

Presented by



# A Tour Through the Cotton Supply Chain

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## Mission

Improve the demand for and profitability of cotton  
through research and promotion







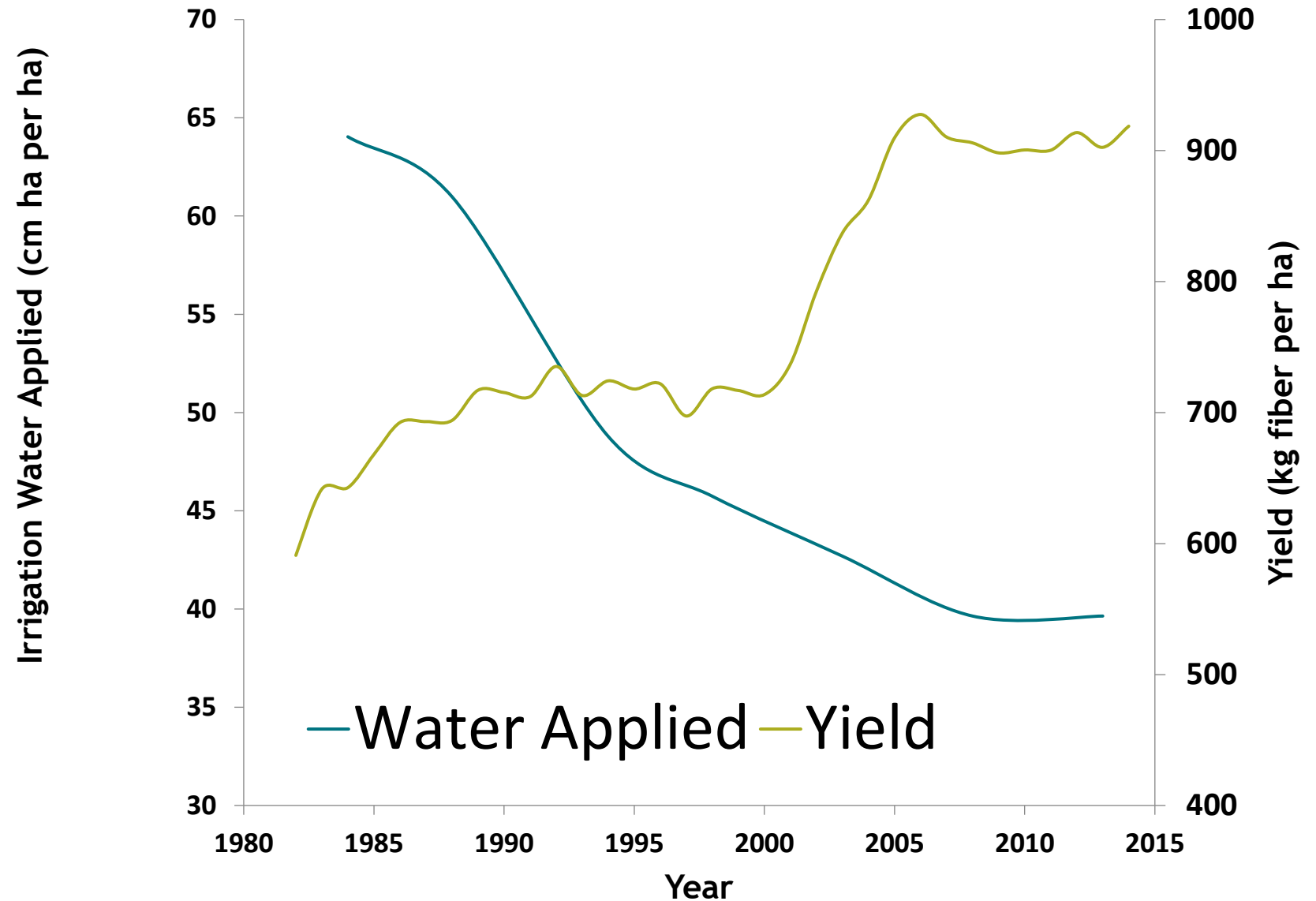
- Not-for-profit company
- Science-based organization
- Worldwide sharing of research and knowledge



# U.S. Water & Yield Trends

Decreased water  
use: **40%**

Increased yields:  
**50%**



Source: USDA Farm and Ranch Irrigation Surveys





## The Global Supply Chain for Cotton

Farm

Product

Consumers

**77** Countries  
Grow Cotton

**62** countries export cotton

**81** countries import cotton

Over **120** countries  
manufacture cotton products

Almost all consumers  
use textile products

# End Uses for Cotton Fiber

APPAREL

HOME  
TEXTILES

NONWOVENS





# Cotton Production

77 countries grow cotton

75% of world production from 5 countries

India

China

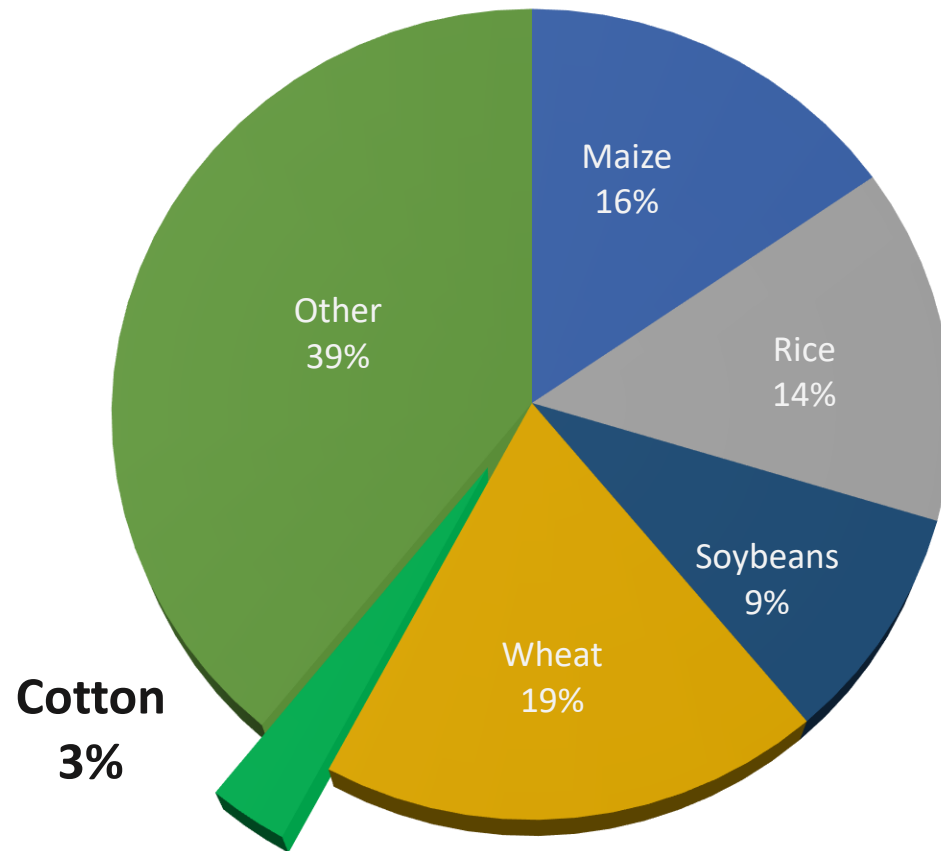
U.S.

