

Corporate Overview

Kater Hake

V.P. Ag. & Env. Research

**ICAC Research Associates
April 18, 2017**



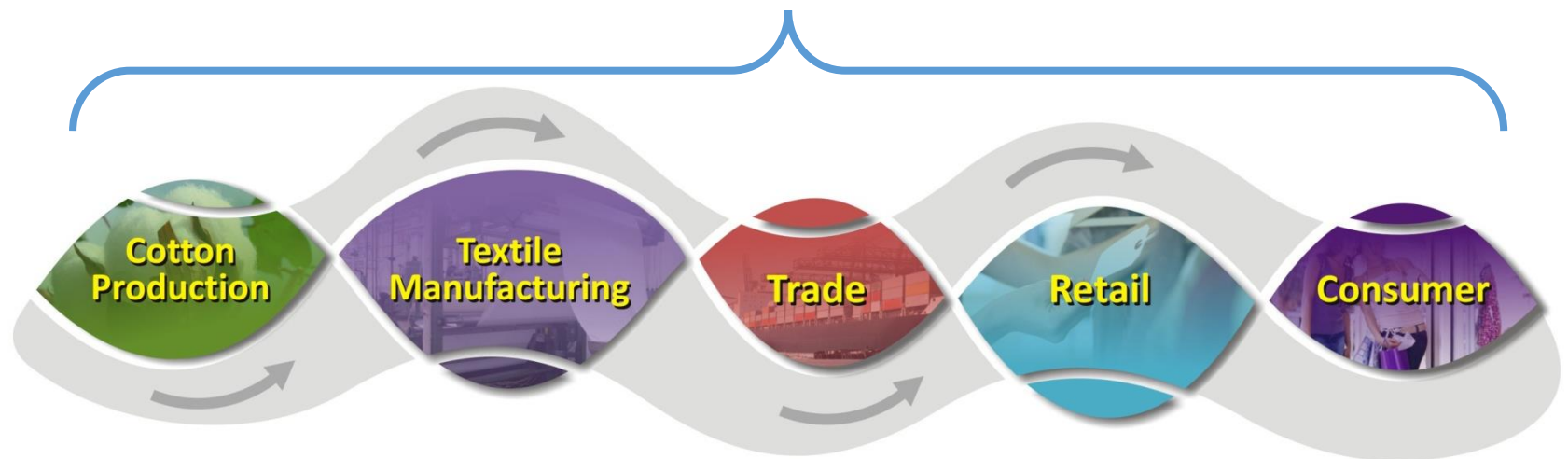
Our Mission

To increase the demand for
and profitability of **cotton**
through research and promotion

