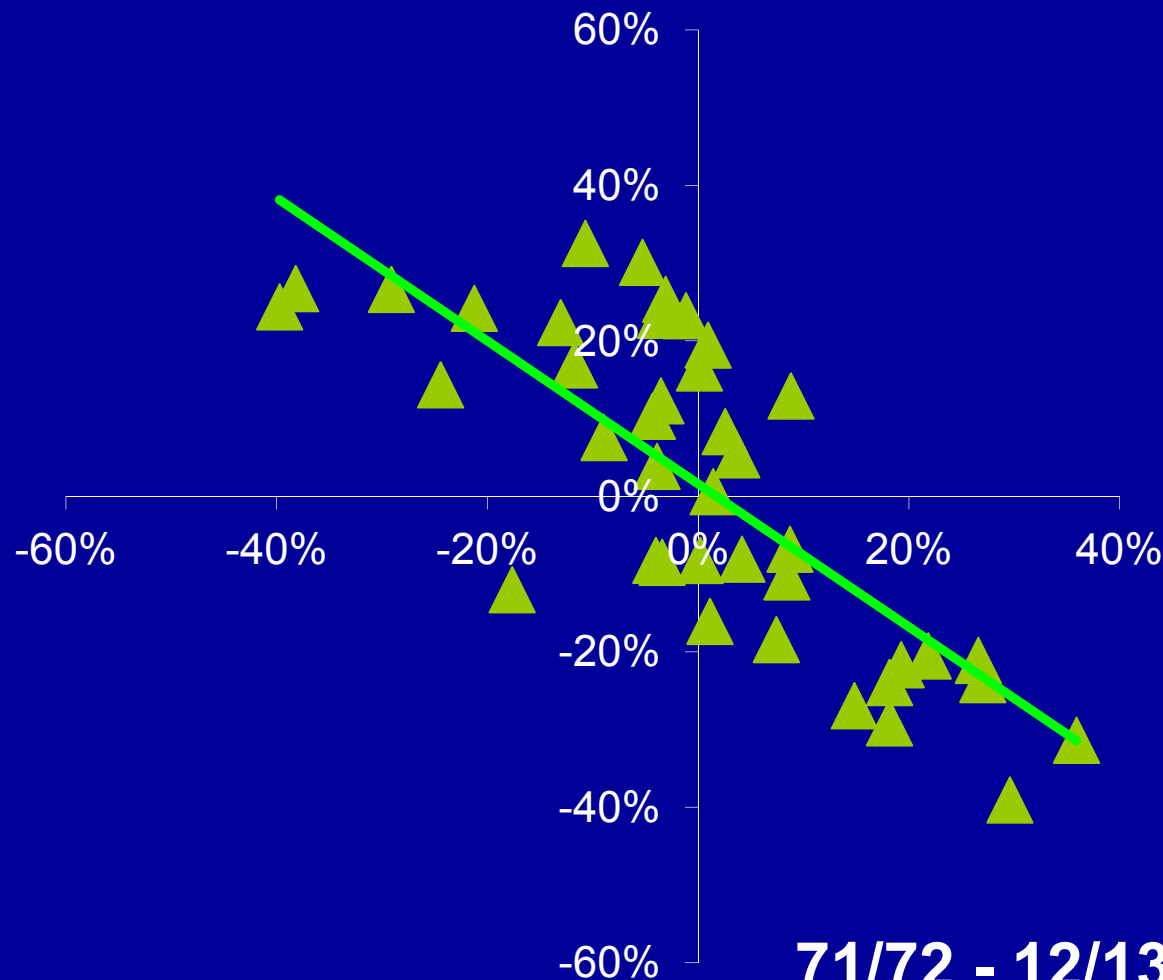
(source: Cotlook Ltd.)



A Index and Stock-to-Mill Use Ratio in World Less-China

% change in Cotlook A Index

$$y = -0.92x + 0.0159$$
$$R^2 = 0.6027$$



% change in SMU in
World-less-China

71/72 - 12/13 (exl. 73/74, 10/11)

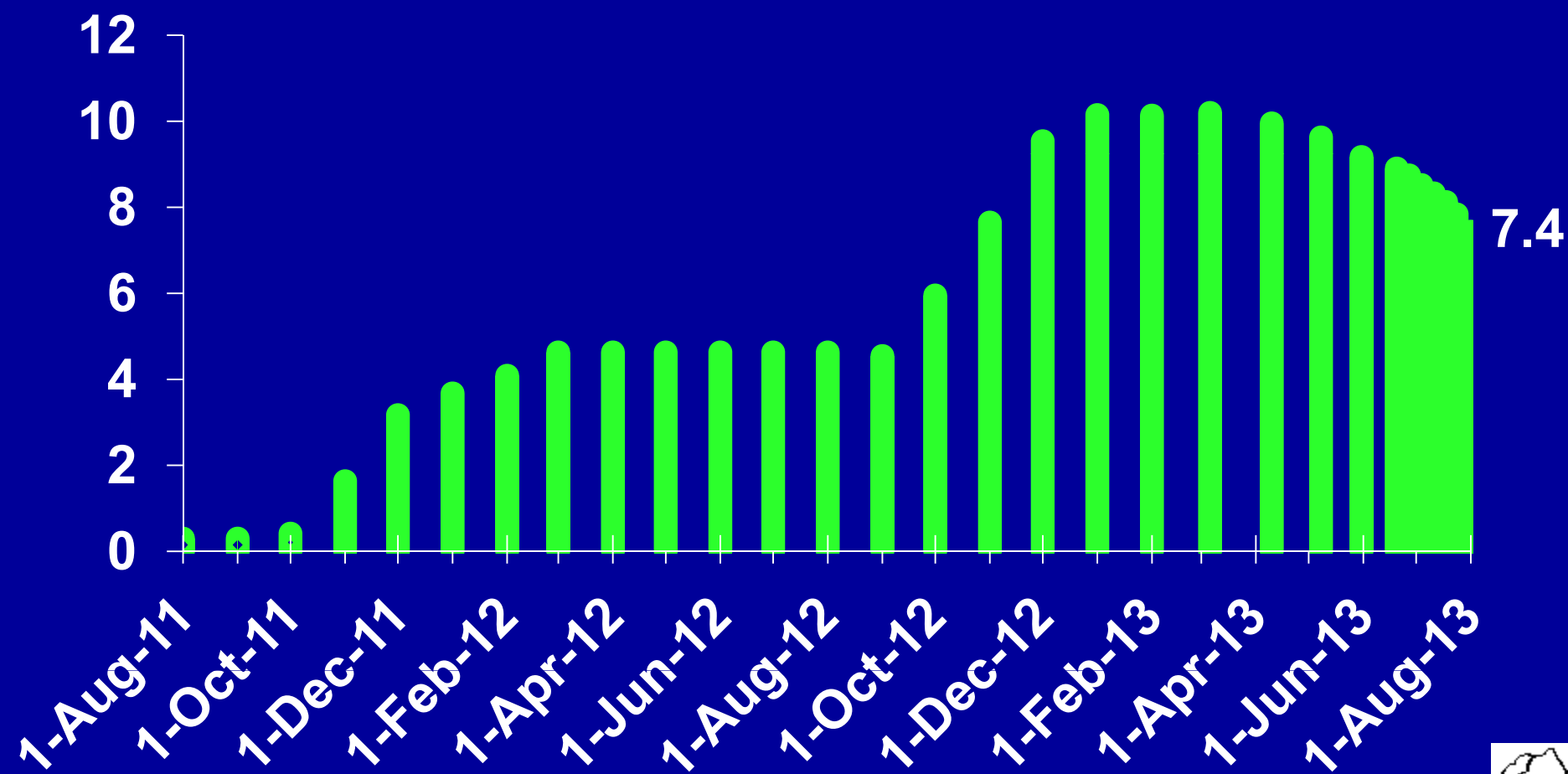


Prices in 2012/13 & 2013/14

- **Dependent on Chinese policy:**
Support price yuan 20,400/ton
- **China = buyer of last resort**
- **How much stocks will the CNCRC buy/liquidate?**

Estimated Size of China National Reserve

Million tons



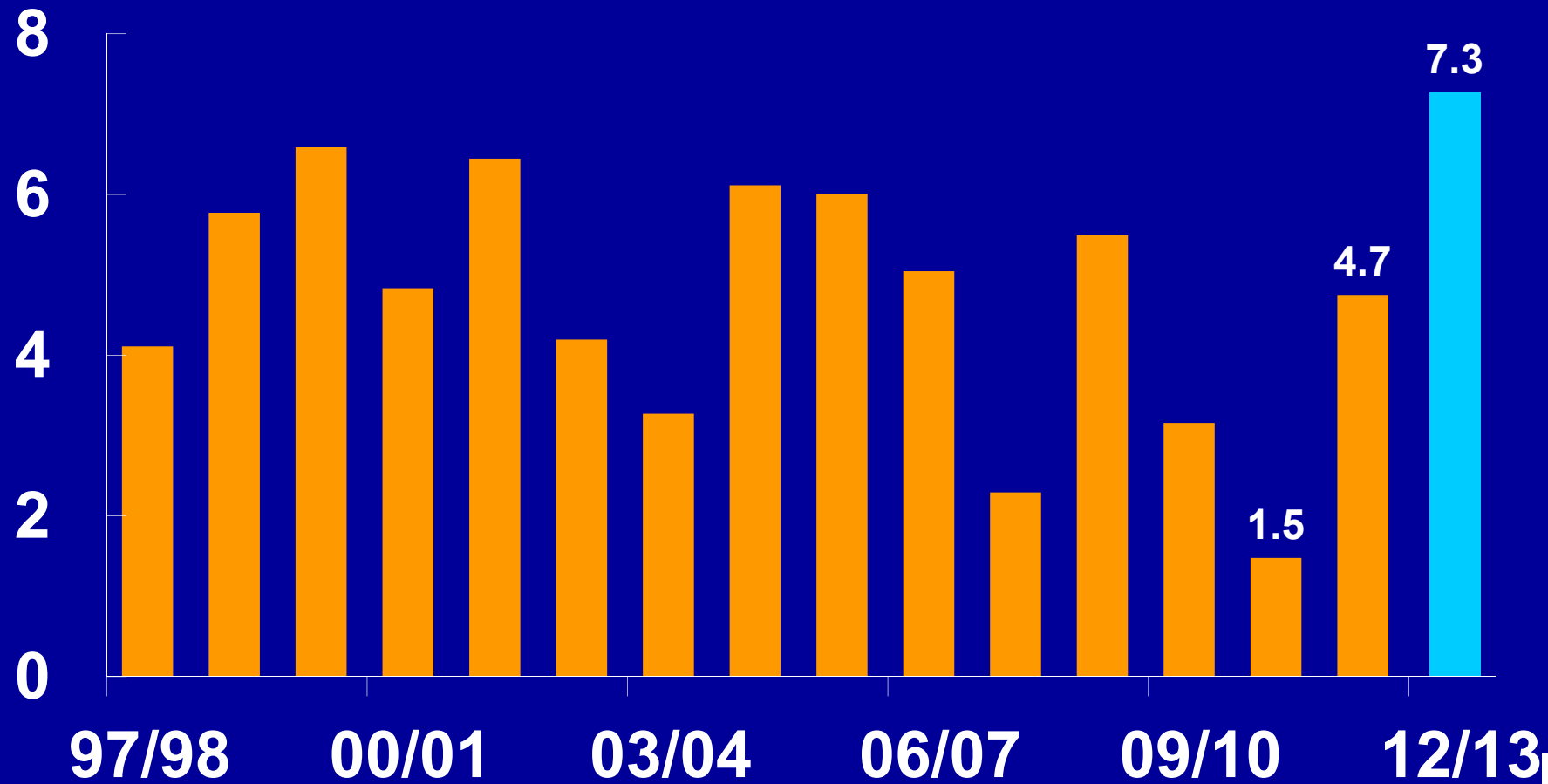
Direct Assistance to Cotton Production

- Direct support to production
- Border protection
- Crop insurance subsidies
- Minimum support price mechanisms
- Input subsidies
- Transportation subsidies