Pakistan

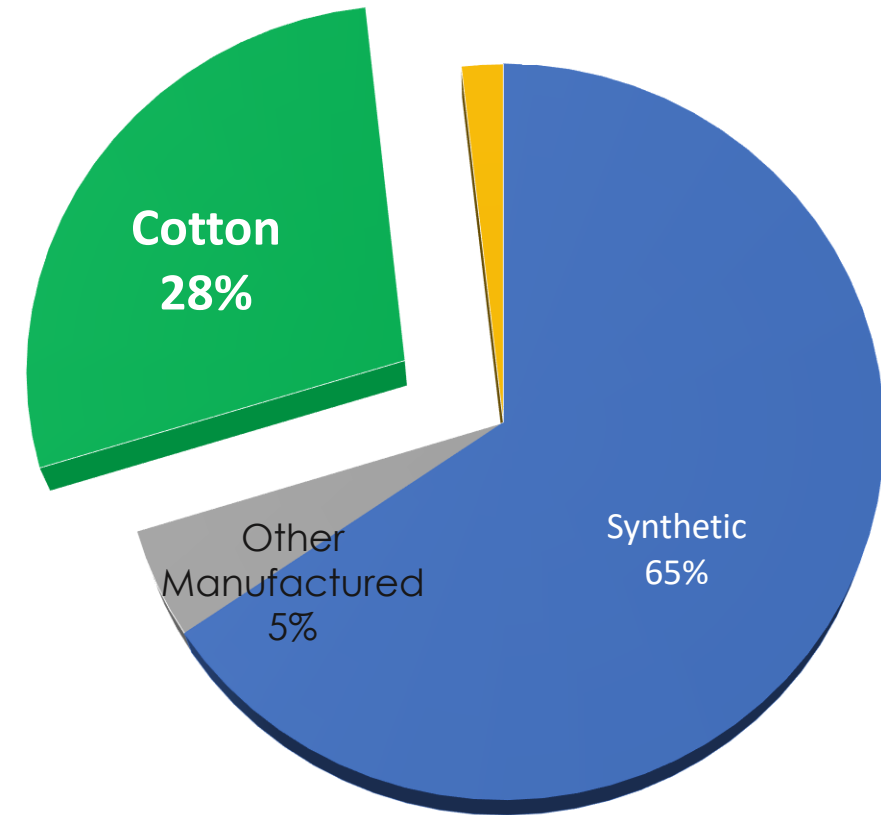
Brazil

# Cotton meets 28% of the world's textile needs from 3% of the agricultural land

## Percent of Global Cropland

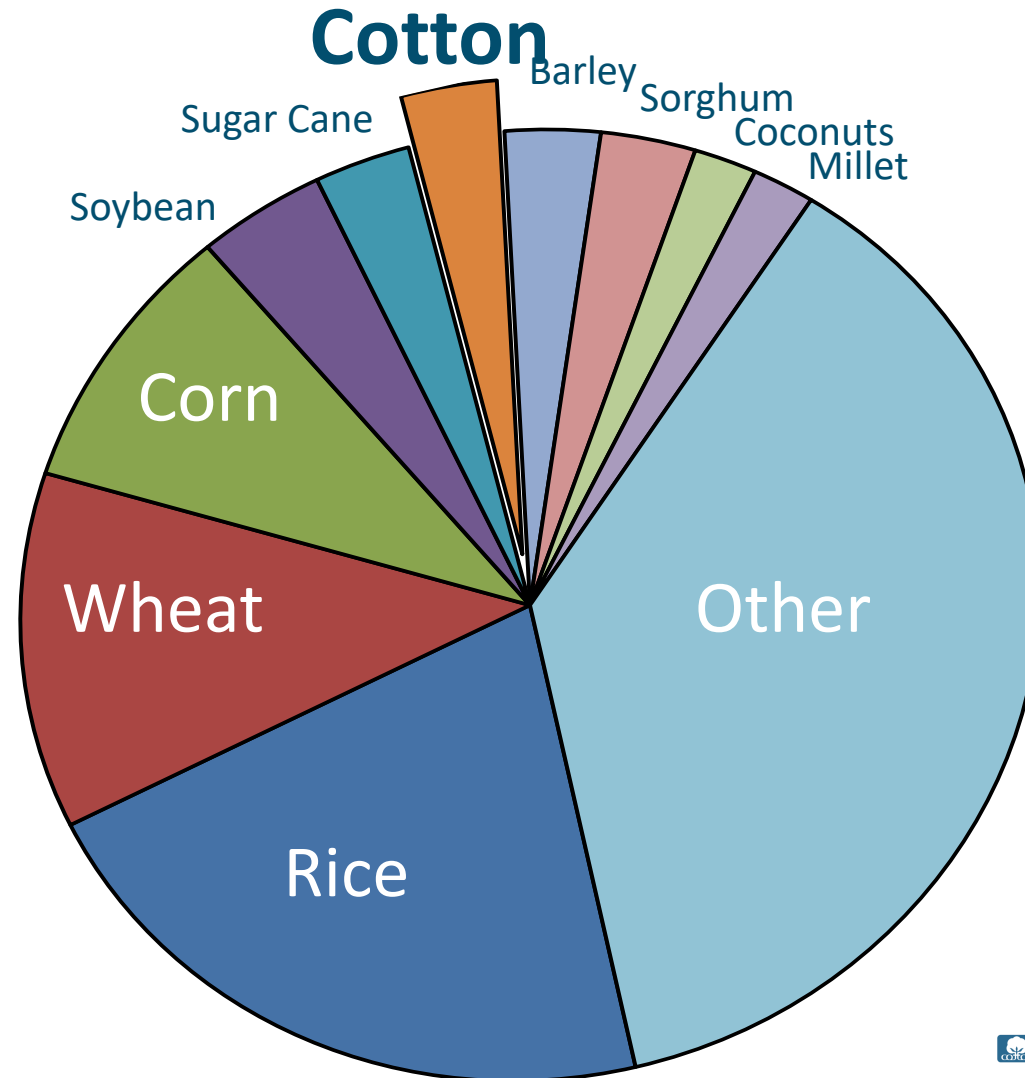


## Worldwide Demand for Fibers





# Cotton's Global Water Use

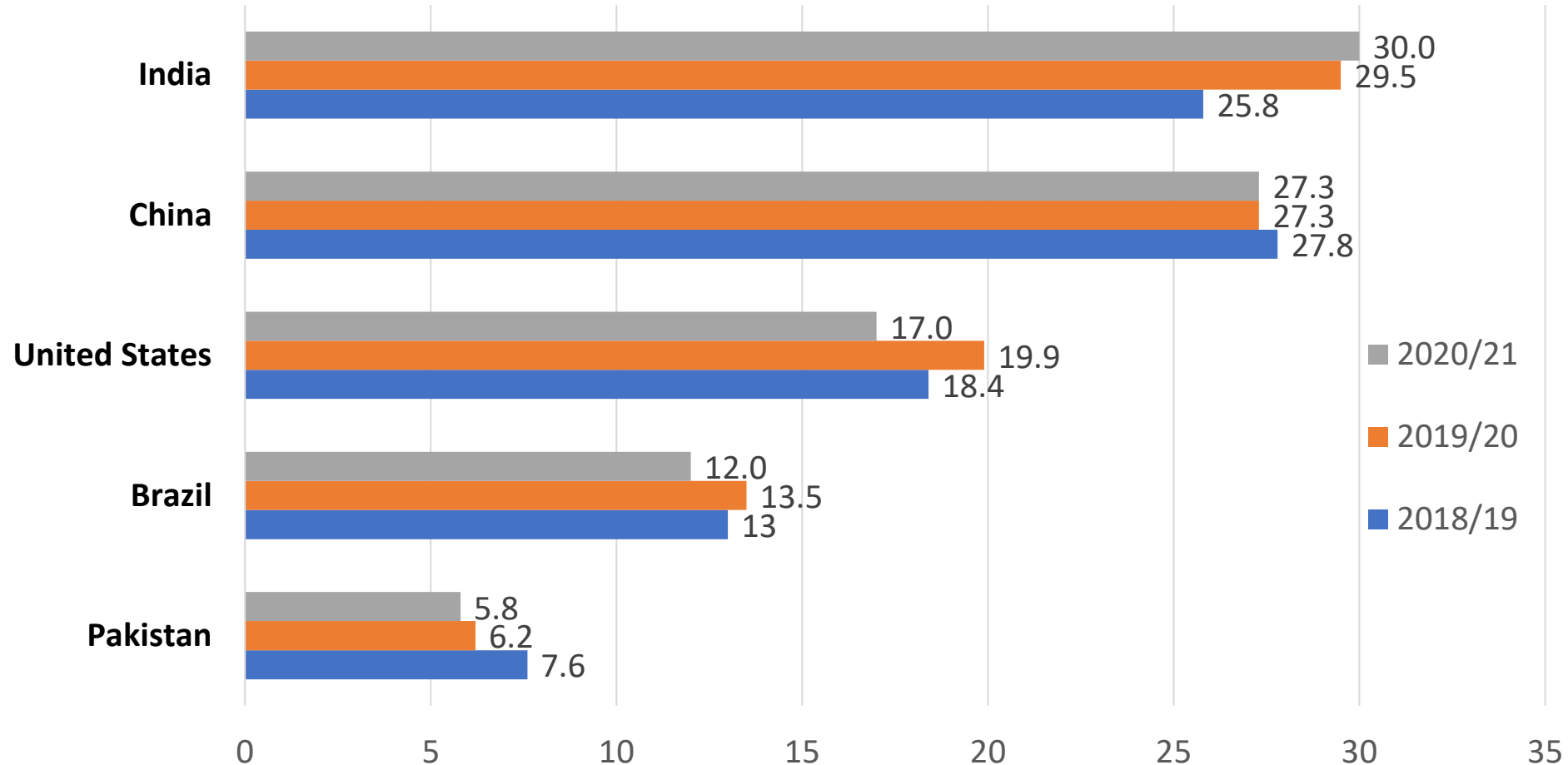


Cotton production uses  
**3%**  
of the world's agricultural  
water

Source: Hoekstra, A. Y. & Chapagain, A. K. (2007). Water footprints of nations: water use by people as a function of their consumption pattern. *Water Resource Management*, (21)1, 35–48.