Cotton Incorporated Structure

All U.S. Cotton Growers &
All U.S. Importers of cotton

Board of
140 growers &
40 importers



Cotton Incorporated Offices



141 Full- time employees in 6 offices:

★ Cary, North Carolina

▲ New York, New York

▲ Mexico City, Mexico

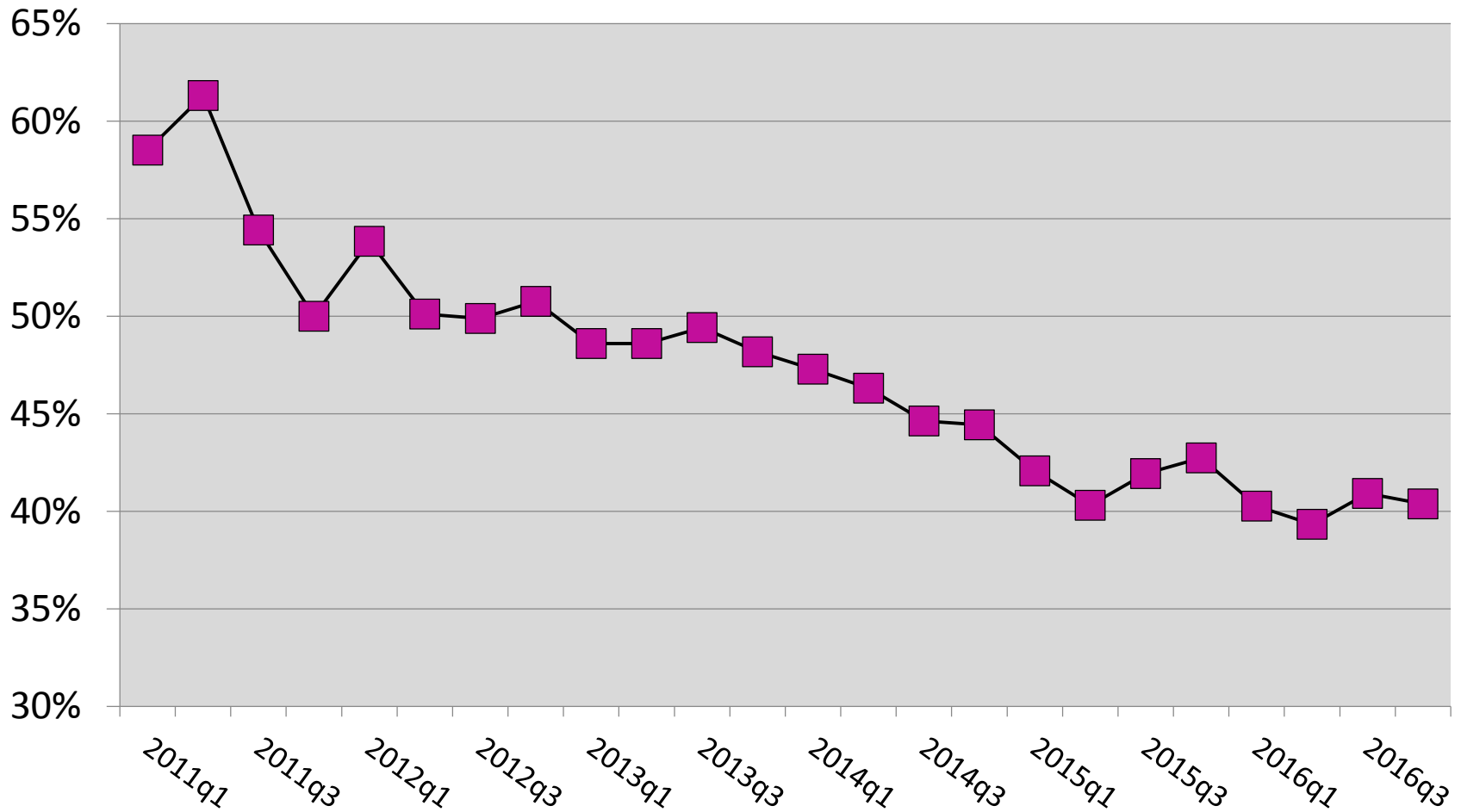
▲ Shanghai, China

▲ Kowloon, Hong Kong

▲ Osaka, Japan

Cotton's Share of Women's Apparel

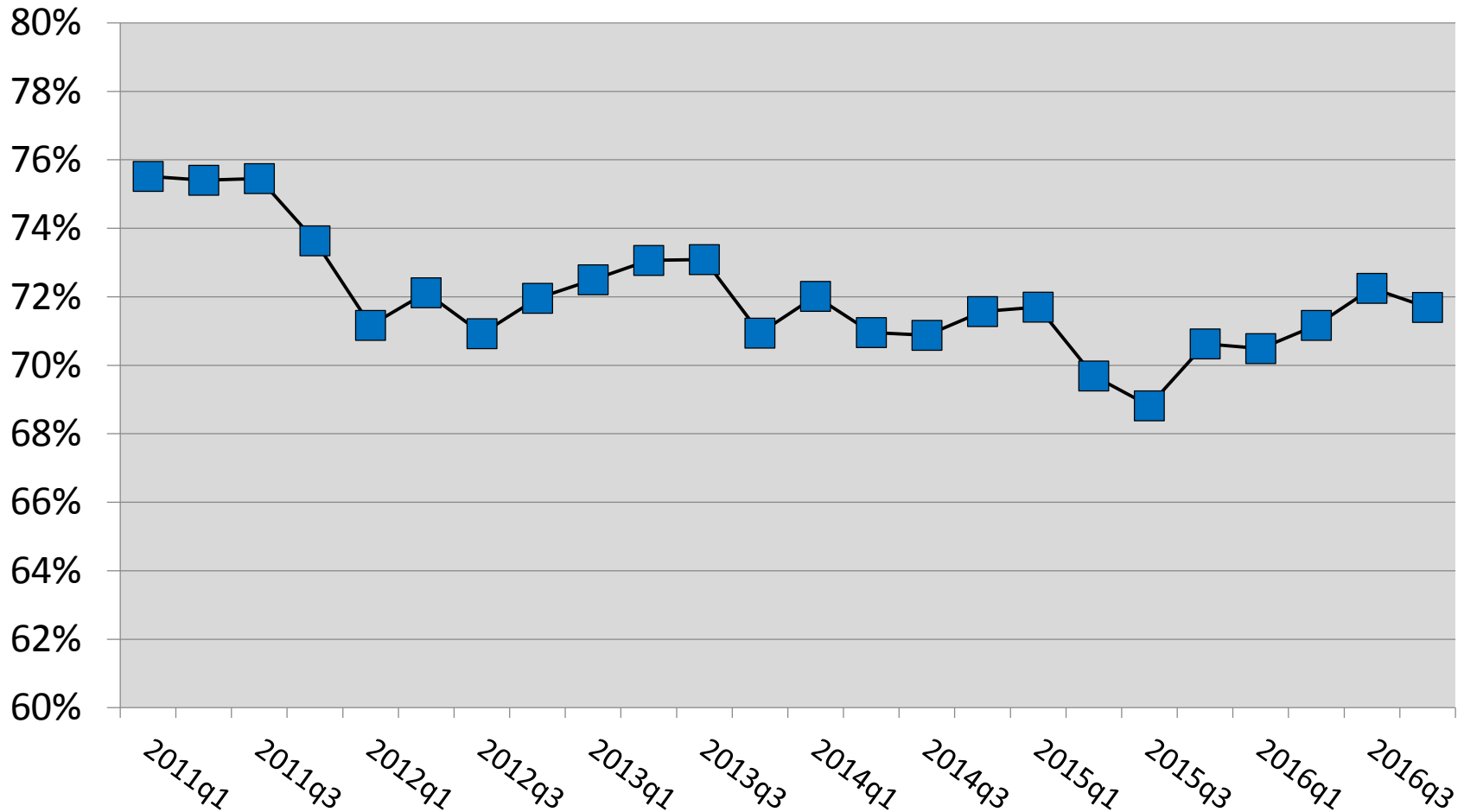
Percent, Seasonally Adjusted



Source: Cotton Incorporated's Retail Monitor™

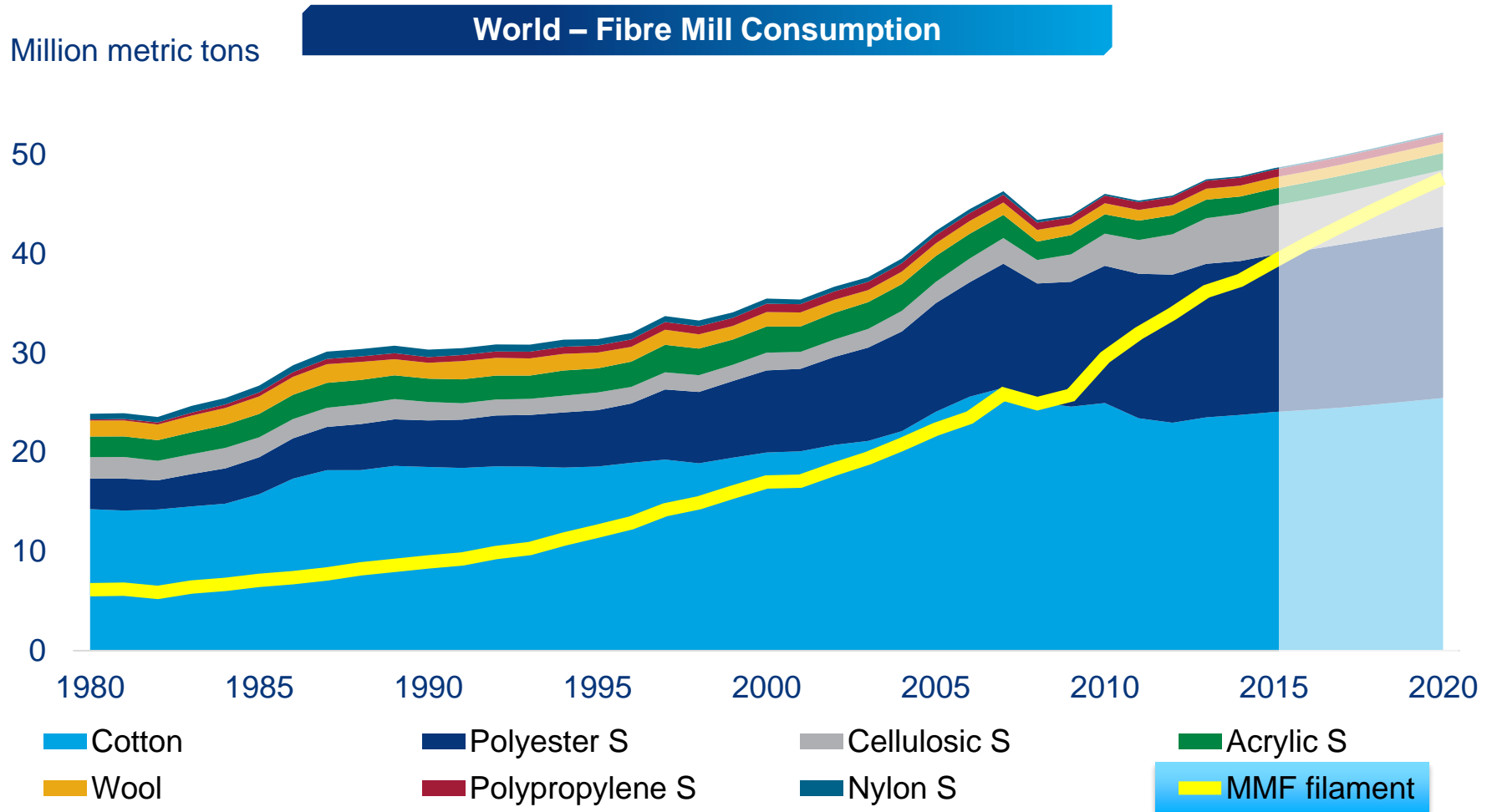
Cotton's Share of Men's Apparel

Percent, Seasonally Adjusted



Source: Cotton Incorporated's Retail Monitor™

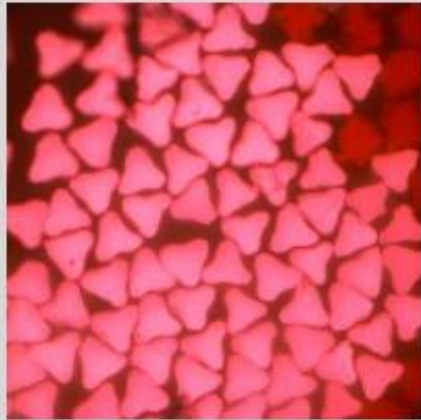
Man made filament growing faster than all staple fibers



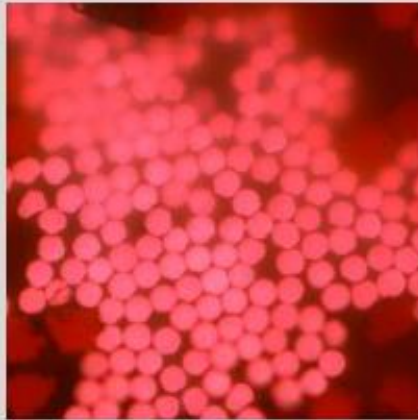
Source: PCI Wood Mackenzie Red Book 2016