DIRECT ASSISTANCE TO COTTON

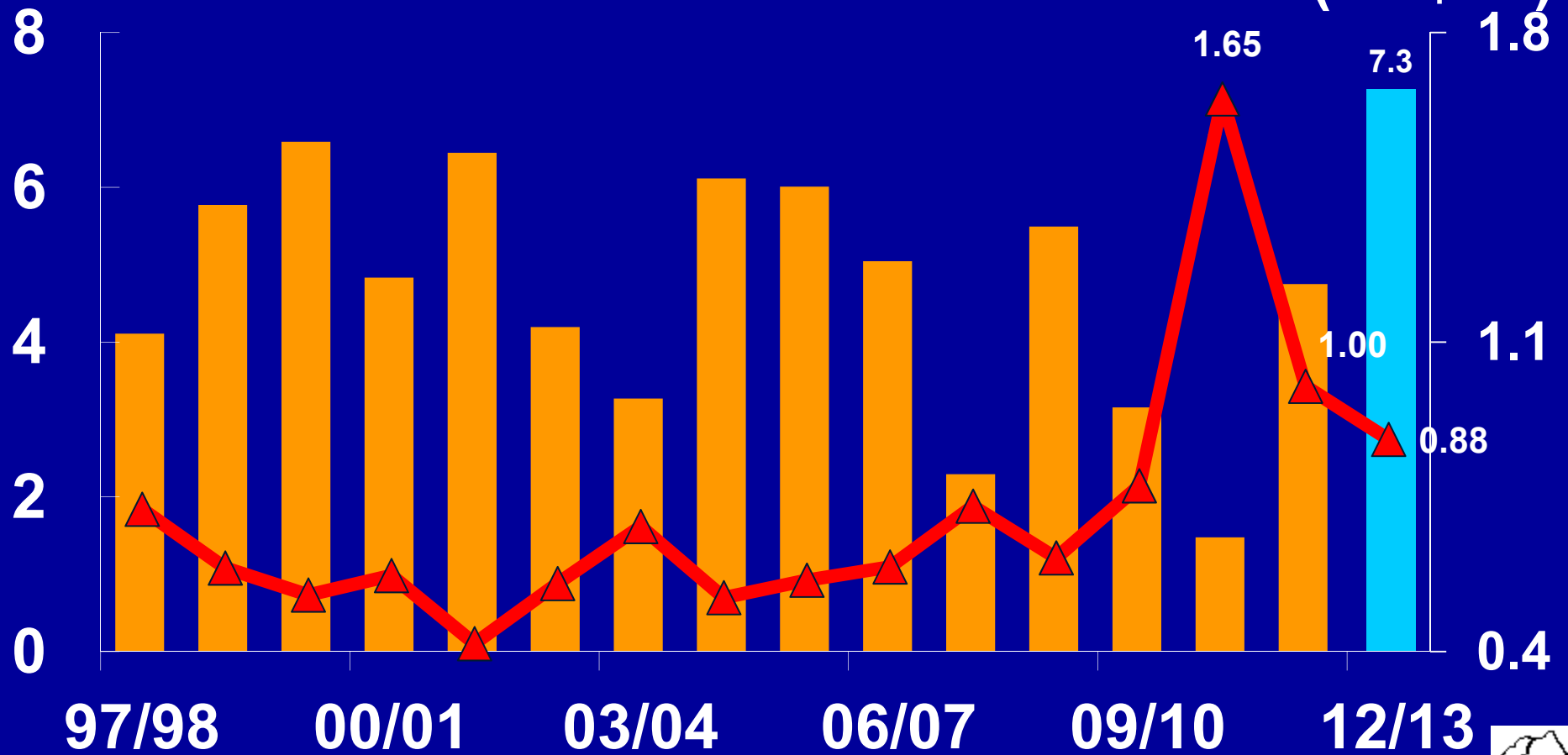
Billion US\$



DIRECT ASSISTANCE TO COTTON AND PRICES

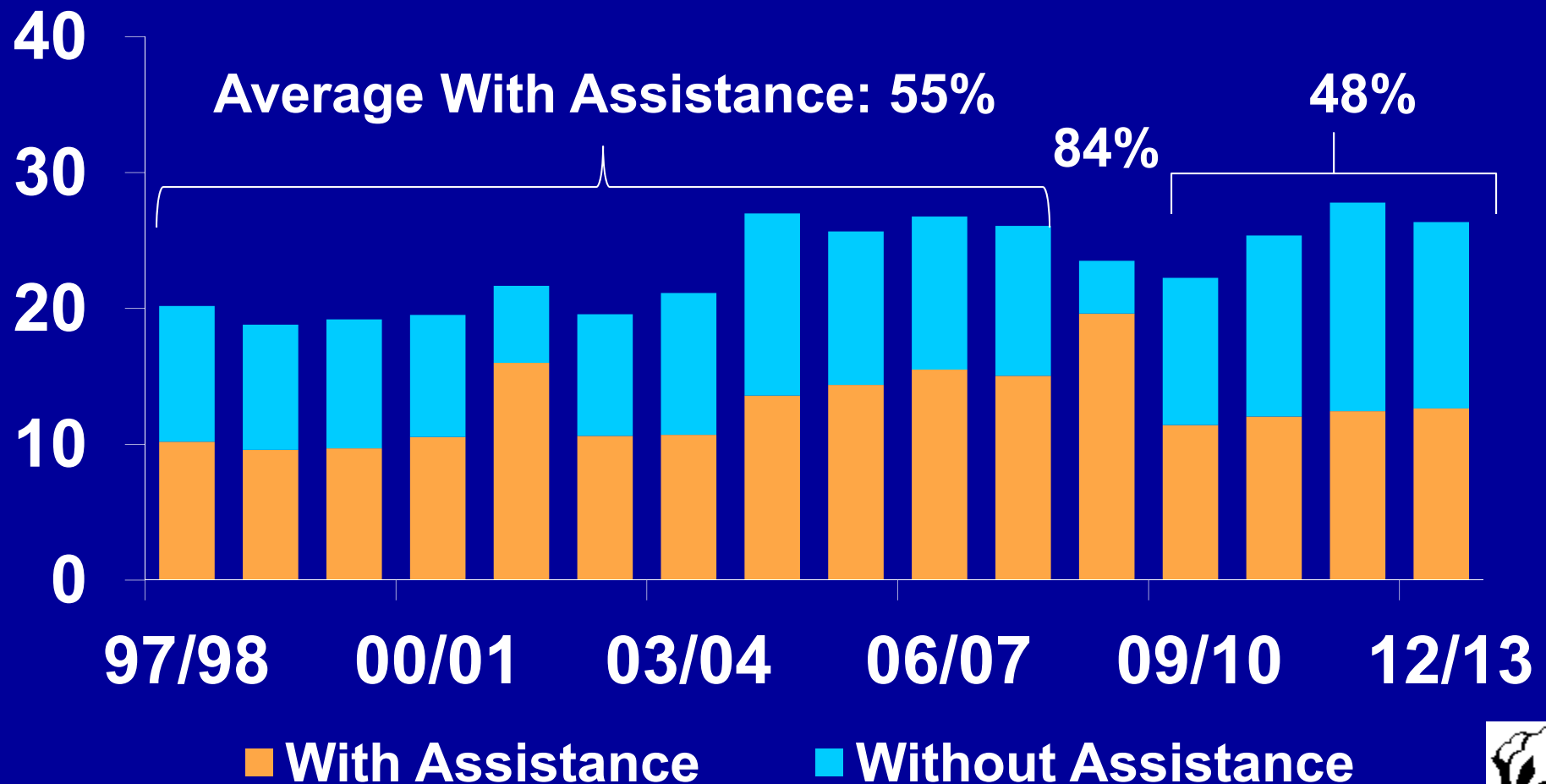
Billion US\$

A Index (US\$/lb)