# Cotton Production Top 5 Countries

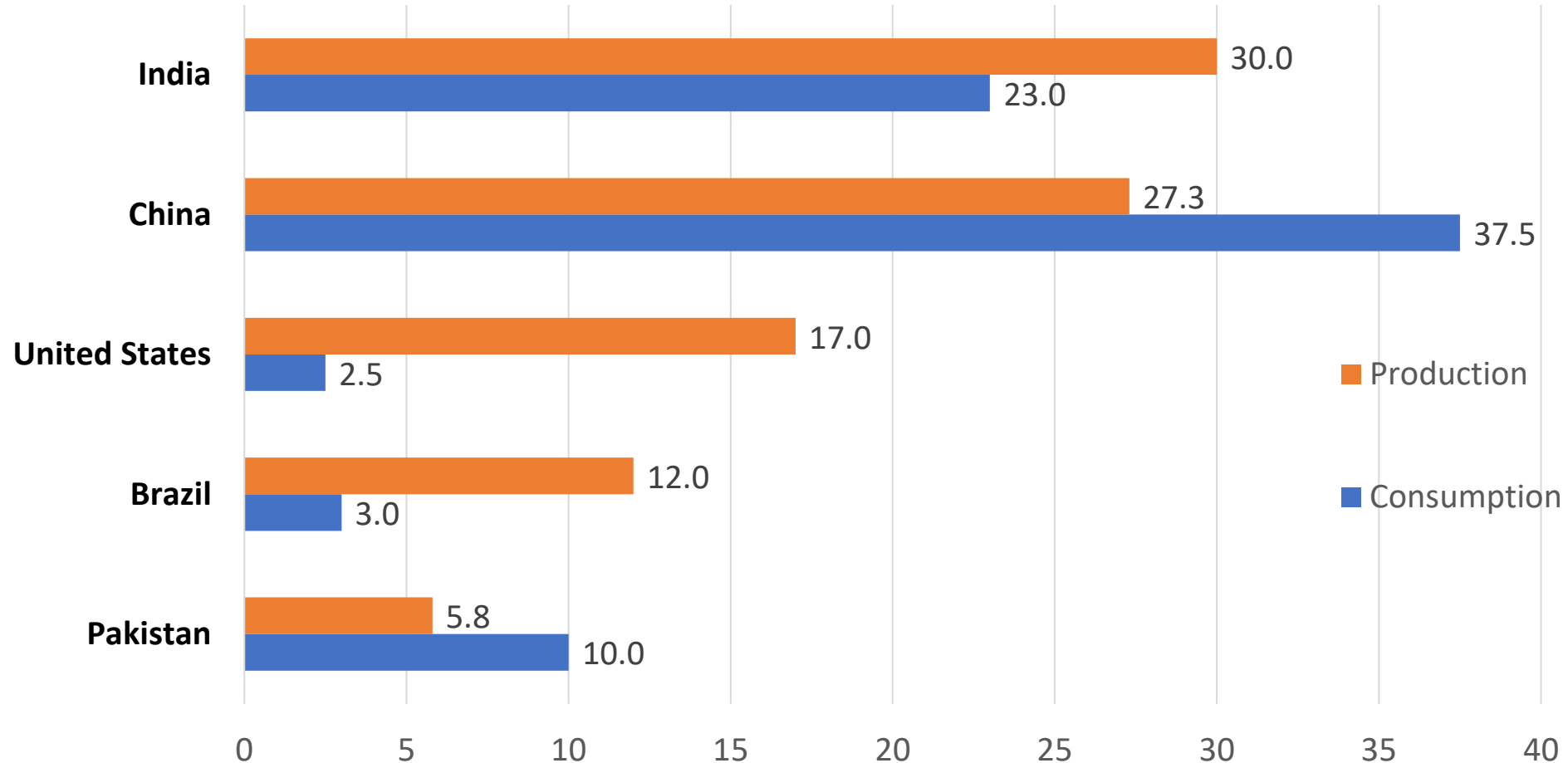
Millions of bales



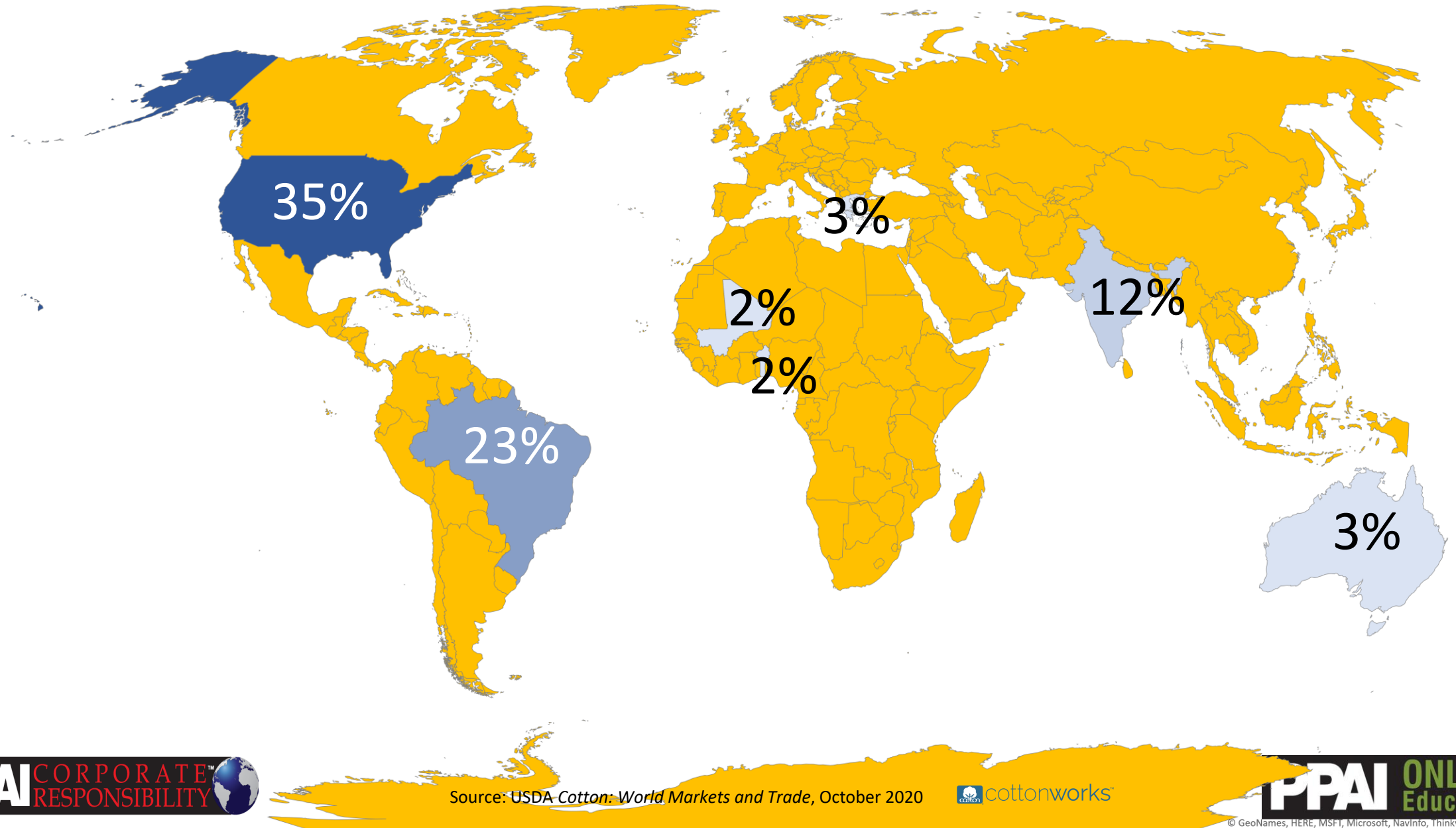


# Cotton Production Top 5 Countries

Millions of bales

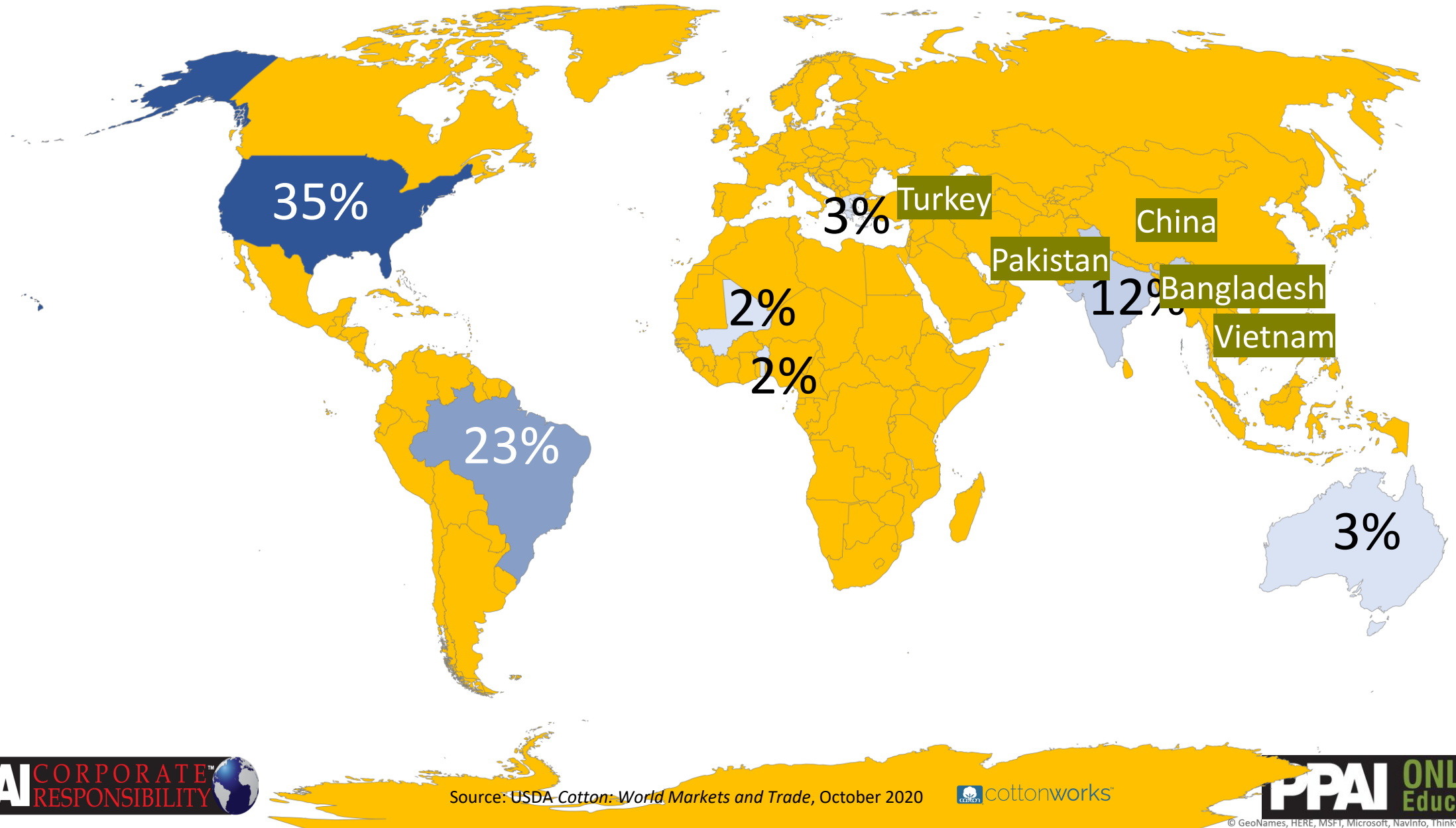


# Leading Cotton Exporters

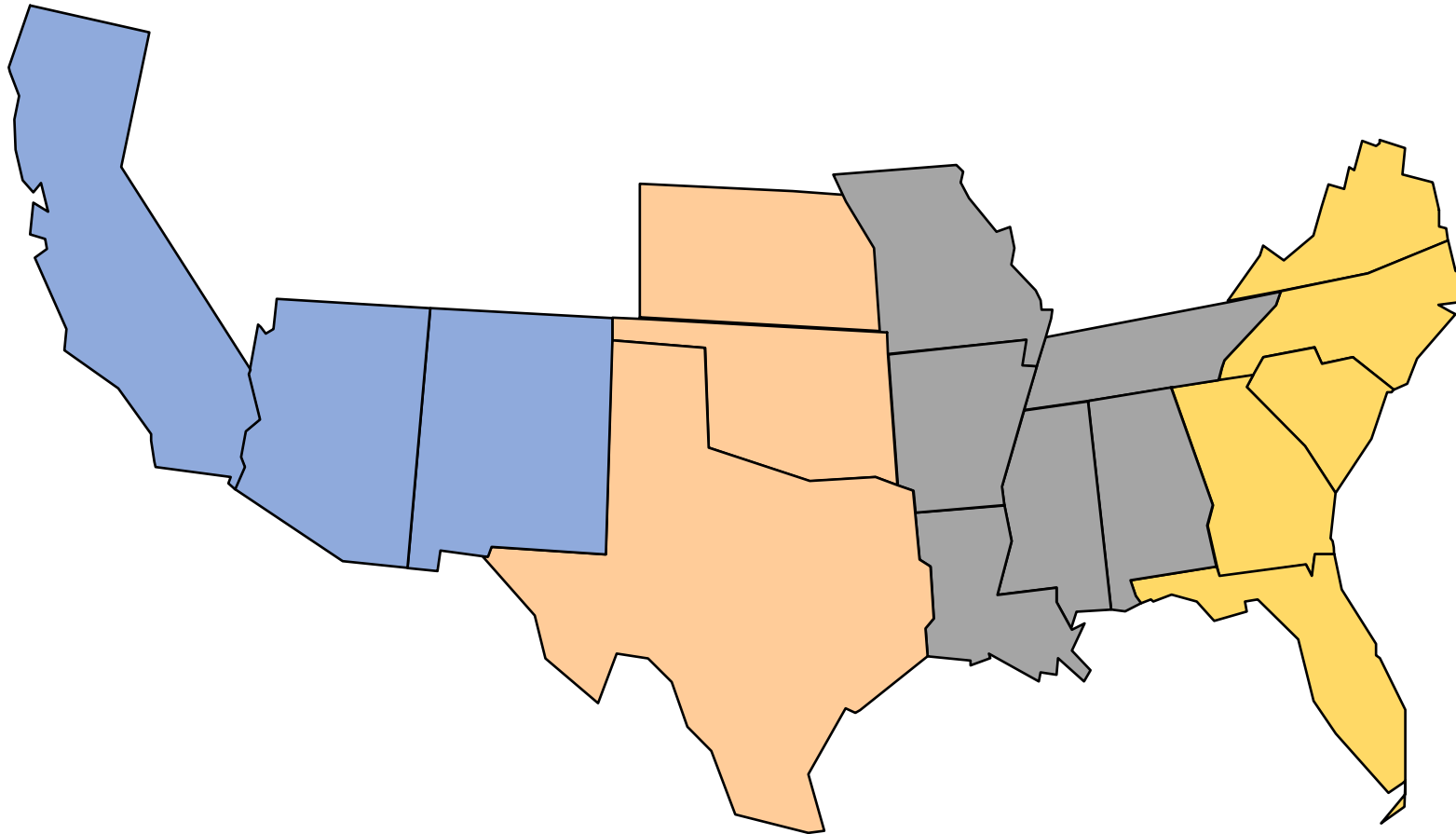




# Leading Cotton Exporters



# U.S. Cotton Belt



# The Cotton Calendar and Production Process

Northern Hemisphere (approximately 90% of world production)



# The Cotton Calendar and Production Process

Northern Hemisphere (approximately 90% of world production)



PLANTING

2020



# Planting



- Need good soil moisture and warmer temperatures



# The Cotton Calendar and Production Process

Northern Hemisphere (approximately 90% of world production)



PLANTING

GROWTH

2020



# Growth



# Growth







# Growth

# The Cotton Calendar and Production Process

Northern Hemisphere (approximately 90% of world production)