Trusted commercial intelligence
www.woodmac.com

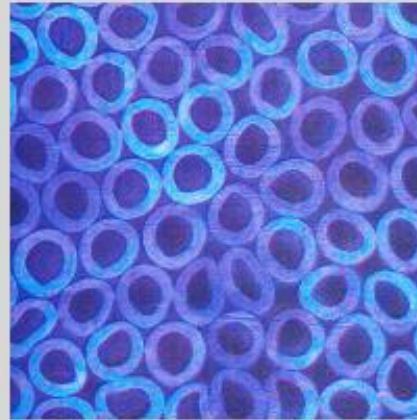
Endless Geometric Possibilities



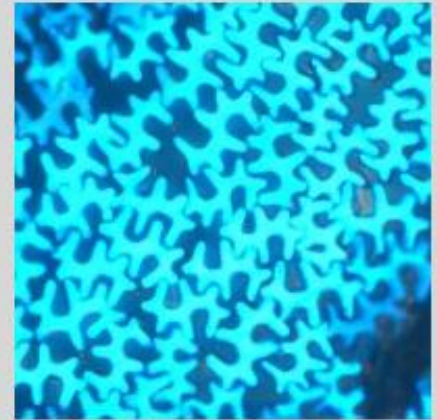
Y Shaped Multifilament



Round Multifilament



Multi Hollow Fiber



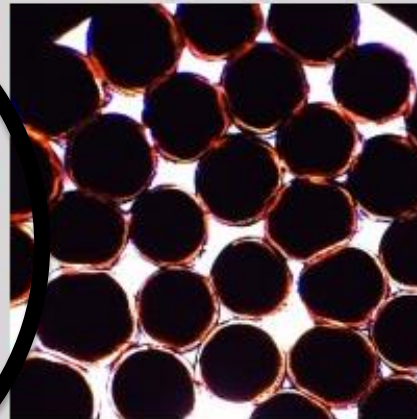
4DG



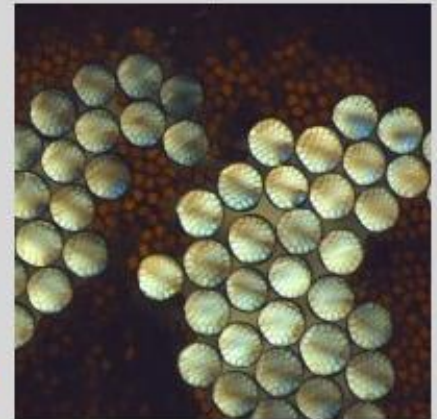
Winged Fiber



Islands in the Sea

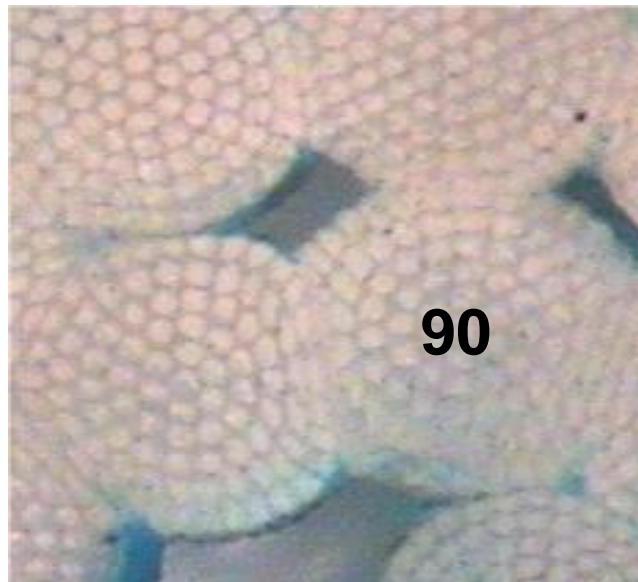
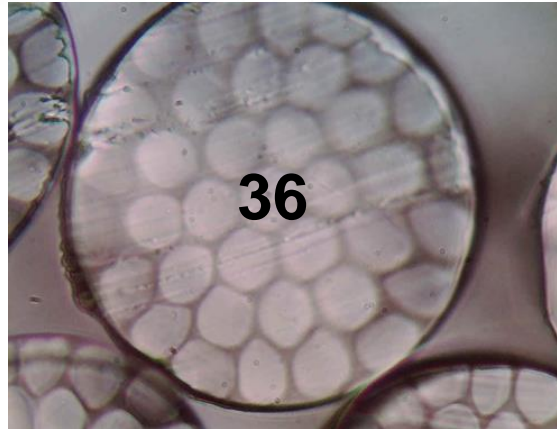
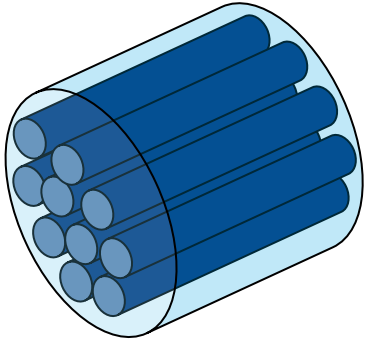


Bico Multifilament



LAC 3772 (Sea -Island)

Islands in the Sea – Splittable polyester filament



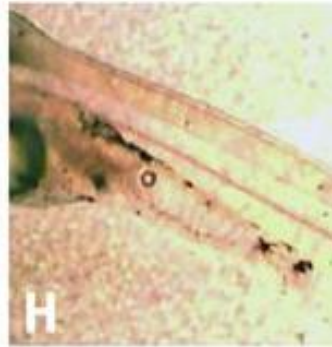
MICROFIBER POLLUTION

ECOTOXICOLOGY

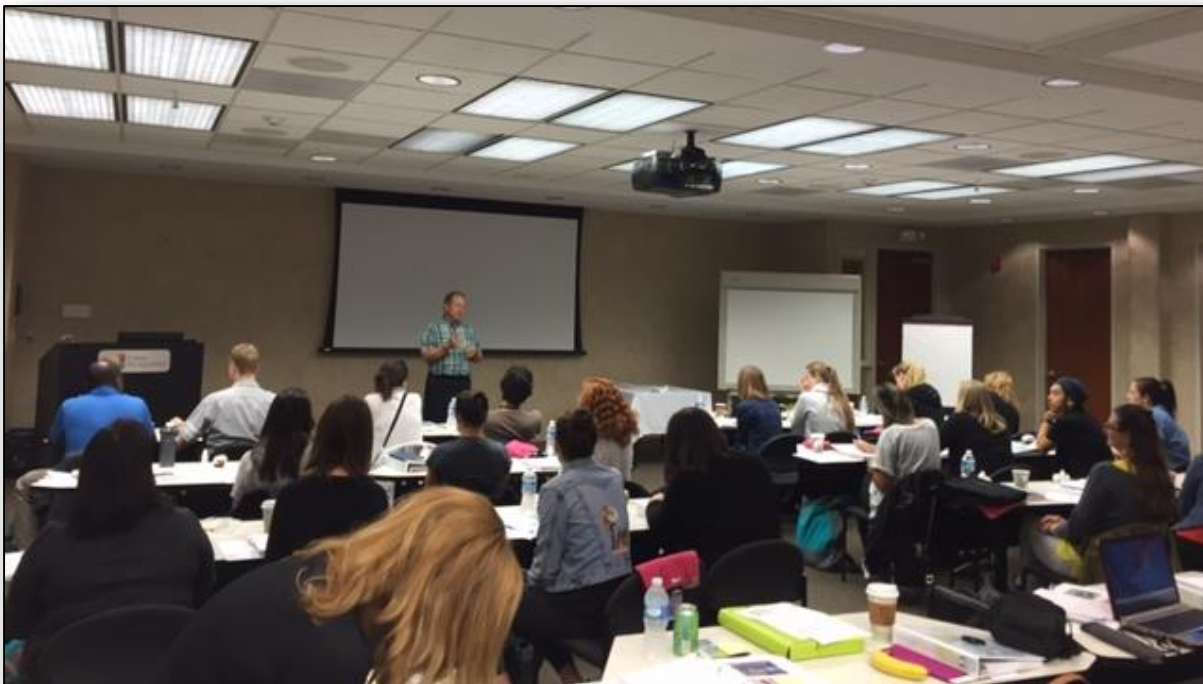
Environmentally relevant concentrations of microplastic particles influence larval fish ecology

Oona M. Lönnstedt* and Peter Eklöv

Science 2016 June 3



- Microplastic particles are shed from washing synthetic textiles
- They are ubiquitous in the ocean and on land
- They concentrate toxins (PCBs, DDT, POPs) in fish
- Have a severe impact on fish health
- Impacts on human health being investigated
- Expensive to filter out of washing machine discharge
- Synthetic functionality creates this problem



ACTIVE™

ENHANCED | ENGINEERED | EMBELLISHED

PERFORMANCE COTTON

GROW YOUR ACTIVEWEAR BUSINESS.