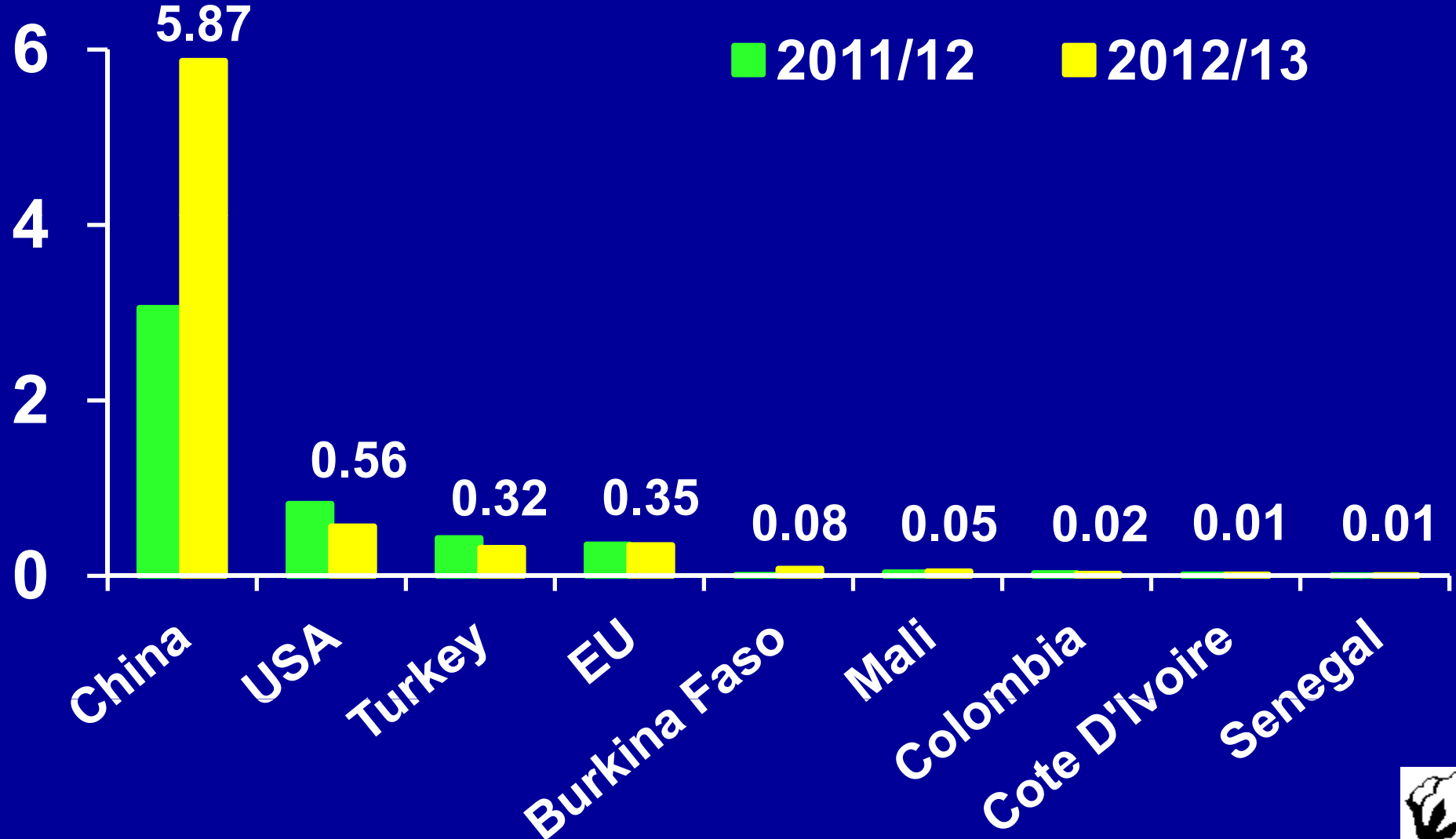
WORLD PRODUCTION UNDER DIRECT ASSISTANCE

