The Outlook for Cotton and Cottonseed

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President & CEO

Cotton Breeders’ Tour
July 2019
Major Presentation Points

- World textile fiber market growing (population & economic growth)
- Cotton had significant headwinds over past decade
- Next 10 years should be better for cotton
- Sustainability will continue to become more important—could be advantage for cotton
- Alternative crops (corn & soybeans) not likely to take acres from cotton
- U.S. cotton acreage (except 2020) is likely to remain near current levels
- Large crops will put significant downward pressure on cottonseed prices
- Cottonseed research & promotion along with ULGCS critical to enhance seed value for growers
U.S. Upland Cotton Acres

<table>
<thead>
<tr>
<th>Year</th>
<th>Acres (Millions)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2006</td>
<td>14.95</td>
</tr>
<tr>
<td>2007</td>
<td>10.54</td>
</tr>
<tr>
<td>2008</td>
<td>9.30</td>
</tr>
<tr>
<td>2009</td>
<td>9.01</td>
</tr>
<tr>
<td>2010</td>
<td>10.77</td>
</tr>
<tr>
<td>2011</td>
<td>14.43</td>
</tr>
<tr>
<td>2012</td>
<td>12.08</td>
</tr>
<tr>
<td>2013</td>
<td>10.21</td>
</tr>
<tr>
<td>2014</td>
<td>10.85</td>
</tr>
<tr>
<td>2015</td>
<td>8.42</td>
</tr>
<tr>
<td>2016</td>
<td>9.88</td>
</tr>
<tr>
<td>2017</td>
<td>12.36</td>
</tr>
<tr>
<td>2018</td>
<td>13.85</td>
</tr>
<tr>
<td>2019</td>
<td>13.45</td>
</tr>
</tbody>
</table>
World Production & Use of Cotton

Million 480 Lb. Bales

Source: USDA
World Per Capita Cotton Demand

Source: USDA

0.2% Growth per Year
Cotton’s Share of Market – Major Apparel Categories

Percent, Seasonally Adjusted

Source: Cotton Incorporated’s Retail Monitor™
Cotton’s Recent Headwinds

- Financial Crisis
- Price Spike & Price Volatility
- Cheap Synthetic Fiber Prices
- Denim Market Weakness
- Fabric Weight Reductions
- Athletic Apparel Emergence
- Polyester Fashion Trend
- Sustainability Concerns
KEY FACTORS FOR COTTON TO IMPROVE COMPETITIVENESS

- Maintain Positive Brand, Retailer & Consumer Perceptions
- Improved Sustainability & Sustainability Communications
- Ability to Supply the Market in Volume & Quality
- Continued Fiber, Fabric & Product Innovations
PERFORMANCE FEATURES

Consumers want their clothing to do more, so they can do less

Percent saying the following features are appealing:

- Easy Care: 82%
- Stain Resistance: 77%
- Fade Resistance: 80%
- Wrinkle Resistance: 76%
- Temperature Control: 78%
- Moisture Management: 75%

Source: CCI & Cotton Incorporated’s 2018 Global Lifestyle Monitor
2018 Cotton Incorporated Technologies

- **JCPenney**
  - TOUGH COTTON™ Technology
- **Lunya**
  - Moisture Management + Antimicrobial
- **Callaway Apparel**
  - SWEAT-HIDING Technology
Cotton LEADS™ Partners—Still Expanding
COTTON USA
U.S. Cotton Trust Protocol
Creatures in the deepest trenches of the sea are eating plastic

In six of the ocean’s deepest crevasses, scientists found tiny shrimp-like creatures chomping on tiny bits of plastic.

By: Sarah Gibbens. Published February 28, 2019
Synthetic Fibers & Plastics

Increasing Concerns
MICROPLASTICS ISSUE

Microplastics pollution is widespread

Source: Adventurers and Scientists for Conservation Microplastic Study
North Carolina State University research on microfiber degradation

Aquatic Biodegradation – Results

- Cotton: 76%
- Polyester: 4%
Index of Textile Aquatic Microplastics
(Assumes 5.5%/yr. degradation rate & 3%/yr. future world production of synthetic fibers)

Index: 2018 = 100

3x More Textile Microplastics Possible by 2048
TOP ENVIRONMENTAL CONCERNS

Issues vary across the globe

U.S.
- Water Quality (81%)
- Air Quality (77%)
- Depletion of Natural Resources (76%)

Rest of World
- Air Quality (89%)
- Water Quality (87%)
- Climate Change (86%)

Source: CCI & Cotton Incorporated's 2017 Global Environment Survey
CONSUMER AWARENESS AND CONCERN

Microfiber waste is a top concern for those aware of fiber production issues

Average aware of issues: 25%
Concerned with microfiber waste: 84%

Source: CCI & Cotton Incorporated’s 2017 Global Environment Survey
SUSTAINABLE FABRICS

Cotton is considered most sustainable

Percent saying the following fibers are safe for the environment:

- **Cotton**: 90%
- **Wool & Silk**: 86%
- **Rayon**: 53%
- **Nylon**: 46%
- **Polyester**: 45%

Source: CCI & Cotton Incorporated’s 2018 Global Lifestyle Monitor
FIBER LABEL CHECKING INCREASES IN THE U.S.

PERCENT ALWAYS/USUALLY CHECK FIBER CONTENT LABELS

56% of Boomers check fiber labels

46% of Gen Xers check fiber labels

38% of Millennials check fiber labels

*Partial year data, through June 2018

Source: Cotton Incorporated’s Lifestyle Monitor™ Survey
World Per Capita Cotton Demand

Source: USDA for history. Cotton Incorporated World Fiber Demand & Supply Models for Projections
## Cotton Area: Responsiveness to World Cotton Price

<table>
<thead>
<tr>
<th>Highly Responsive</th>
<th>Moderately Responsive</th>
<th>Least Responsive</th>
</tr>
</thead>
<tbody>
<tr>
<td>• U.S.A.</td>
<td>• China</td>
<td>• Pakistan</td>
</tr>
<tr>
<td>• Australia</td>
<td>• India</td>
<td>• Uzbekistan</td>
</tr>
<tr>
<td>• Brazil</td>
<td>• Rest of World</td>
<td></td>
</tr>
<tr>
<td>• Turkey</td>
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</tbody>
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U.S. Soybean Price Received

Source: USDA & Cotton Incorporated
U.S. Upland Cotton Price Received

Source: USDA & Cotton Incorporated
Cotton/Corn Price Ratio
(Average Price Received Basis)

Source: USDA & Cotton Incorporated
Cotton/Corn Futures Price Ratio at Planting Time vs. Upland Cotton Acres

Source: USDA, CME Group, NCC.
U.S. Upland Cotton Acres

Million Acres

Source: USDA & Cotton Incorporated
Total U.S. Cotton Production

Source: USDA & Cotton Incorporated
Cottonseed Prices vs. Soybean Price

$ per Short Ton

$ per Bushel

Cotseed (Left)  Soy (Right)
Cottonseed Total Crush

Source: USDA
Cottonseed Price vs. Milk Price

Source: USDA
Cottonseed
Total U.S. Production Less Crush

Source: USDA
WHOLESEED MARKETING
COTTONSEED OIL MARKETING
World Per Capita Total Fiber Demand

1.9% Growth per Year

Source: USDA, Fiber Organon, PCI Fibers