MAY 3-5 | CARY, NC

Accommodation expenses are provided.
Participation is limited.

Contact wblankinship@cottoninc.com



RSVP by APRIL 1st

ACTIVE
enhanced · engineered · embellished



FABRIC COLLECTIONS

for Apparel & Home

122 new fabrics developed

70 Wovens | 46 Knits | 6 Bonded

KEY PRODUCT CATEGORIES

Active wear

Knit tops

Non-denim pants

Denim

FEBRUARY



SEPTEMBER



New collections are released biannually

Wovens

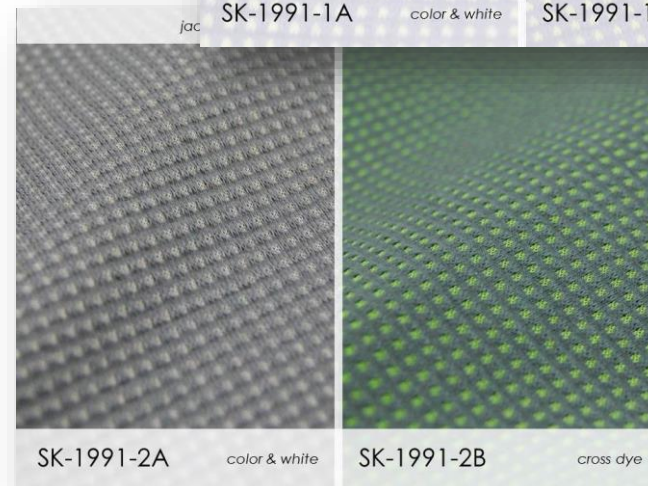
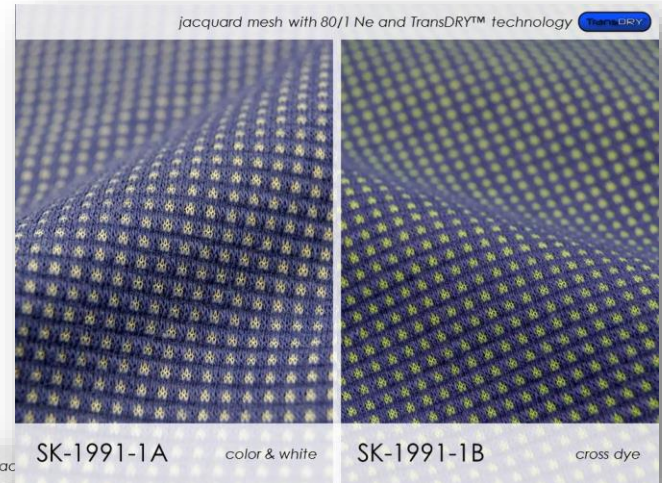




FlashDRY Cotton



**Alpine
Start
V-Neck
Tee &
Polo**





**MEN'S THERMAL COTTON
FULL ZIP HOODIE**



SK-1983-4

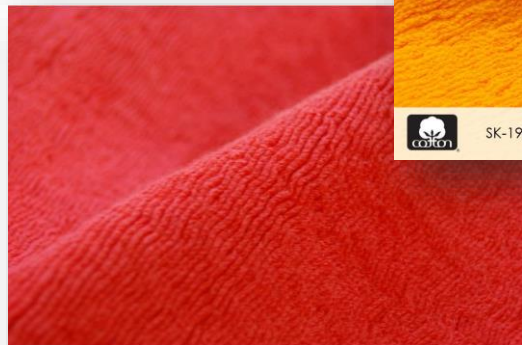
wo

**Insulating Ruffle Knit
Developments**



SK-1983-2

compact ruffle knit with TransDRY™ technology



SK-1983-3

compact ruffle knit

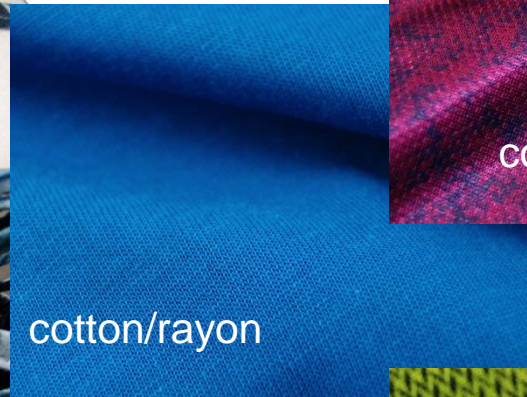




Blend Developments



cotton/acetate/spandex



cotton/rayon



cotton/rayon/spandex



cotton/polyester



cotton/acetate

Cotton Incorporated's Consumer Marketing Strategy



AWARENESS

ENGAGEMENT

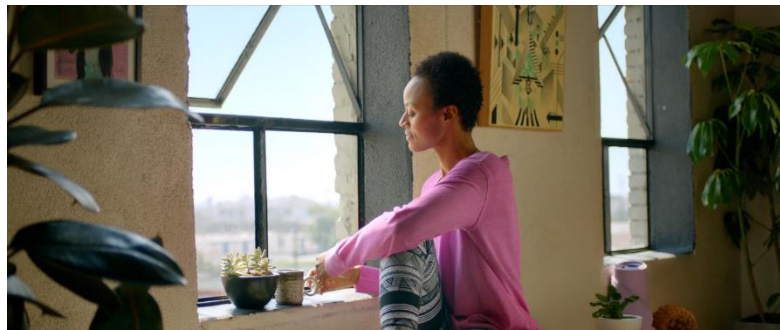
ACTION

and
aggressive comparative marketing



IT'S YOUR *favorite* FOR A REASON.™

ANTHEM 2



MARY

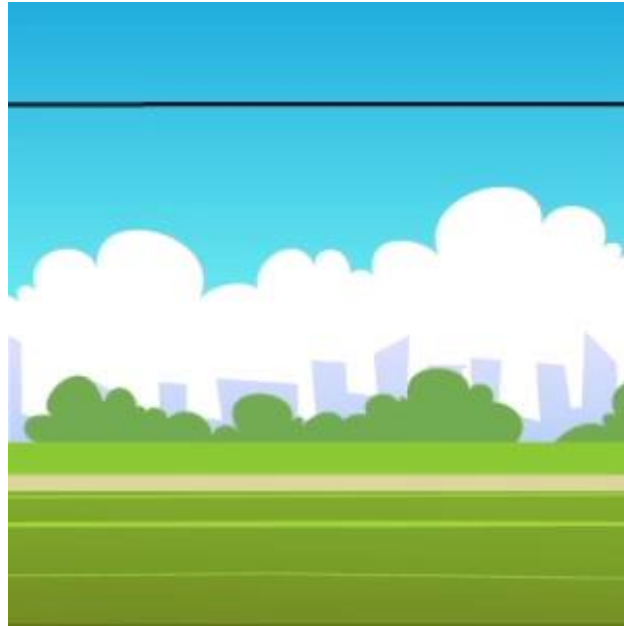


THE DIGITAL BURST PROJECT



Concept

- Odor is a problem for synthetic activewear
- Cotton washes cleaner & smells better



Cotton Incorporated

Concept

- Polyester is derived from oil
- Cotton is natural



Cotton Incorporated

Ag and Environmental Research

- AERD's objective is to increase grower profitability through research and outreach
- Outcomes are primarily knowledge but also include germplasm, varieties and tools
- Research portfolio is balanced to meet today's needs while preparing for future challenges
- Provide data and scientific expertise in support of Cotton's sustainability reputation, including metrics and standards

[HOME](#)[RESEARCH & REPORTS](#)[RESOURCES DIRECTORY](#)[HOW TO VIDEOS](#)[ABOUT](#)[SEARCH](#)

COTTON CULTIVATED

COTTON AG DATA, RESOURCES AND TRENDS

Welcome to your one-stop destination for cotton resources. Here you'll find up-to-date, region-specific information from our extensive Cotton Incorporated research library, universities and other top sources.