Million Tons



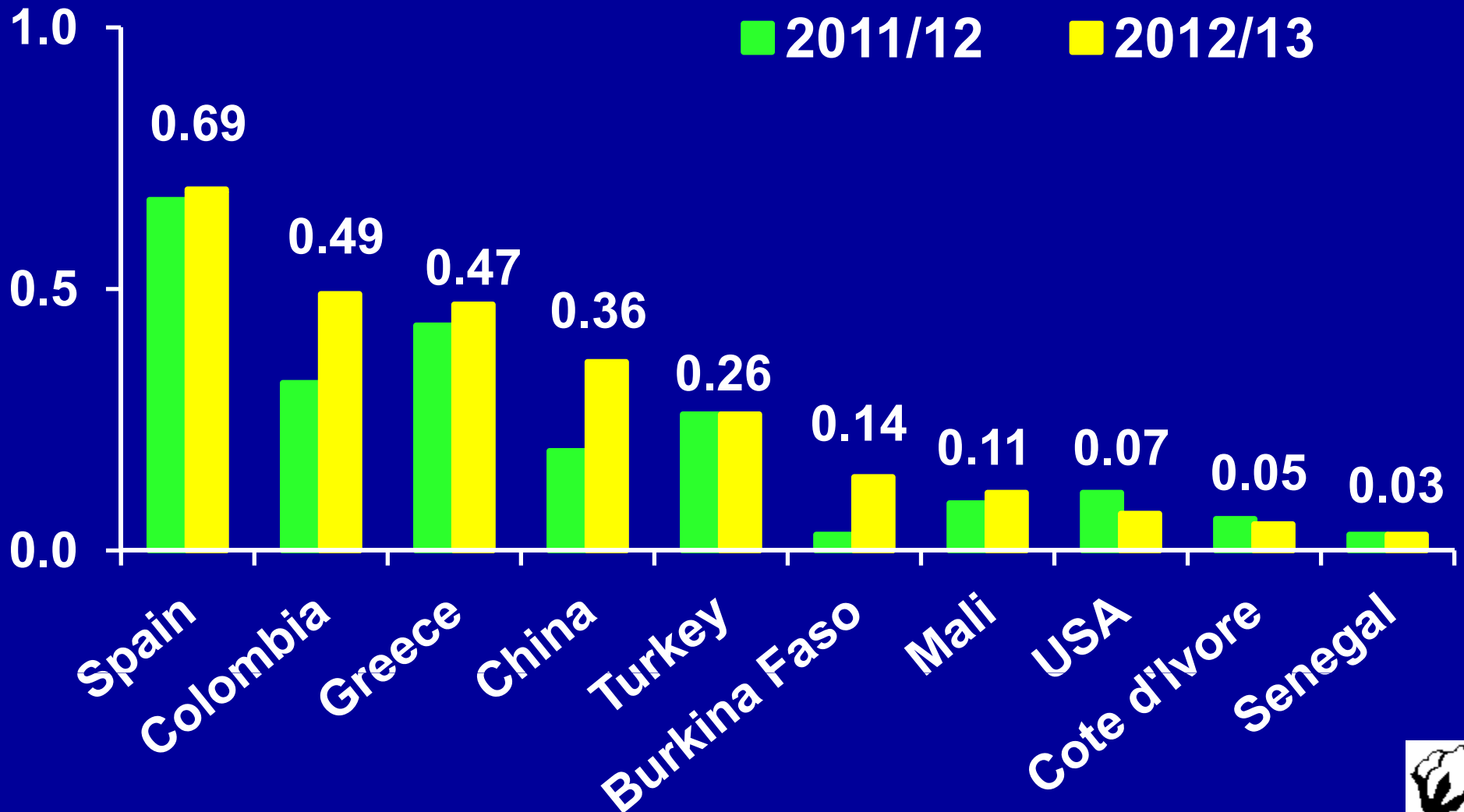
DIRECT ASSISTANCE TO COTTON

Billion US\$



DIRECT ASSISTANCE TO COTTON

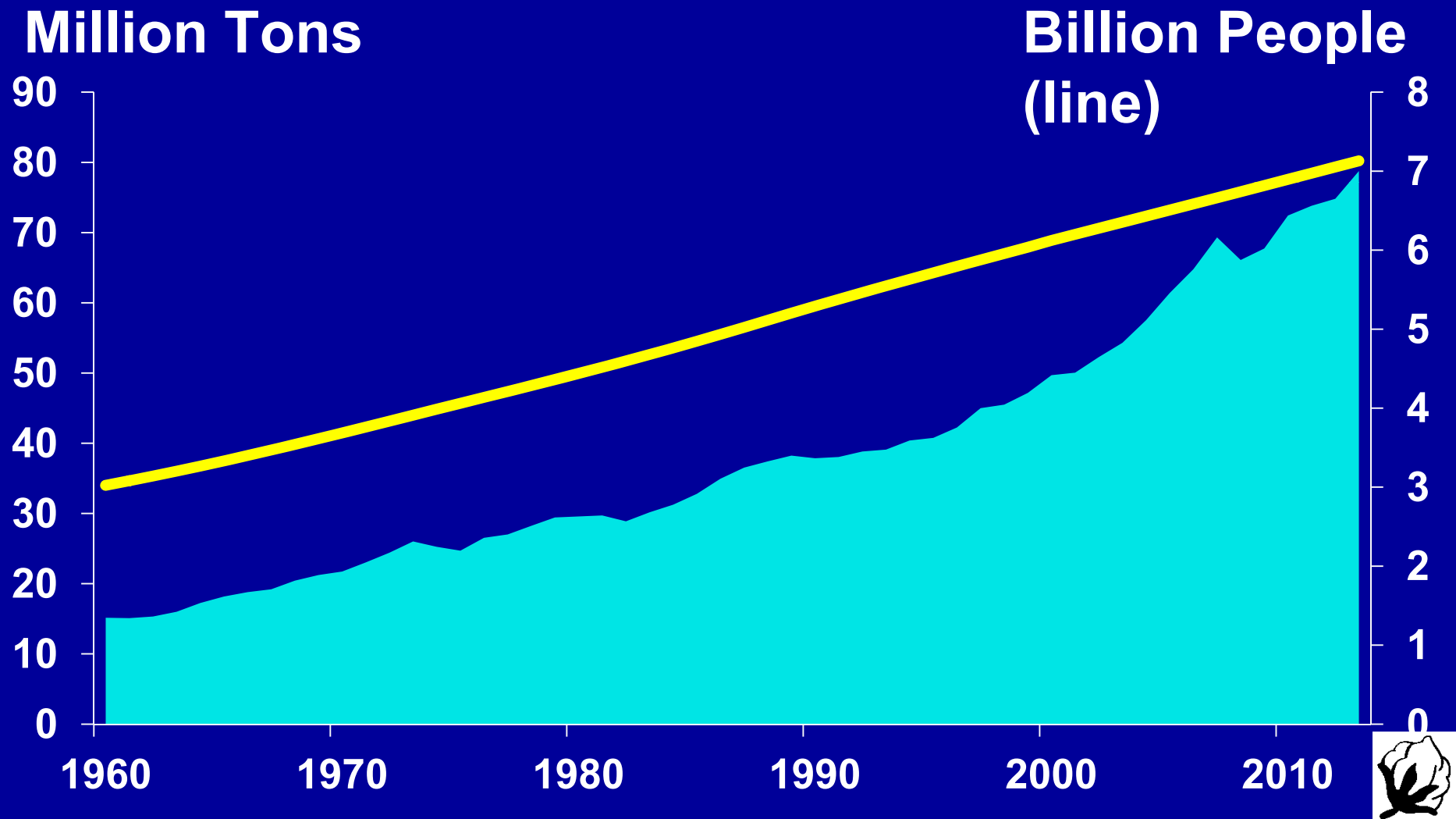
US\$/lb



End-Use Consumption

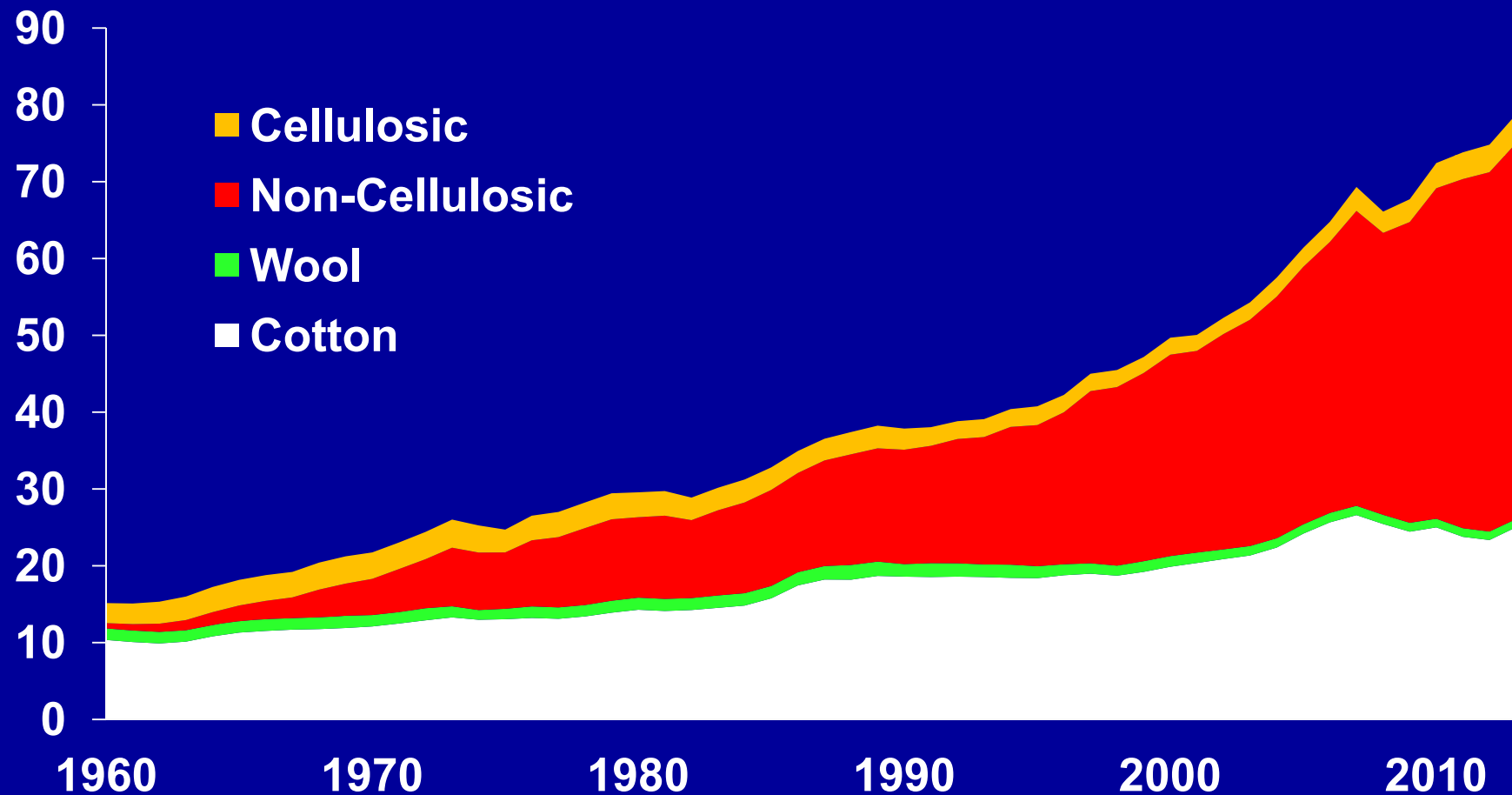
- Determinants
- Inter-fiber competition

World Consumption of Textile Fibers and Population

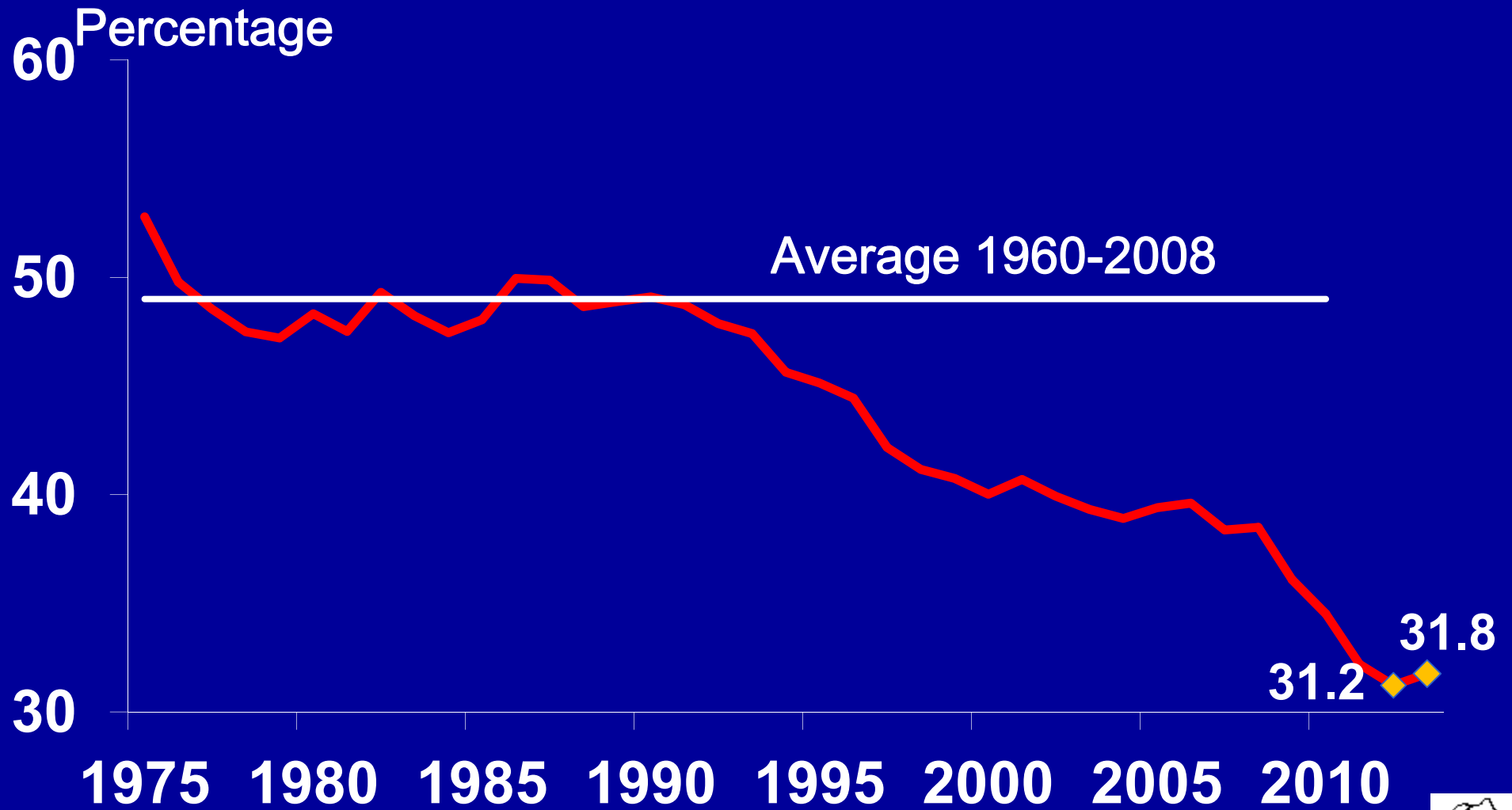


World Consumption of Textile Fibers

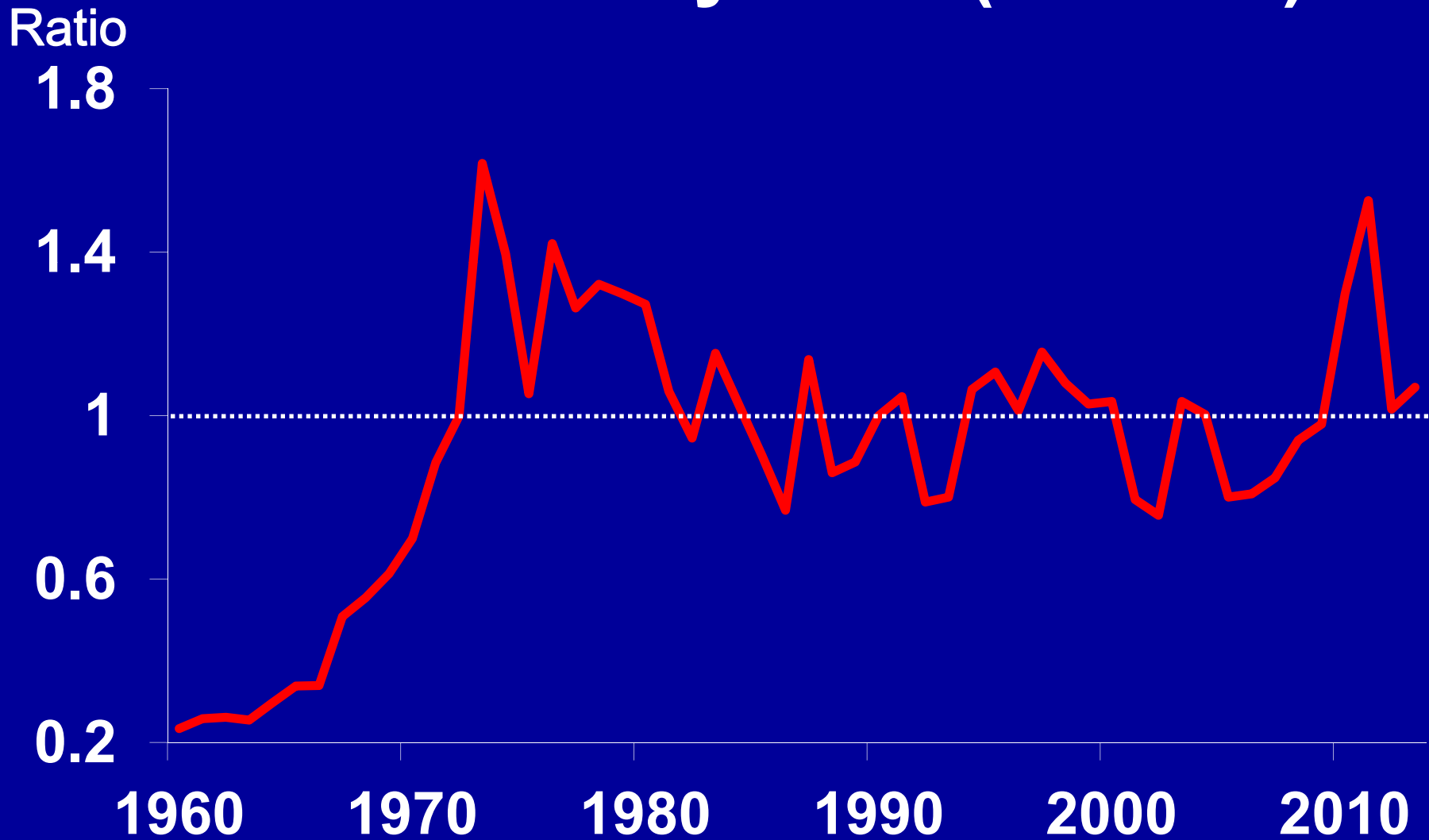
Million Tons



Market Share of Cotton in World Textile Fibers Consumption



Relative Price of Cotton to Polyester (Annual)