PLANTING

GROWTH

HARVEST

2020



# Harvest





# Harvest





# Ginning



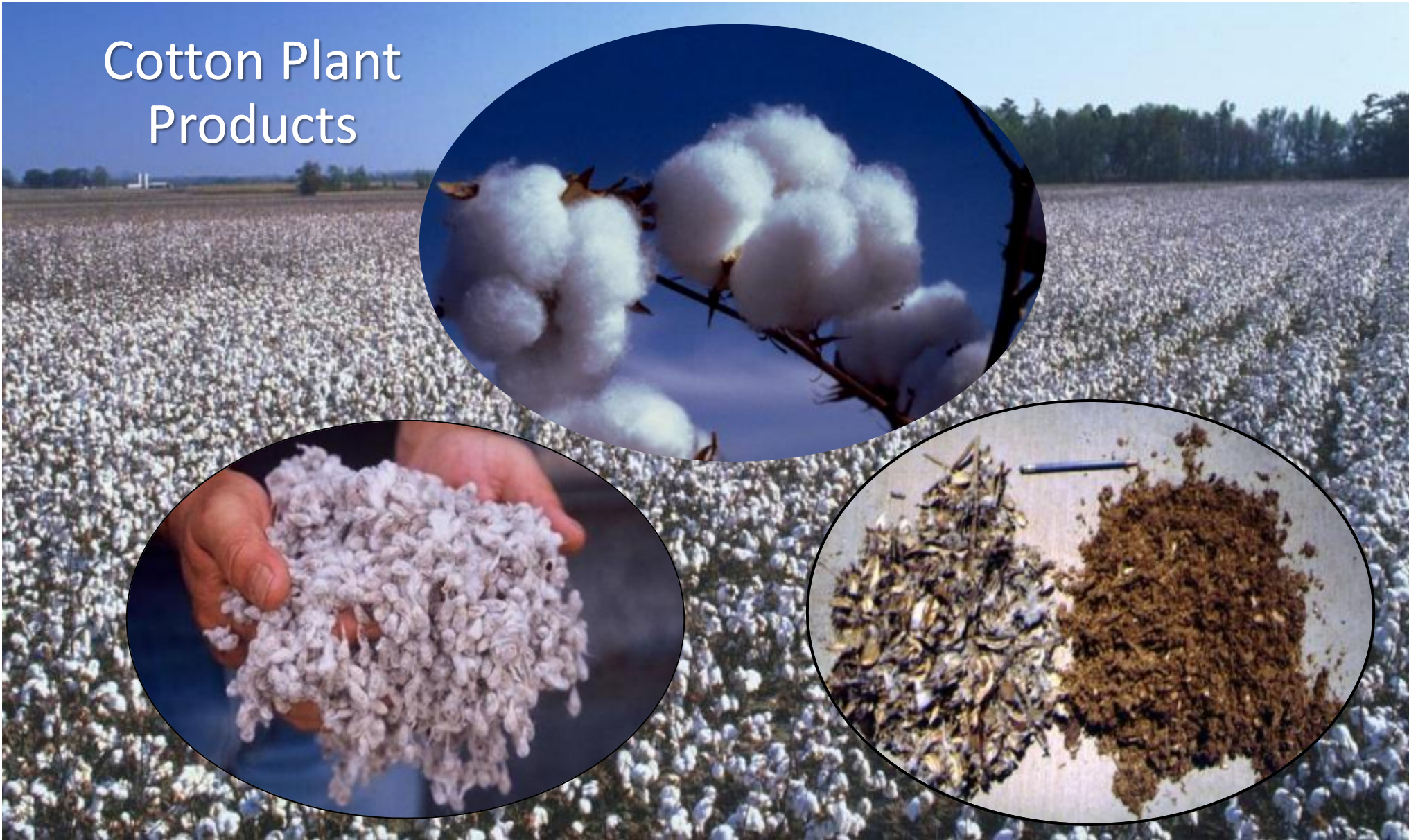


# Ginning





# Cotton Plant Products





# Ginning





# New Crop Cotton



# The Cotton Calendar and Production Process

Northern Hemisphere (approximately 90% of world production)



PLANTING

GROWTH

HARVEST

"NEW CROP"  
COTTON

2020

2021

Mill Deliveries and Exports

"NEW CROP"  
COTTON



A close-up photograph of cotton plants with white, fluffy cotton bolls and brown, dried cottonseed heads on thin, reddish-brown stems. The background is blurred.

# Cotton Production Methods

# Cotton Production Methods

There are three basic production systems for growing cotton: biotech (GM), conventional, and organic.

EST. **The** 2003

# ORIGINAL MOUNTAIN PANT

## »» NOW 100% ORGANIC ««



WHY ORGANIC COTTON? CERTIFIED ORGANIC COTTON MEANS NO  
GMOS, FERTILIZERS, TOXINS, CHEMICALS OR AERIAL SPRAYING,  
THEREFORE REDUCING THE IMPACT ON OUR ENVIRONMENT.





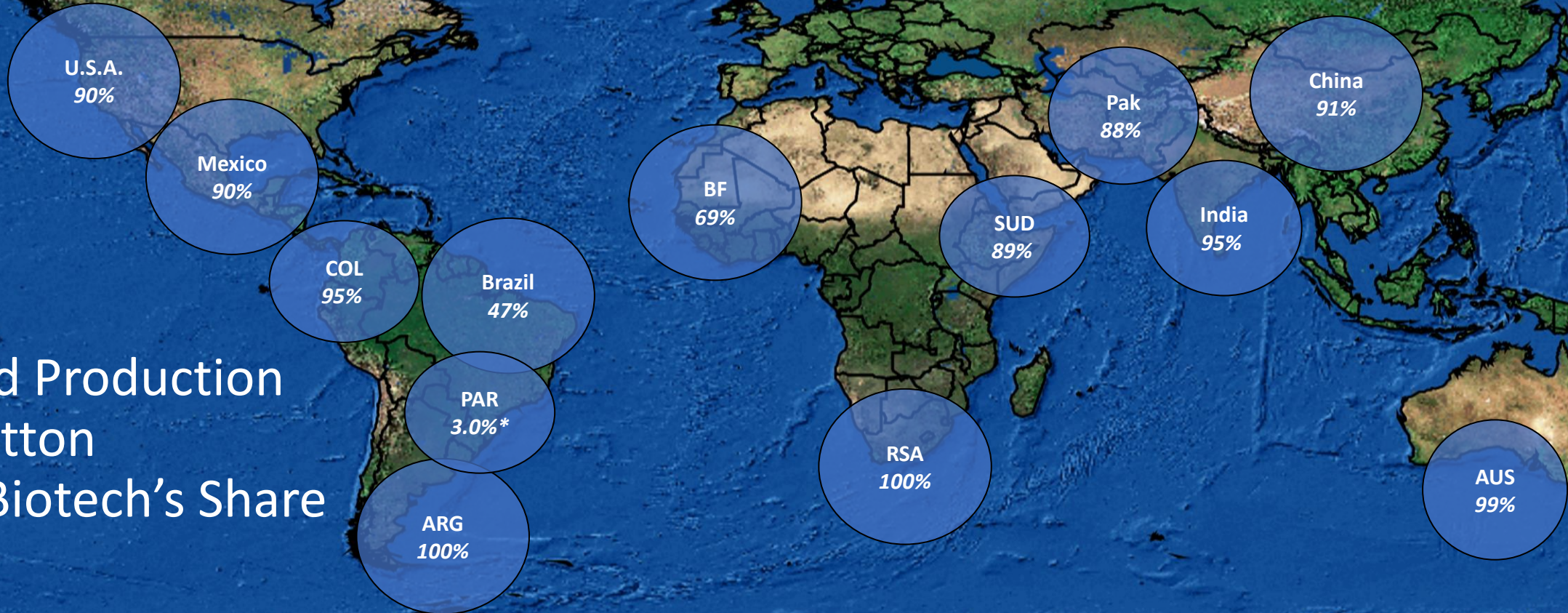


# Cotton Production Methods

Most of the world's production uses biotech seed varieties.