Search our site and other resources



COTTON NEWS

[NEWS](#)[MARKET](#)[QUALITY](#)

Filter News by...



Cotton Farming

- [Strong Cotton | SPECIAL REPORT](#)
January 9, 2017
- [Pertinent Topics For Ginners Will B...](#)
January 3, 2017
- [Multiple Year Cotton Production](#)
January 3, 2017

[SEE ALL COTTON NEWS](#)

Research

Research, reports
Cotton Industry

2015 Cotton
Summary

Sustainability | 2016

This document provides an executive summary of the most recently complete global life cycle assessment for ...

[Learn more >](#)

[SEE ALL RESEARCH & REPORTS](#)

COTTON MULTIMEDIA

[WEATHER](#)[WEBCASTS](#)[VIDEOS](#)

Watch this Week's
Weather Outlook



TODAY 26 JAN 17

Cary, United States

Cotton Harvest Information:

Make sure you are ready for harvest with guides on the efficient operation of pickers and strippers as well as tips on the proper storage of seed cotton



National



26 Jan

26 Jan

From MU
fields

26 Jan

VEET

MED

SUBSCRIBE

January 26, 2017 Weather Update

from [Civideo.com](#)
 Incorporated



Mid-week Weather Outlook

January 26, 2017



05:13

HD :: vimeo

COTTON NEWS

[NEWS](#)[MARKET](#)[QUALITY](#)

Cotton Farming

- [Strong Cotton | SPECIAL REPORT](#)
January 9, 2017
- [Pertinent Topics For Ginners Will B...](#)
January 3, 2017
- [Multiple Year/Location Data = Pric...](#)
January 3, 2017

[SEE ALL COTTON FARMING ARTICLES](#)

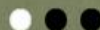
Research and Reports

Research, reports and other materials from Cotton Incorporated's rich library

2015 Cotton LCA Executive Summary

Sustainability | 2016

This document provides an executive summary of the most recently complete global life cycle assessment for ...

[Learn more >](#)[SEE ALL RESEARCH & REPORTS](#)

COTTON MULTIMEDIA

[WEATHER](#)[WEBCASTS](#)[VIDEOS](#)

COTTON NATURAL

Natural Resource Survey



Stinkbug Management

[SEE ALL HOW TO VIDEOS](#)

Resources Directory

Trusted resources that we find useful and think you will, too

Handling Cotton Exposed to Excessive Rainfall

Harvest

Given the weather conditions that have challenged the southeastern United States this harvest season, suggestions for ...

[Learn more >](#)[SEE ALL RESOURCES](#)

Cotton Harvest Information:

Make sure you are ready for harvest with guides on the efficient operation of pickers and strippers as well as tips on the proper storage of seed cotton

[National](#)

CULTIVATED TWEETS



@Crop_Protection

27 Jan

News: Incorporating #Soil Health Into Your Farming Mantra
<https://t.co/wW2hYTextf>



@CottonGrowerMag

26 Jan

Bayer Offers Shared Risk Program for FiberMax, Stoneville Growers
<https://t.co/gvOwLYiuPt# cotton>



@CottonGrowerMag

26 Jan

[COMPOSE NEW TWEET](#)

STAY INFORMED

Email

[SUBSCRIBE](#)

HOW TO VIDEOS

FILTER BY REGION

[ALL](#)[FAR WEST](#)[MIDSOUTH](#)[SOUTHEAST](#)[SOUTHWEST](#)

FILTER BY TOPIC

[ALL](#)[HARVEST](#)[INSECT MANAGEMENT](#)[MAINTENANCE](#)[SUSTAINABILITY](#)[National](#)

Cotton Harvest Information:

Make sure you are ready for harvest with guides on the efficient operation of pickers and strippers as well as tips on the proper storage of seed cotton



Natur



In Se
In Season



Preseason Procedures

Preseason Procedures

Preseason Procedures



Fire Prevention

In Season Procedures Harvesting

SUBSCRIBE

COTTON NEWS

[NEWS](#)[MARKET](#)[QUALITY](#)

Filter News by...



Cotton Farming

- [Strong Cotton | SPECIAL REPORT](#)
January 9, 2017
- [Pertinent Topics For Ginners Will B...](#)
January 3, 2017
- [Multiple Year/Location Data = Pric...](#)
January 3, 2017

[SEE ALL COTTON FARMING ARTICLES](#)

Research and Reports

Research, reports and other materials from
Cotton Incorporated's rich library

2015 Cotton LCA Executive Summary

Sustainability | 2016

This document provides an executive
summary of the most recently
complete global life cycle assessment
for ...

[Learn more >](#)

[SEE ALL RESEARCH & REPORTS](#)

COTTON MULTIMEDIA

[WEATHER](#)[WEBCASTS](#)[VIDEOS](#)

Focus on Cotton

- [Management of Tarnished Plant Bugs...](#)
January 3, 2017
- [Glyphosate-Resistant Johnsongrass...](#)
November 29, 2016
- [What Does it Cost to Choose the Wro...](#)
November 29, 2016
- [Target Spot of Cotton - Six Years Afte...](#)
October 31, 2016
- [Changing Bt Technologies and Bollwo...](#)
October 4, 2016
- [Impact of Leaf Pubescence on Fiber...](#)
October 4, 2016

[SEE ALL FOCUS ON COTTON WEBCASTS](#)

Resources Directory

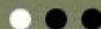
Trusted resources that we find useful and
think you will, too

Handling Cotton Exposed to Excessive Rainfall

Harvest

Given the weather conditions that
have challenged the southeastern
United States this harvest season,
suggestions for ...

[Learn more >](#)

[SEE ALL RESOURCES](#)

Cotton Harvest Information:

Make sure you are ready for
harvest with guides on the efficient
operation of pickers and strippers
as well as tips on the proper
storage of seed cotton



National



CULTIVATED TWEETS



@Crop_Protection

27 Jan

News: Incorporating [#Soil](#) Health
Into Your Farming Mantra
<https://t.co/wW2hYTexft>



@CottonGrowerMag

26 Jan

Bayer Offers Shared Risk Program
for FiberMax, Stoneville Growers
<https://t.co/gvOwLYiuPt> [#cotton](#)



@CottonGrowerMag

26 Jan



COMPOSE NEW TWEET

STAY INFORMED

Email

SUBSCRIBE

[Back to Focus
on Cotton](#)

What Does it Cost to Choose the Wrong Cotton Variety?

December 2016



By Guy D. Collins, Ph.D.
Associate Professor
Extension Cotton Specialist
North Carolina State University
Phone: 919-515-2647
Email: gdcollin@ncsu.edu

Watch Presentation (25 min 04 sec)

for PC, Mac, and Mobile Devices | for iPhone

[Subscribe to PMN](#)

Summary: This presentation will help growers as well as county agents, consultants, and industry personnel from all cotton producing states gain a better understanding of the potential economic impact of poor cotton variety selection. Specifically in this presentation, practitioners will learn the real impact of making poor variety decisions and what to expect when doing so. Additionally they will learn how various degrees of error vary in terms of economic impact. By the end of this presentation, growers will completely understand the importance of careful variety selection and how to go about the variety selection process while avoiding or minimizing error, therefore improving their ability to capture additional profit in modern cotton varieties.



Guy D. Collins, Ph.D.

Extension Cotton Specialist,
North Carolina State...