Relative Price of Cotton to Polyester

Ratio
1.6

1

0.4

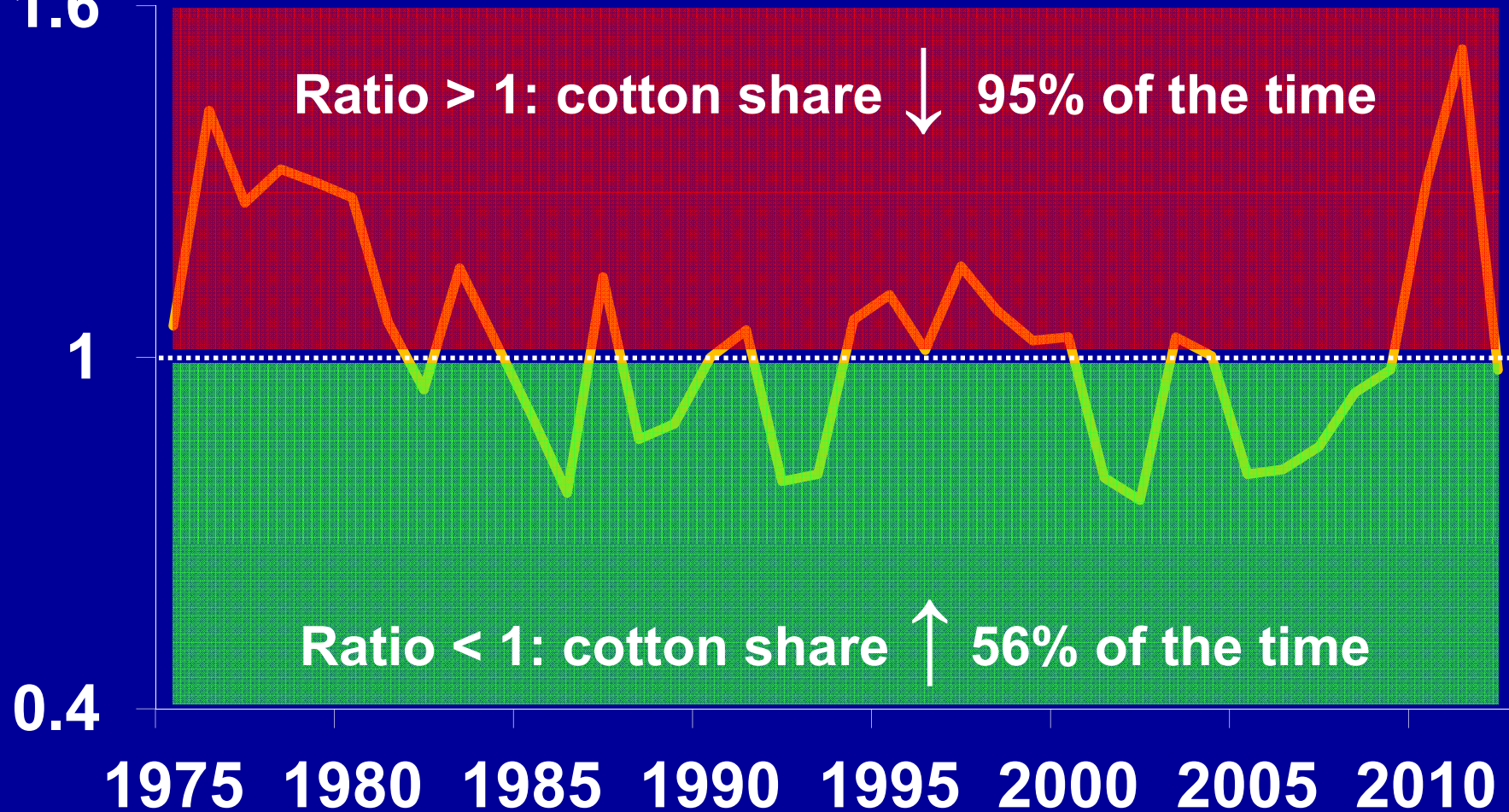
Ratio > 1: cotton share ↓ 95% of the time