# World Production of Cotton and Biotech's Share



Sources: USDA, FAS, Production, Supply and Distribution online, May 2014; James, Clive, 2013 Global Status of Commercialized Biotech/GM Crops: 2013. ISAAA Brief No. 46. ISAAA: Ithaca, NY

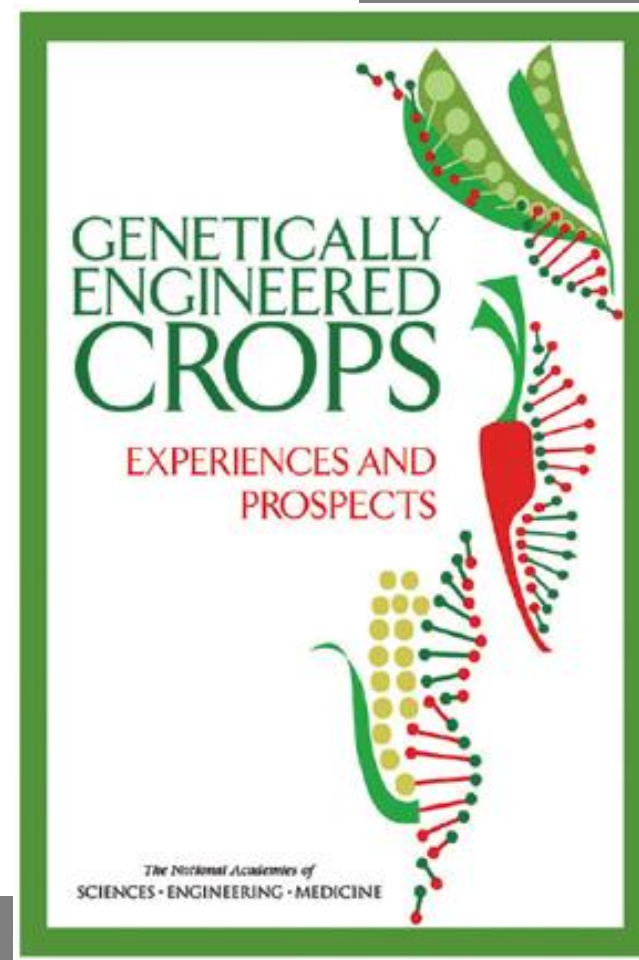


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SCIENCES • ENGINEERING • MEDICINE



## Genetically Engineered Crops: Experiences and Prospects

- No substantiated evidence of a difference in risks to human health between currently commercialized GE crops and conventionally bred crops.
- No conclusive cause-and-effect evidence of environmental problems from the GE crops.



# Cotton Production Methods

Organic production is a method of growing cotton,  
not a different cotton.



Home > Topics > Raw Materials

NOVEMBER 2, 2020 6:00AM ET

# GOTS Detects Evidence of Organic Cotton Fraud in India

By Arthur Friedman



Kitchen and bed textile made from organic cotton bolls.

CREDIT: Adobe

# Traceability





# Traceability



# Traceability







# Traceability

Every bale of U.S. cotton has a permanent bale identification tag.

Textile mills anywhere in the world can purchase a uniquely identified bale with complete fiber quality information.

# Traceability





# Traceability

Textile mills don't just buy tons or bales of cotton; they buy cotton based on fiber qualities.

# Traceability

BloombergMarkets

Target Severs Ties With Welspun Over Egyptian-Cotton Dispute

## Target Severs Ties With Welspun Over Egyptian-Cotton Dispute

by Shannon Pettypiece

August 19, 2016, 10:30 AM EDT Updated on August 19, 2016, 11:22 AM EDT

- Retailer says supplier's sheets used inferior material
- Discount-store chain will offer customers refunds on purchases

Target Corp. is ending all business with Welspun India Ltd., one of the world's big textile manufacturers, after saying the supplier was sending it phony Egyptian cotton sheets.

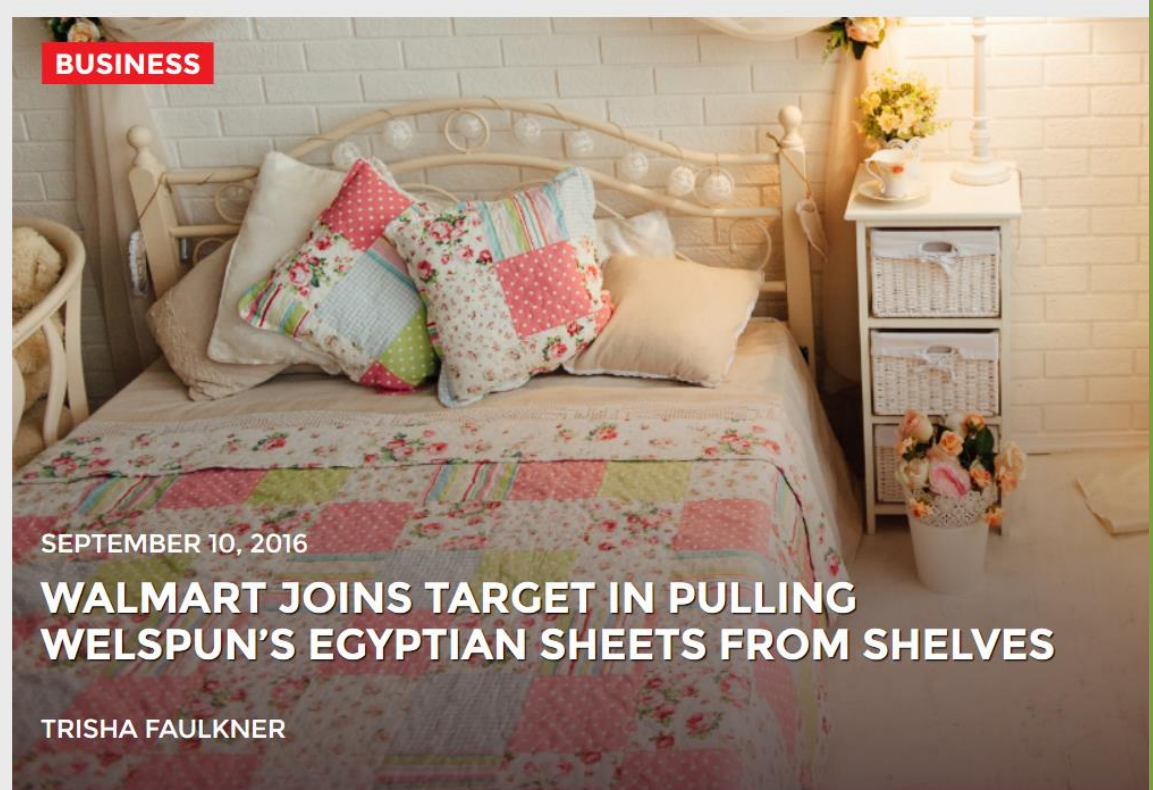
The retailer said it discovered last month that 750,000 sheets and pillowcases labeled as Egyptian cotton were actually made with another type of cotton. The retailer pulled the items from