[More info](#)

Menu

1. Introduction
2. Variety Selection Criteria
3. Variety Selection Considerati...
4. Common Questions (1)
5. Common Questions (2)
6. Common Questions (3)
7. Common Questions (4)
8. Variety Comparison (Degree ...
9. Impact on Your Farm (1)
10. Economic Impact of the Indi...
11. Recap (On-Farm Trials)
12. Economic Impact of the Indi...
13. Recap (OVT)
14. Impact on Your Farm (2)
15. NC On-Farm Trials (Fiber Qu...
16. Frequency of Poor Quality
17. Resources for Variety Selecti...
18. Works Cited
19. Thank You

Search...



What Does it Cost to Choose the Wrong Cotton Variety?



NC STATE UNIVERSITY

Guy D. Collins, Ph.D.

NCSU Cotton Extension Associate Professor

Keith L. Edmisten, Ph.D

NCSU Professor and Extension Cotton Specialist



< PREV

NEXT >



Guy D. Collins, Ph.D.
Extension Cotton Specialist,
North Carolina State...

[More info](#)

Menu

1. Introduction
2. Variety Selection Criteria
3. Variety Selection Considerati...
4. Common Questions (1)
5. Common Questions (2)
6. Common Questions (3)
7. Common Questions (4)
8. Variety Comparison (Degree ...
- 9. Impact on Your Farm (1)**
10. Economic Impact of the Indi...
11. Recap (On-Farm Trials)
12. Economic Impact of the Indi...
13. Recap (OVT)
14. Impact on Your Farm (2)
15. NC On-Farm Trials (Fiber Qu...
16. Frequency of Poor Quality
17. Resources for Variety Selecti...
18. Works Cited
19. Thank You

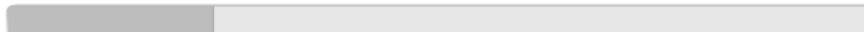
Search...



Impact on your farm

Using the smallest degree of error and the currently low cotton prices of \$0.65/lb....

- **A 1500-acre producer could lose \$99,000 to \$135,000 in potential revenue to make a SMALL mistake**
- **These cost drastically increase for higher degrees of error, and these methods are common**
- **For \$0.80/lb prices, these figures inflate by 25 %!!**



< PREV

NEXT >



Dale Logan
Manager, SeedMatrix

[More info](#)

Menu

1. Introduction
2. Dashboard
3. Single Trial Data (1)
4. Single Trial Data (2)
5. Single Trial Data (3)
6. Single Trial Data (4)
7. Single Trial Data - PDF Rep...
8. Single Trial Data - Excel Re...
9. Single Trial Data (5)
10. Top Performing Products ...
11. Top Performing Products ...
12. Top Performing Products ...
13. Top Performing Products ...
14. Top Performing Products ...
15. Top Performing Products ...
16. Top Performing Products ...
17. Head to Head Compariso...
18. Head to Head Compariso...
19. Head to Head Compariso...
20. Head to Head Compariso...
21. Head to Head Compariso...

Search...



SeedMatrix.com (00:00 / 15:41)

Resources

SeedMatrix.com

Variety Trial Data - Seed Comparisons - Agriculture Data Archiving - SeedMatrix.com | SeedMatrix - Google Chrome
https://seedmatrix.com

WELCOME | HOW IT WORKS | BENEFITS | PRESS | CONTACT | MY DASHBOARD


seedmatrix

Signed In As
JohnDoegrower

Dashboard
Reports
Regions
Profile
Sign Out

A Revolution in Advanced Seed Comparison Technology

SeedMatrix puts the power in your hands to compare seed varieties on multiple levels



About SeedMatrix

SeedMatrix is a web based application that enables users to analyze a myriad of seed test plot data in a simple format. SeedMatrix allows the user to analyze variety trial data on cotton, wheat, corn, and soybean. SeedMatrix can analyze the data to find best varieties based on multiple criteria selections, including geography, soil texture, irrigation type, as well as technology traits.

LEARN HOW IT WORKS

The Benefits

- Analyze your company's internal plot data
- No need to collect and standardize OVT test plot data, its included
- You control who has access to your data
- SEE MORE BENEFITS

WELCOME
HOW IT WORKS
BENEFITS
PRESS
CONTACT
MY DASHBOARD

All content ©2012 SeedMatrix.com
PH 901-277-6764
info@seedmatrix.com



◀ PREV

NEXT ▶

Seedmatrix: Find your most profitable variety



Dashboard Reports Regions Profile **Help me with this page!** Sign Out **[Kater Hake]**

Cotton

Single Trial Data Top Performing Products **Head to Head Comparison** One to Many Comparison

Head to Head Comparison

☒ Compare Products ☐ Compare Companies

Company: Delta Pine

Product:

Add To Comparison

Customize the columns displayed

Tests: **19|14** 2015: **19|14**

Columns Remove

Filters Year (1) ☐ All ☒ 2015 ☐ 2014 ☐ 2013 ☐ 2012 ☐ 2011 ☐ 2010 ☐ 2009 ☐ 2008 ☐ 2007 ☐ 2006 ☐ 2005

Head to Head Results Trials By State Trials Within States Benchmark Comparison Product Details Dual Axis Chart Sc

Company	Product	Trait	All Trials		Trials with Fiber Data				
			Yield	Turnout	Yield	Turnout	Staple	Strength	Mic
Delta Pine	DP 1518 B2XF	B2XF	1,235	41.9%	1,159	42.3%	36.5	29.3	4.37
Delta Pine	DP 0912 B2RF	B2RF	1,203	40.4%	1,142	40.5%	34.4	29.9	4.89

Trials with Fiber Data							
Yield	Turnout	Staple	Strength	Mic	Unif	\$/LB	\$/Acre
1,159	42.3%	36.5	29.3	4.37	83.3%	\$0.5328	\$621.26
1,142	40.5%	34.4	29.9	4.89	82.6%	\$0.5080	\$583.28

[Login](#) | [Contact Us](#) | [Sign Up for PMN Update](#)

Search PMN

Crop, Forage & Turfgrass Management



Journal

Applied Turfgrass Science



Journal

Crop Management



Journal

Forage and Grazinglands



Journal

Plant Health Progress



Journal

Focus on Corn



Webcasts

Focus on Cotton



Webcasts

Focus on Potato



Webcasts

Focus on Soybean



Webcasts

Focus on Tomato



Webcasts



News

Plant Disease Management Reports



Efficacy Trials

Arthropod Management Tests



Efficacy Trials



Proceedings



Image Database

PMN
Partners

Subscribe
to PMN

COTTON  CULTIVATED
CottonCultivated.Cottoninc.com

FOCUS ON COTTON

*Enhancing the Health, Management,
and Production of Cotton Crops*



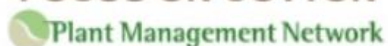
Educational Webcasts

[RSS Feed](#) 

Latest Webcasts

- **Resistant Weeds: What You Should Know and Why You Should Care** - Todd A. Baughman, Oklahoma State University, February 2017.
- **Management of Tarnished Plant Bugs in Cotton** - Jeff Gore, Mississippi State University, January 2017.

FOCUS ON COTTON



George G. Kennedy, Ph.D.

Professor of Agriculture,
North Carolina State...

[More info](#)

Menu

1. Introduction
2. Tobacco Thrips (Frankliniell...
3. Tobacco Thrips Manageme...
4. The Problem With Tobacc...
5. Temporal Occurrence of Pl...
6. Timing and Magnitude of ...
7. Cotton Seedling Growth Is...
8. Timeline: Seasonal Thrips I...
9. Model Estimates Intensity ...
10. Using Model Projections f...
11. How Do You Use the Onli...
12. Using the Calendar to Sel...
13. Basic Operation: Selectin...
14. Basic Operation: Selectin...
15. Basic Operation: Selectin...
16. Tool Output: Relative Ris...
17. Tool Output: Relative Ris...
18. Tool Deployment: Risk Pr...
19. Tool Output: Graphical D...
20. Using the Tool: Updating...
21. Applying Tool Output (1)

Search...



Thrips Infestation Predictor for Cotton: An Online Tool for Informed Thrips Management (00:08 / 11:44)
Resources

Thrips Infestation Predictor for Cotton: An Online Tool for Informed Thrips Management

<http://climate.ncsu.edu/cottonthripsrisk>



**NC STATE
UNIVERSITY**

George G. Kennedy, Thomas M. Chappell, and Anders S. Huseth
North Carolina State University



< PREV

NEXT >

FOCUS ON COTTON



Peter C. Ellsworth, Ph.D.