1975 1980 1985 1990 1995 2000 2005 2010



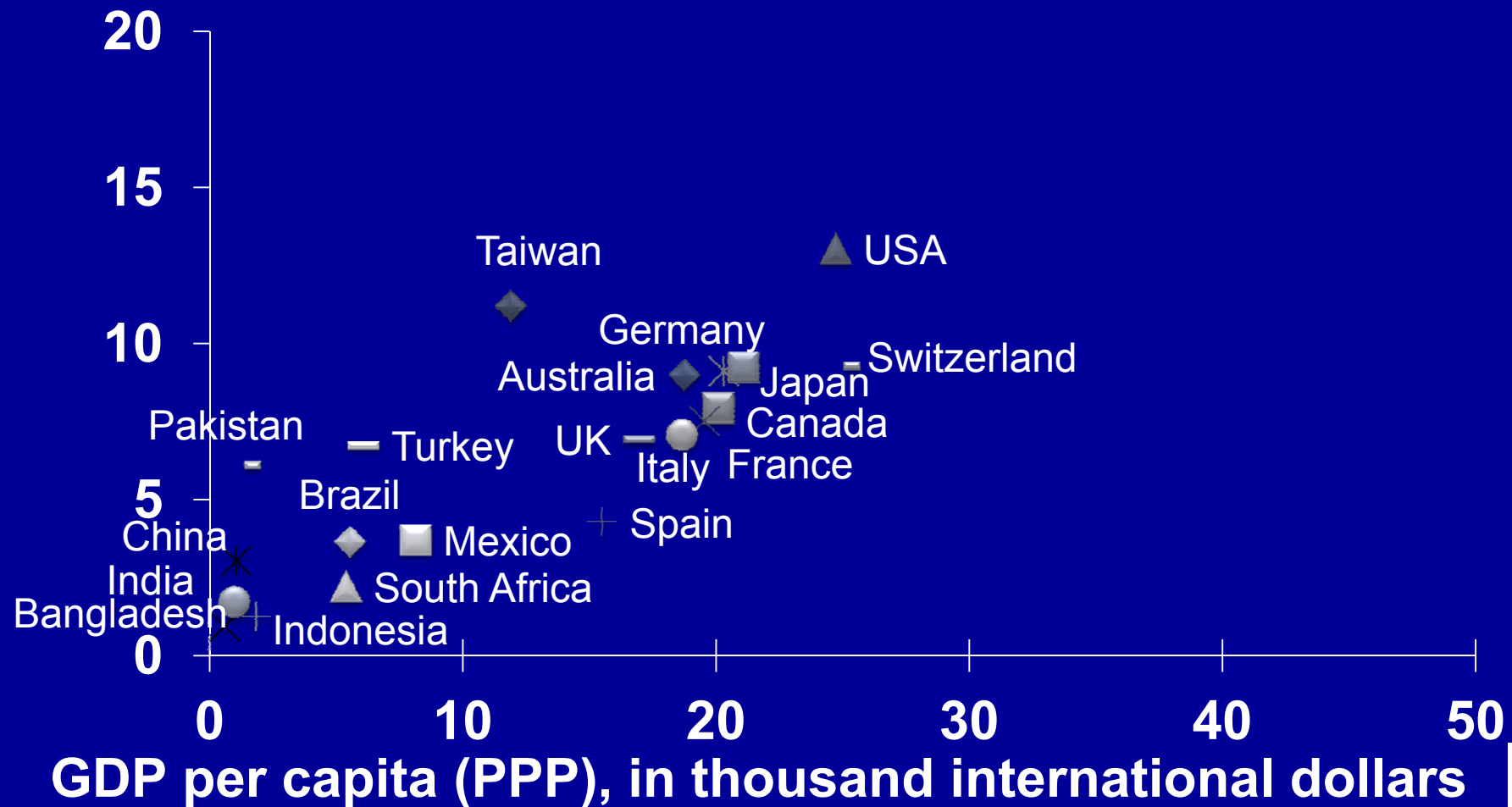
Relative Price of Cotton to Polyester

Ratio
1.6



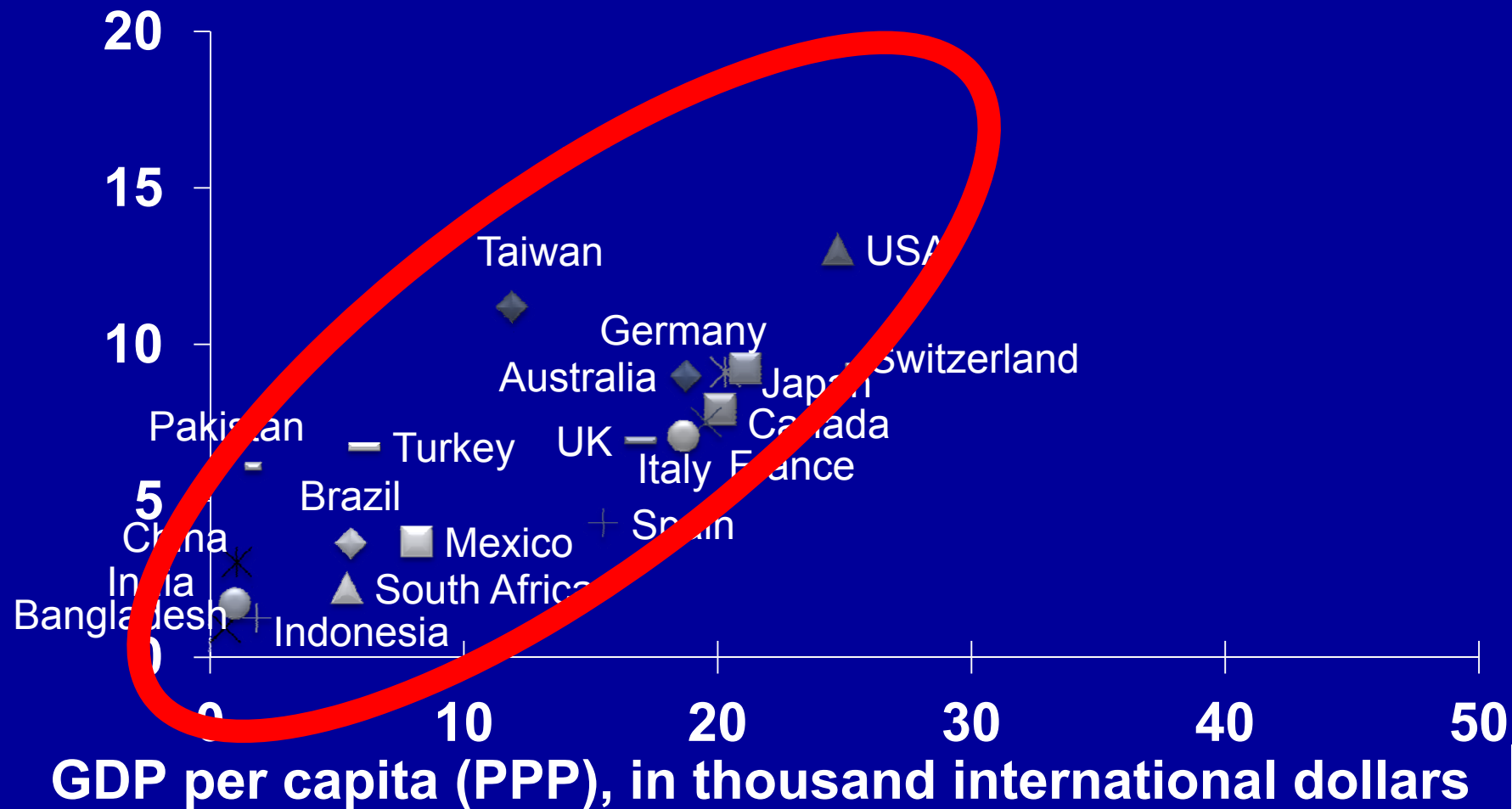
Cotton Consumption per Capita vs. GDP per Capita 1992

Cotton Consumption per Capita, in kgs



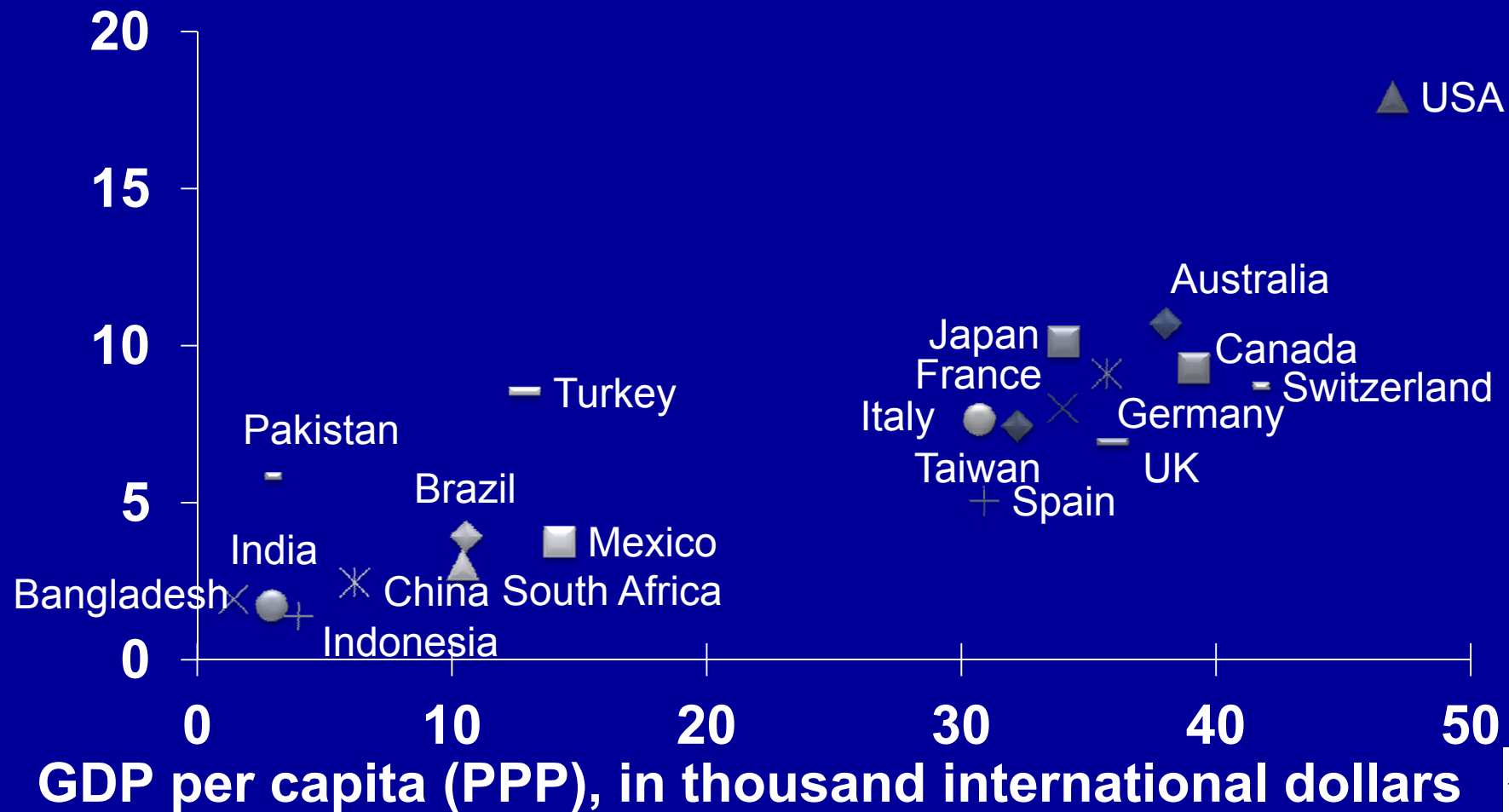
Cotton Consumption per Capita vs. GDP per Capita 1992

Cotton Consumption per Capita, in kgs



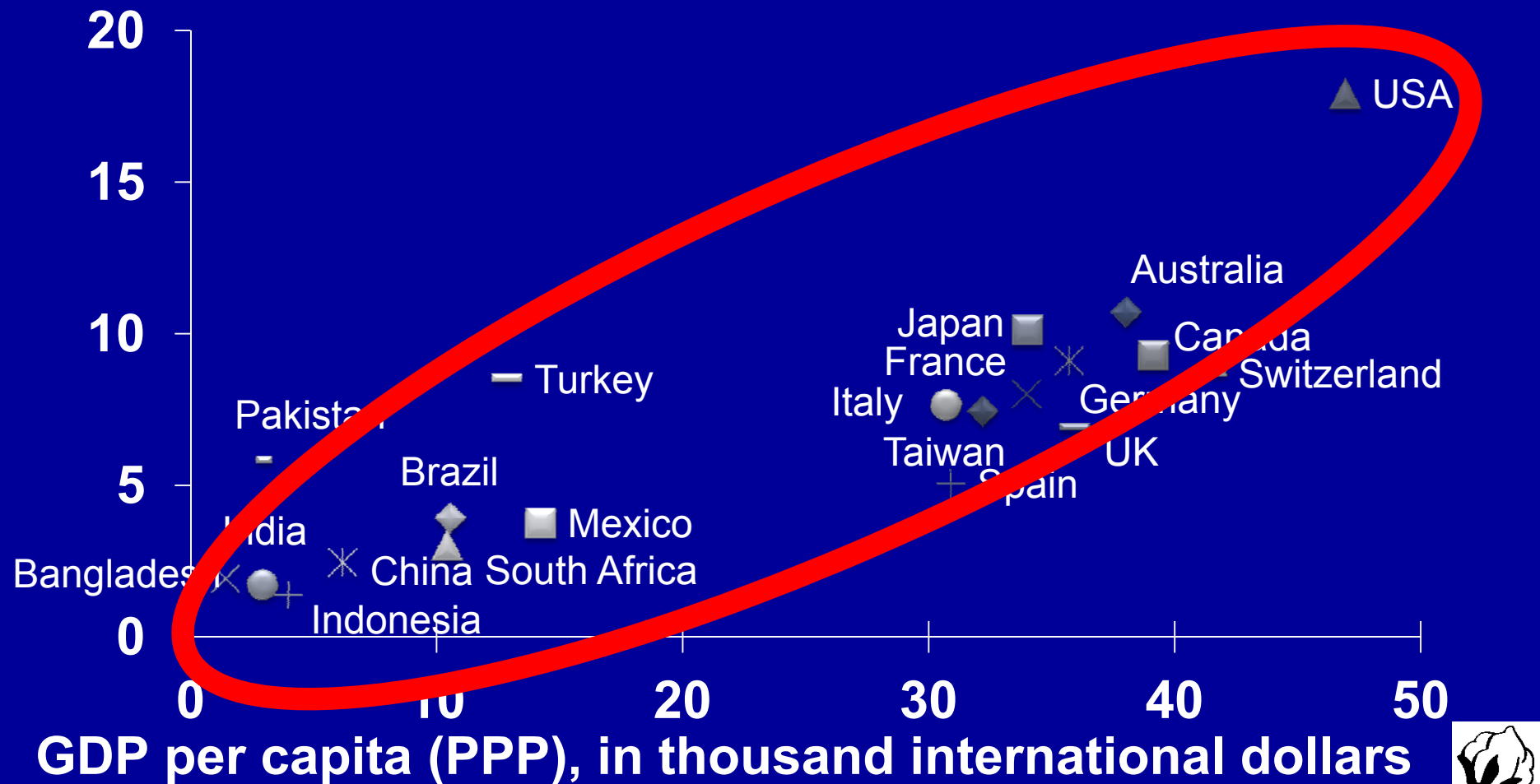
Cotton Consumption per Capita vs. GDP per Capita 2008