BUSINESS

SEPTEMBER 10, 2016

## WALMART JOINS TARGET IN PULLING WELSPUN'S EGYPTIAN SHEETS FROM SHELVES

TRISHA FAULKNER





**Environment**  
Common ground

# How your clothes are poisoning our oceans and food supply

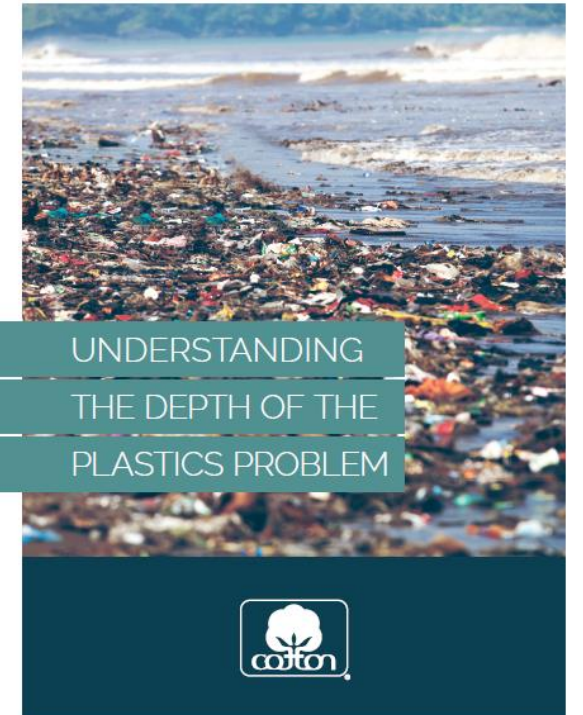
New studies show that alarming numbers of tiny fibers from synthetic fabrics are making their way from your washing machine into aquatic animals







## Turning the Tides: Tackling Our Ocean's Plastic Pollution Problem





# End Uses for Cotton Fiber

APPAREL

HOME  
TEXTILES

NONWOVENS



# End Uses for Cotton Fiber

41% of total apparel imports

APPAREL

HOME  
TEXTILES

18% of total non- apparel imports

NONWOVENS



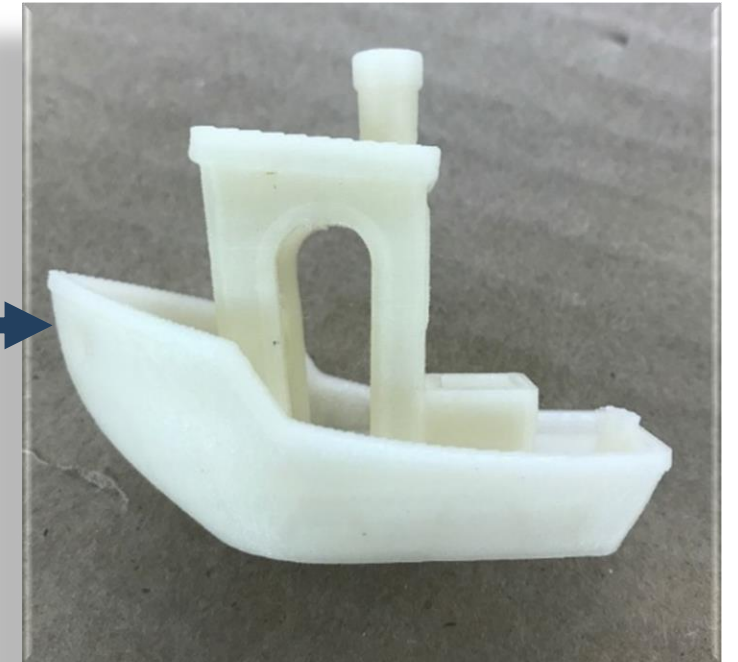
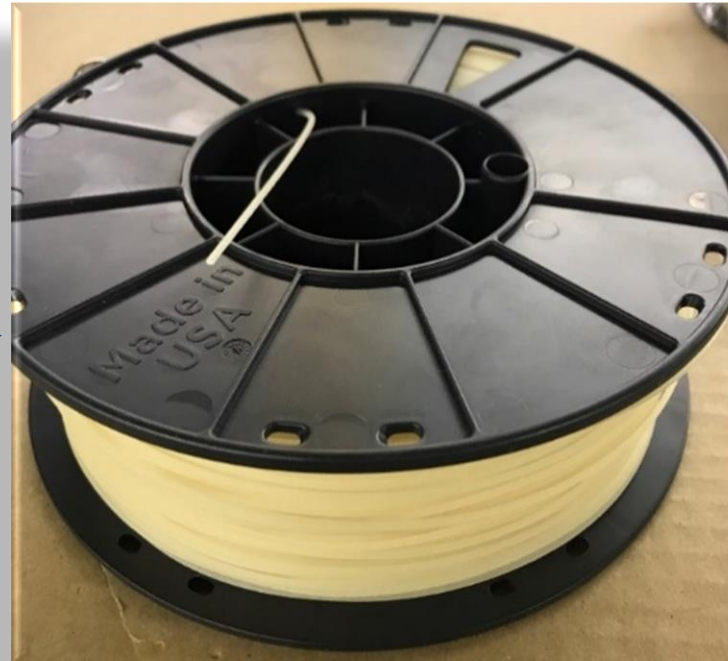
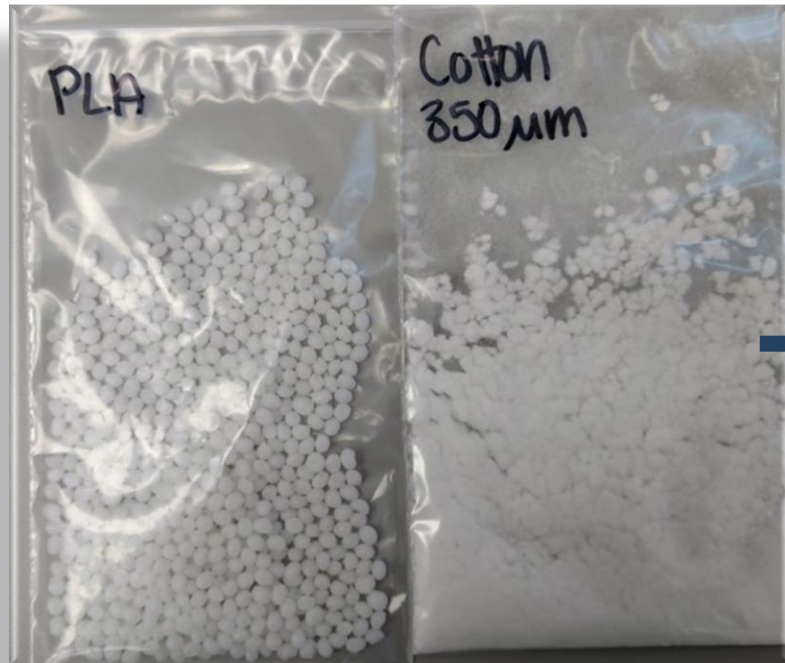




# New Products For Cotton



## 3D Printing and Injection Molding



Source: Cotton Incorporated





Travel mugs containing 7% and 2.5% cotton – goal is 30%

Toothbrush handles. White (3<sup>rd</sup> from left consists of 30% cotton flock material with PLA)



Sunglass frames



Source: Cotton Incorporated  
 cottonworks™

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