Specialist/Professor, IPM,
University of Arizona

[More info](#)

Menu Notes

1. Introduction
2. Whitefly IPM (1)
3. Statewide Cotton Sprays
4. 100 Million Dollar Problem
5. Contamination
6. Sensitive Processing Equip...
7. Statewide Cotton Sprays
8. Deployment of Selective T...
9. Selective Options for Lygus
10. Economic & Environment...
11. IPM
12. Unstable (1)
13. Unstable (2)
14. Unstable (3)
15. Bemisia tabaci (1)
16. Whitefly IPM: 1991
17. Whitefly IPM: 1993
18. Whitefly IPM: 1995
19. Whitefly IPM: 1996-1999
20. Whitefly IPM: 2000
21. Contamination? (1)

Search...

Whitefly Management & Prevention of Excess Sugars in Cotton (00:05 / 36:01)

Resources

*Plant Management Network & Cotton Incorporated
Focus on Cotton Webcast*

Whitefly Management & Prevention of Excess Sugars in Cotton

**Peter C. Ellsworth, Tim Vandervoet,
Lydia M. Brown, Al Fournier & Steven
E. Naranjo***

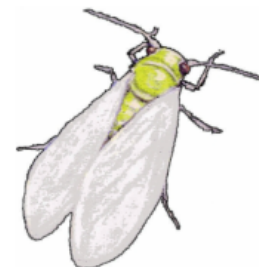
Arizona Pest Management Center

**Department of Entomology
University of Arizona**



COLLEGE OF AGRICULTURE
AND LIFE SCIENCES

COOPERATIVE EXTENSION
Arizona Pest Management Center



< PREV

NEXT >



Peter C. Ellsworth, Ph.D.

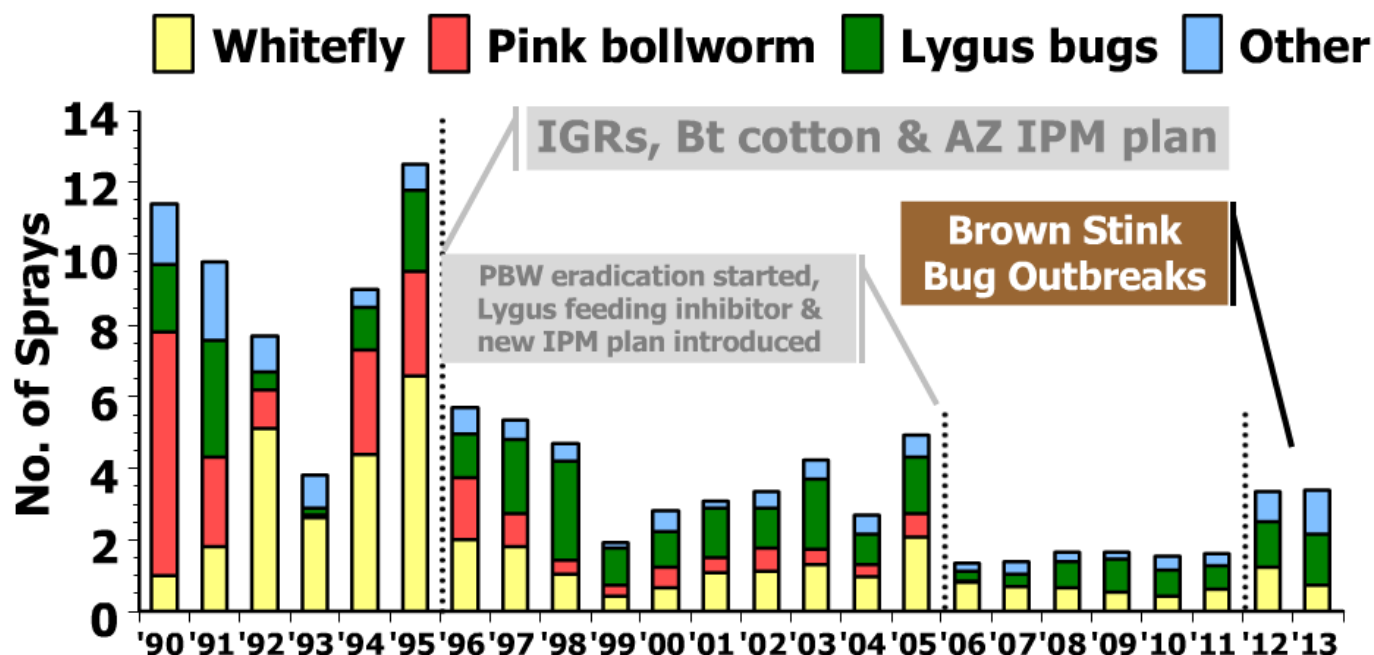
Specialist/Professor, IPM,
University of Arizona

[More info](#)

Menu Notes

- 87. Integration
- 88. Compatibility of Practices
- 89. Brown Stink Bug Tactics
- 90. Rate of Increase
- 91. Principal Response Curve ...
- 92. Principal Response Curve ...
- 93. Different Outcomes: Thre...
- 94. Different Outcomes: Thre...
- 95. Different Outcomes: Four...
- 96. Different Outcomes: Five ...
- 97. Which Ones Work Best?
- 98. Four Most Important Spe...
- 99. Natural Enemy Impacts
- 100. 1996–2011: Selective Sys...
- 101. Disruptive Influence of S...
- 102. Stink Bug Control Destr...
- 103. Selectivity is Key
- 104. Cotton Technology Use ...
- 105. Funding and Support
- 106. Thank You
- 107. Other Resources

Disruptive Influence of Stink Bugs



Ellsworth et al. 2/14

Search...



< PREV

NEXT >

FOCUS ON COTTON

Plant Management Network



Peter C. Ellsworth, Ph.D.

Specialist/Professor, IPM,
University of Arizona

[More info](#)

Menu Notes

- 87. Integration
- 88. Compatibility of Practices
- 89. Brown Stink Bug Tactics
- 90. Rate of Increase
- 91. Principal Response Curve ...
- 92. Principal Response Curve ...
- 93. Different Outcomes: Thre...
- 94. Different Outcomes: Thre...
- 95. Different Outcomes: Four...
- 96. Different Outcomes: Five ...
- 97. Which Ones Work Best?
- 98. Four Most Important Spe...
- 99. Natural Enemy Impacts
- 100. 1996–2011: Selective Sys...
- 101. Disruptive Influence of S...
- 102. Stink Bug Control Destr...
- 103. Selectivity is Key
- 104. Cotton Technology Use ...
- 105. Funding and Support
- 106. Thank You
- 107. Other Resources

Search...



Whitefly Management & Prevention of Excess Sugars in Cotton (33:29 / 36:01)

Resources



< PREV

NEXT >

FOCUS ON COTTON



Jeff Gore, Ph.D.

Assistant Professor,
Mississippi State University

[More info](#)

Menu

1. Introduction
2. Overview
3. Pest Status
4. 2006 Source Sink Ratio
5. 2014 Source Sink Ratio
6. Yield Losses
7. Evolution of Insecticide Us...
8. Pyrethroid Resistance
9. Acephate Resistance Survey
10. Regional TPB Trial
11. Foliar Insect Control: MS ...
12. IPM (1)
13. IPM (2)
14. Edge Effects
15. Thresholds
16. Variety Pubescence
17. Impact of Planting Date a...
18. Impact of N Rate

Search...



Management of Tarnished Plant Bugs in Cotton (00:04 / 33:52)

Resources



Management of Tarnished Plant Bugs in Cotton



Jeff Gore

Mississippi State University



< PREV

NEXT >

FOCUS ON COTTON



Jeff Gore, Ph.D.