Cotton Consumption per Capita, in kgs



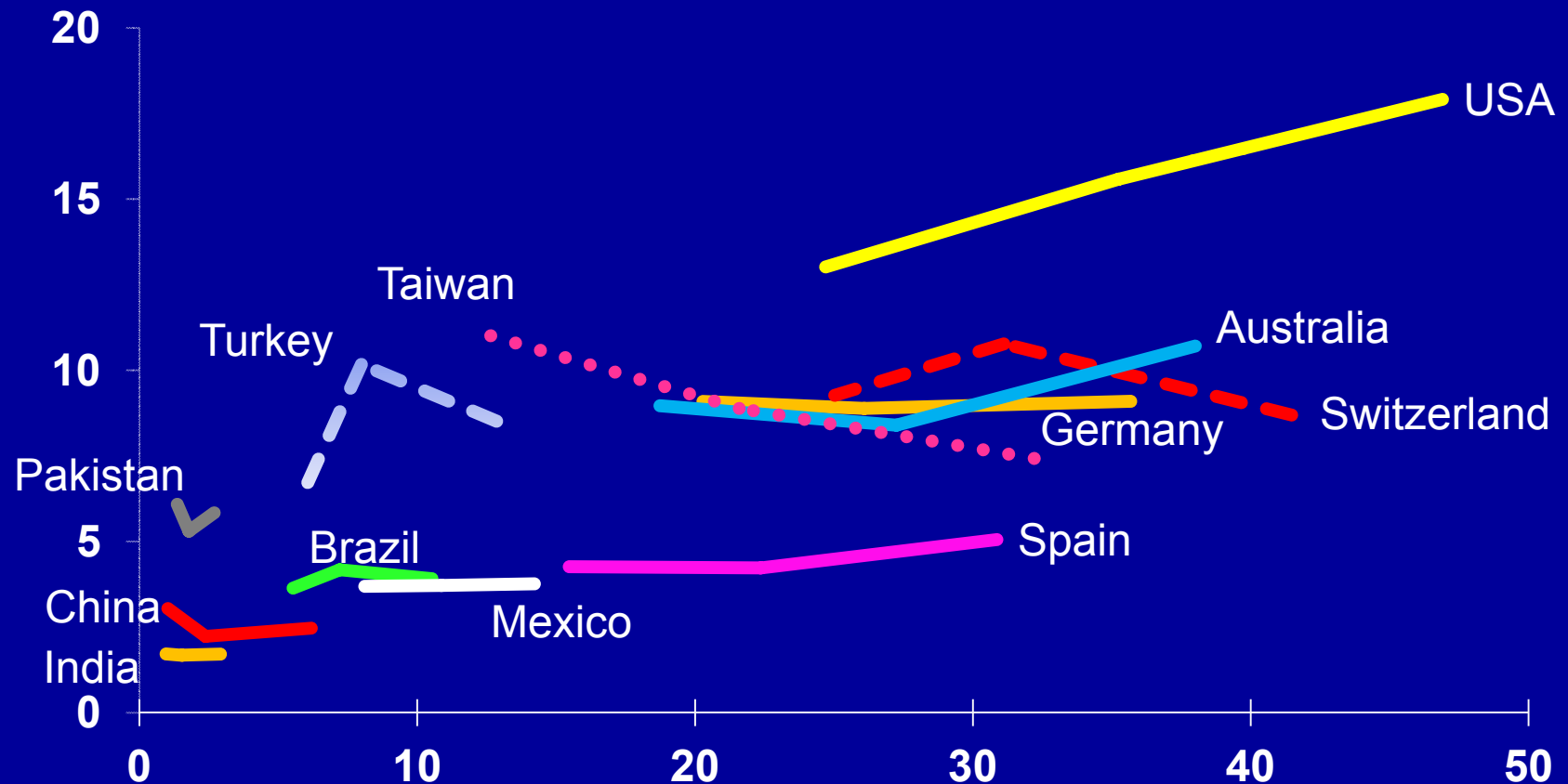
Cotton Consumption per Capita vs. GDP per Capita 2008

Cotton Consumption per Capita, in kgs



Cotton Consumption per Capita vs. GDP per Capita 1992, 2000, 2008

Cotton Consumption per Capita, in kgs

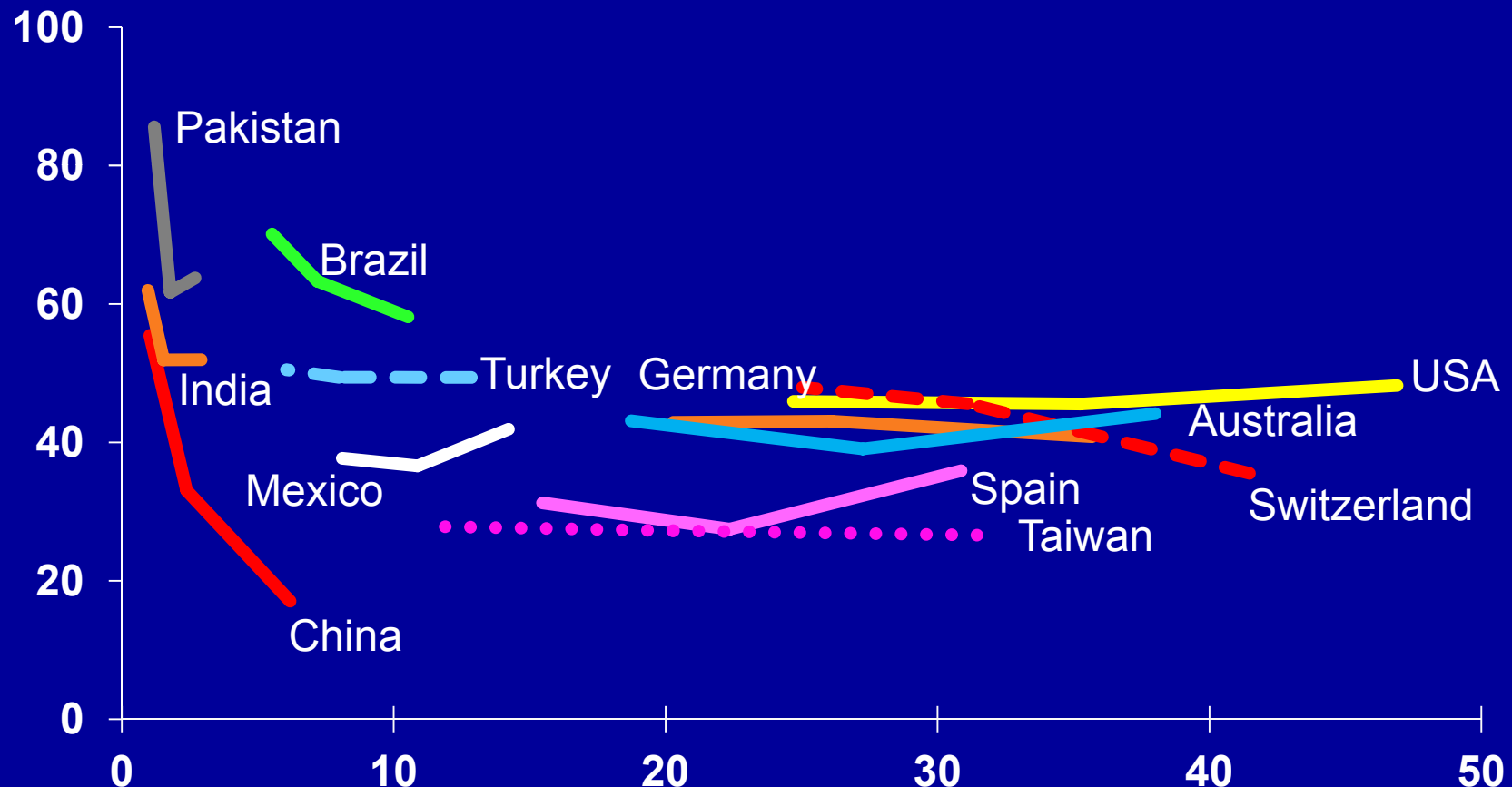


GDP per capita (PPP), in thousand international dollars



Market Share of Cotton vs. GDP per Capita 1992, 2000, 2008

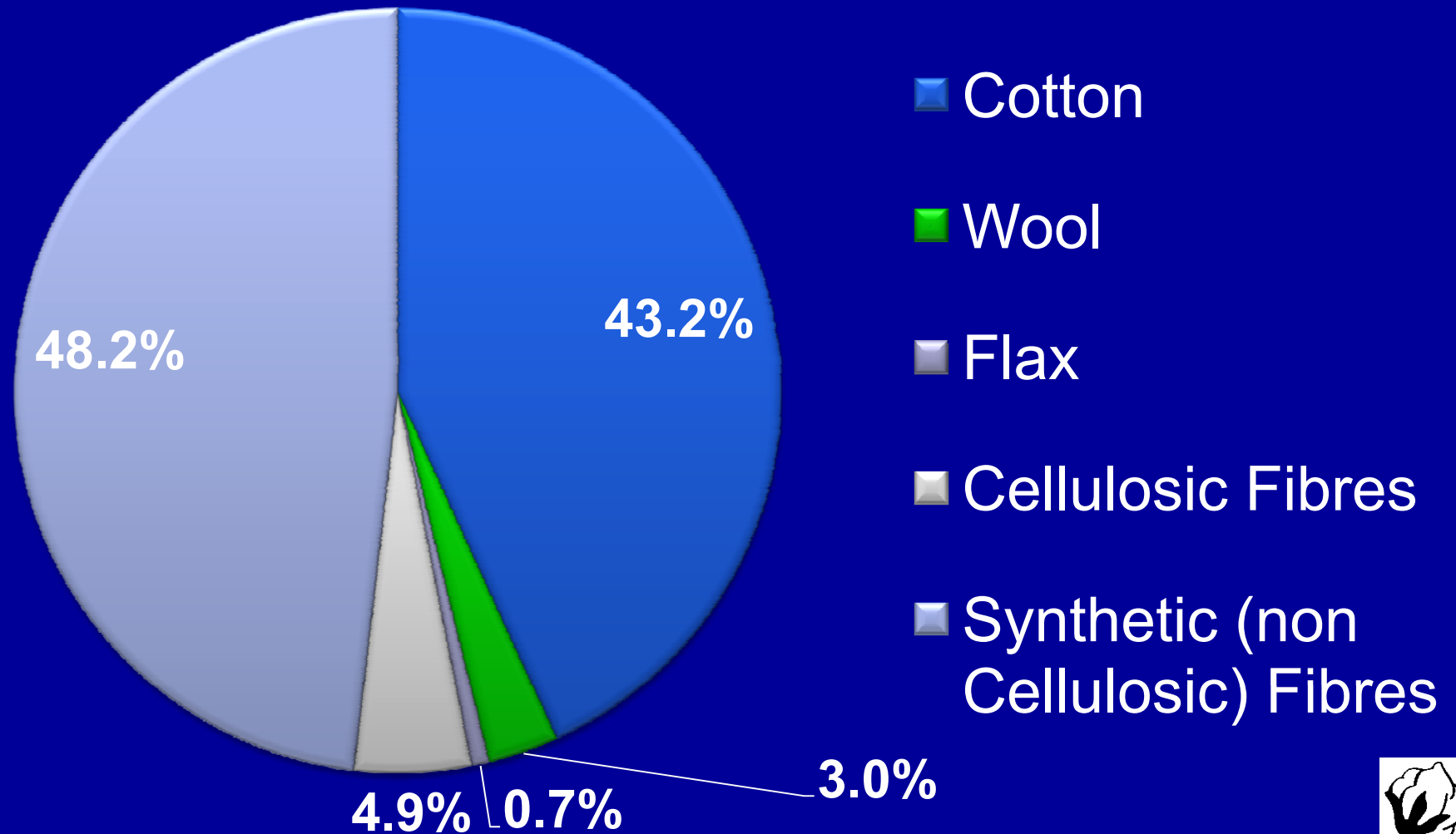
Market Share of Cotton (%)



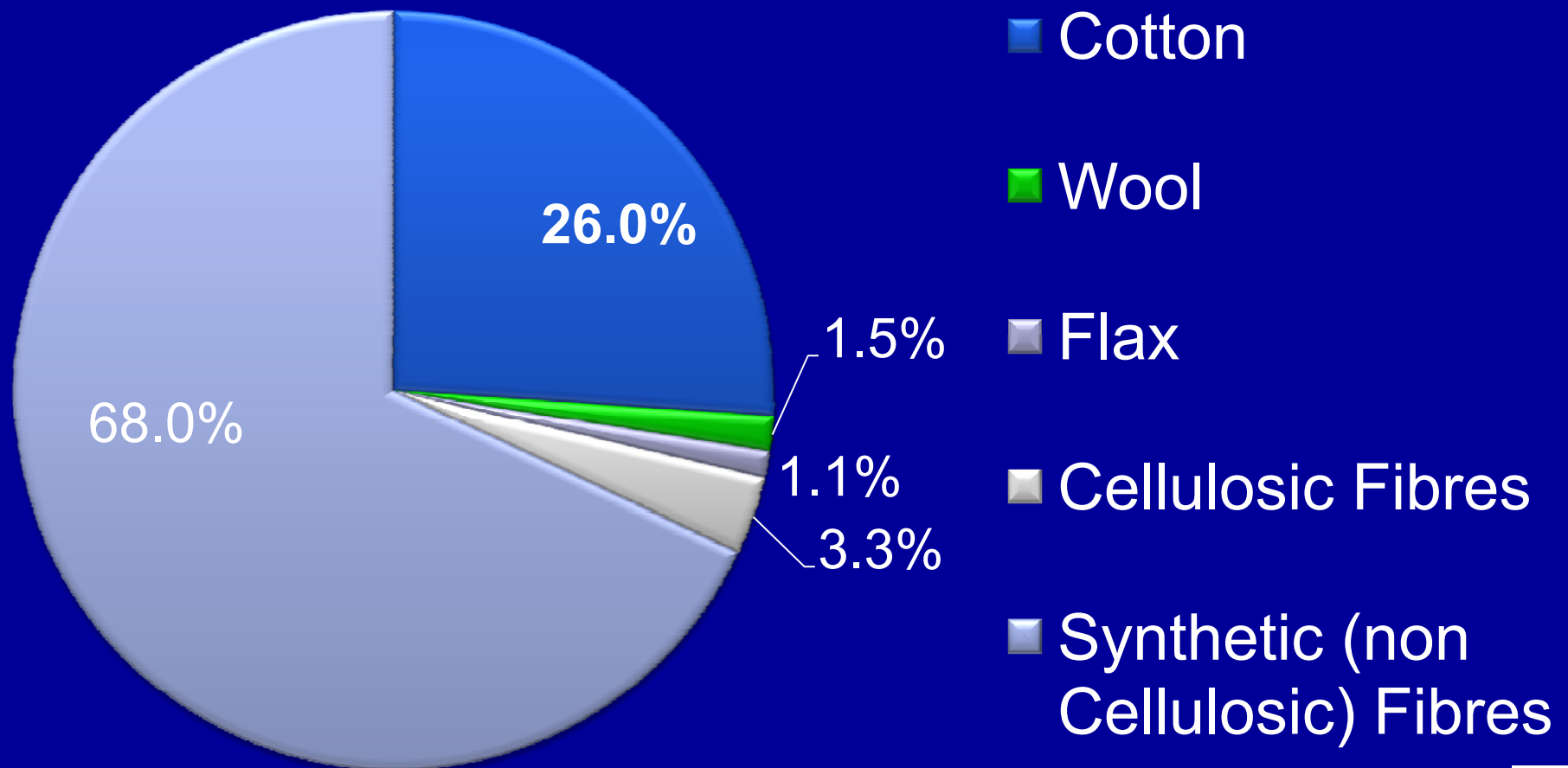
GDP per capita (PPP), in thousand international dollars



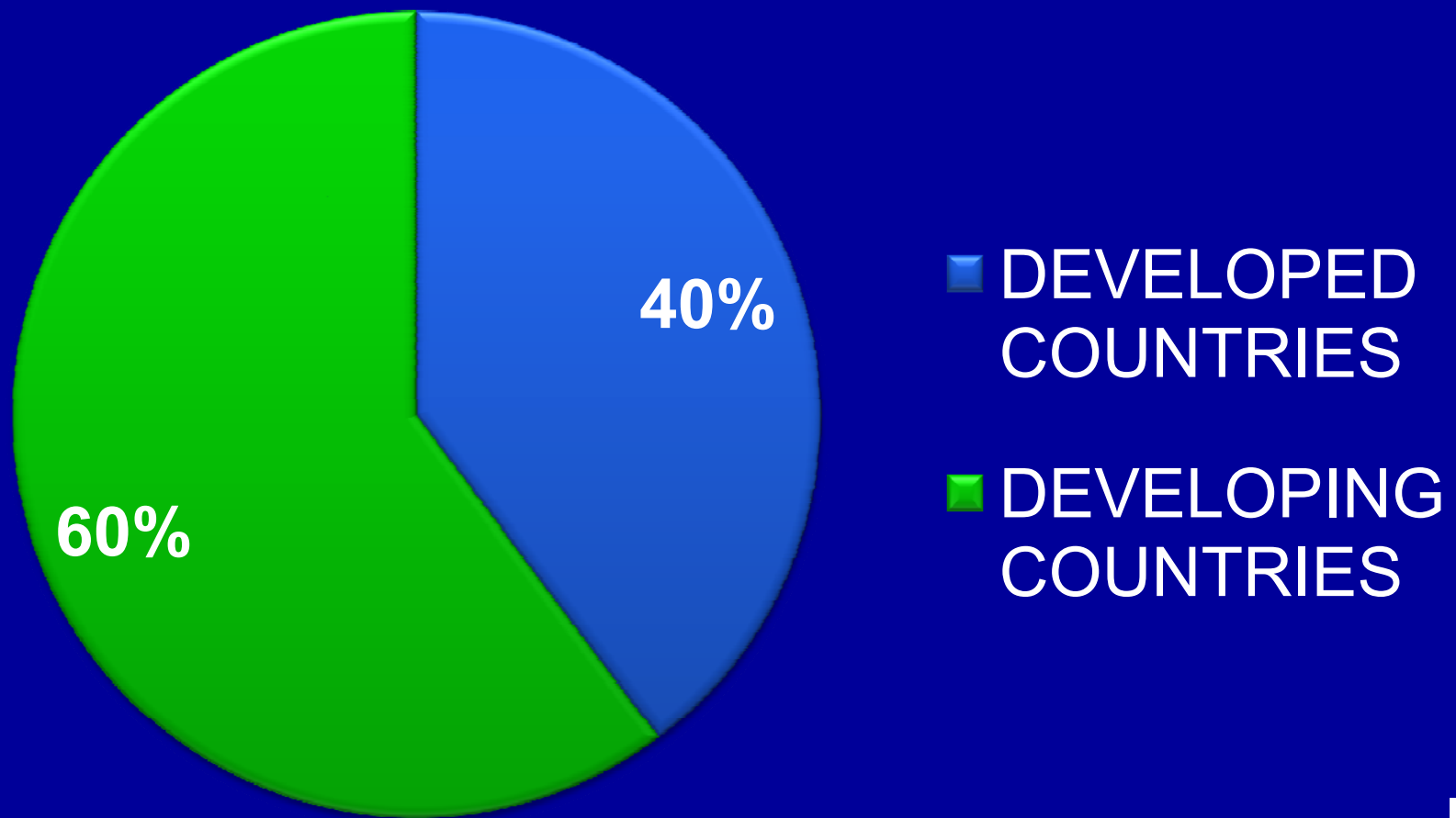
Apparel fibre consumption in developed countries, by fiber type, 2010



Apparel fibre consumption in developing countries, by fibre type, 2010



Shares of developed and developing countries in total world apparel fiber consumption, 2010



Cotton Consumption

↑ population, ↑ cotton consumption

↑ income, cotton consumption per capita ↑↓



Cotton Consumption

Low income countries:

↑ income, ↓ market share of cotton

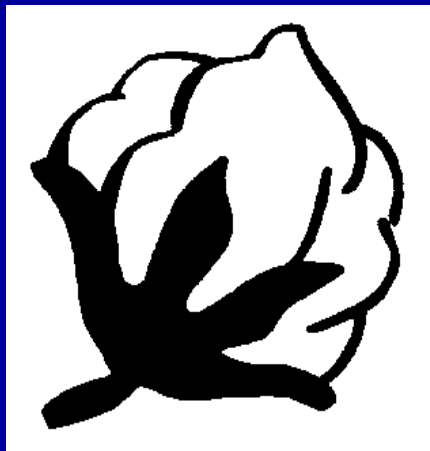
High income countries:

↑ income, market share of cotton stable at
around 40%

Outlook:

↑ cotton consumption
↓ market share of cotton

Structure of the World Cotton Market



Alejandro Plastina, PhD
Senior Economist



International Cotton Advisory Committee

Agricultural Economics Lecture Series
Dept. of Agricultural and Applied Economics
Texas Tech University
13 August 2013