Assistant Professor,
Mississippi State University

[More info](#)

Menu

1. Introduction
2. Overview
3. Pest Status
4. 2006 Source Sink Ratio
5. 2014 Source Sink Ratio
6. Yield Losses
7. Evolution of Insecticide Us...
8. Pyrethroid Resistance
9. Acephate Resistance Survey
10. Regional TPB Trial
11. Foliar Insect Control: MS ...
12. IPM (1)
13. IPM (2)
14. Edge Effects
15. Thresholds
16. Variety Pubescence
17. Impact of Planting Date a...
18. Impact of N Rate

Search...



Management of Tarnished Plant Bugs in Cotton (10:39 / 33:52)

Resources



< PREV

NEXT >



Seth Byrd, Ph.D.

Extension Cotton Specialist,
Texas A&M University...

[More info](#)

Menu

1. Introduction (1)
2. Introduction (2)
3. New Technologies
4. Vegetative Injury Symptoms
5. Growth and Maturity Sym...
6. Review of Previous Work
7. Trial Locations
8. Materials and Methods
9. Sub-Lethal Rates of 2,4-D ...
10. Group I Yield
11. Group II Yield
12. Group III Yield
13. Frequency Treatments Re...
14. Average Yield Loss by Tre...
15. Frequency of Treatments ...
16. End of Season Visual Effe...
17. Effects on Boll Number a...
18. Mechanisms Behind Yield...
19. Group I Injury Ratings
20. Group II Injury Ratings
21. Group III Injury Ratings

Search...



Beltwide Evaluation of the Effect of 2,4-D Drift on Cotton (00:02 / 19:06)

Resources



Beltwide Evaluation of the Effect of 2,4-D Drift on Cotton

Seth A. Byrd

Extension Cotton Specialist
Texas A&M AgriLife Extension

Guy D. Collins, A. Stanley Culpepper, Keith L. Edmisten, Darrin M. Dodds, David L. Wright, Gaylon D. Morgan, Paul A. Baumann, Peter A. Dotray, Andrea S. Jones, Misha R. Manuchehri, Timothy L. Grey, Theodore M. Webster, Jerry W. Davis, Jared R. Whitaker, John L. Snider, Phillip M. Roberts, and Wesley M. Porter



< PREV

NEXT >



Seth Byrd, Ph.D.

Extension Cotton Specialist,
Texas A&M University...

[More info](#)

Menu

- 8. Materials and Methods
- 9. Sub-Lethal Rates of 2,4-D ...
- 10. Group I Yield
- 11. Group II Yield
- 12. Group III Yield
- 13. Frequency Treatments Re...
- 14. Average Yield Loss by Tre...
- 15. Frequency of Treatments ...
- 16. End of Season Visual Effe...
- 17. Effects on Boll Number a...
- 18. Mechanisms Behind Yield...
- 19. Group I Injury Ratings
- 20. Group II Injury Ratings
- 21. Group III Injury Ratings
- 22. Injury Ratings and Yield L...
- 23. Vegetative vs Reproducti...
- 24. Evaluation of Boll Numbe...
- 25. No Pattern Between Heat...
- 26. Environmental Impact
- 27. Conclusions**
- 28. Thank You

Search...



Conclusions

- The tank contamination rate treatment accounted for the majority (75%) of instances of yield loss.
- Growth stages 9-lf, FB, and FB+2 wk were the most sensitive to 2,4-D applications in terms of yield loss compared to NTC.
- Visual injury ratings did not reflect yield loss at the most sensitive growth stages.



< PREV

NEXT >

FOCUS ON COTTON



Glen Ritchie, Ph.D.

Assistant Professor, Texas
Tech University, Texas A&M

[More info](#)

Menu

1. Introduction
2. Cotton Growing Region
3. The Cotton Seed
4. Seeding Development
5. Soil Compaction
6. Cotton Meristems
7. Seedling Stress
8. Vegetative Growth and Fr...
9. Cotton Flower Development
10. Effects of Stress on Fruit
11. Fruit Production
12. Resource Partitioning
13. Fruiting and Vegetative B...
14. Resource Partitioning
15. Boll Development
16. Yield Mapping
17. Boll Distribution
18. Water-Stressed Plant
19. Fully Irrigated Plant
20. Irrigation Rate
21. Irrigation Timing



Cotton Response to Stress (00:00 / 11:34)

Resources

Cotton Response to Stress

Glen Ritchie

Texas Tech University / Texas
A&M AgriLife Research



TEXAS A&M
AGRI LIFE
RESEARCH



< PREV

NEXT >



Glen Ritchie, Ph.D.

Assistant Professor, Texas
Tech University, Texas A&M

[More info](#)

Menu

- 5. Soil Compaction
- 6. Cotton Meristems
- 7. Seedling Stress
- 8. Vegetative Growth and Fr...
- 9. Cotton Flower Development
- 10. Effects of Stress on Fruit
- 11. Fruit Production
- 12. Resource Partitioning
- 13. Fruiting and Vegetative B...
- 14. Resource Partitioning
- 15. Boll Development
- 16. Yield Mapping
- 17. Boll Distribution
- 18. Water-Stressed Plant
- 19. Fully Irrigated Plant
- 20. Irrigation Rate
- 21. Irrigation Timing
- 22. Water Deficit Timing and...
- 23. Water Deficit Timing and...
- 24. Summary
- 25. References

Search...



Water Deficit Timing and Lint Yield

Environment	Squaring	Early Flowering	Late Flowering	Full Irrigation	LSD _{irr}
	Lint Yield (kg ha ⁻¹)				
2011	1215 b	564 d	1101 c	1525 a	84
2012 Loc. 1	1339 b	841 d	1164 c	2059 a	122
2012 Loc. 2	1759 b	876 d	1271 c	2180 a	86
Mean_{irr}	1438 B	760 D	1179 C	1921 A	132

Adapted from Snowden et al. 2014



< PREV

NEXT >



Syam K. Dodla, Ph.D.
Assistant Professor,
Louisiana State University
[More info](#)

Menu

1. Introduction
2. Importance of Sulfur
3. Need for Sulfur Fertilization
4. Sulfur Deficiency Symptoms
5. Sulfur Deficiency Symptoms i...
6. Pre-Plant Soil Analysis
7. Recommended Rates of Sulfu...
8. Sulfur Fertilization: Cotton Yi...
9. Sources of Sulfur Fertilizer
10. Summary

Search...



Sulfur Fertilization of Cotton

Syam K. Dodla

Assistant Professor of Soil Fertility and Crop Irrigation

Red River Research Station

Louisiana State University AgCenter

Bossier City, LA



Plant Management Network

innovate · educate · improve lives

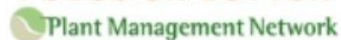
for the latest research-based information on just about anything, visit our Web site: www.lsuagcenter.com



◀ PREV

NEXT ▶

FOCUS ON COTTON



Syam K. Dodla, Ph.D.

Assistant Professor,
Louisiana State University

[More info](#)

Menu

1. Introduction
2. Importance of Sulfur
3. Need for Sulfur Fertilization
4. Sulfur Deficiency Symptoms
5. Sulfur Deficiency Symptoms i...
6. Pre-Plant Soil Analysis
7. Recommended Rates of Sulfu...
8. Sulfur Fertilization: Cotton Yi...
9. Sources of Sulfur Fertilizer
10. Summary

Sulfur Fertilization of Cotton (04:41 / 12:49)

Resources

Sulfur Deficiency Symptoms in Cotton



Adopted from: Yin et al., 2012, Uni. Of Tennessee

- Yellowing of younger leaves
- Stunted growth
- Fewer and smaller bolls
- Reduced root growth

innovate · educate · improve lives
for the latest research-based information on just about anything, visit our Web site: www.lsuagcenter.com



Search...



< PREV

NEXT >



Robert C. Kemerait, Jr.,...
Professor and Extension
Specialist, University of...
[More info](#)

Menu

1. Introduction
2. Target Spot of Cotton (Go...
3. Trouble With Leaf Spots a...
4. Fungal Foliar Diseases
5. What Is the Value of a Lea...
6. Stemphylium Leaf Spot
7. Stemphylium Leaf Spot on...
8. Target Spot on Cotton
9. Leaf Spot Diseases in Deca...
10. Corynespora Leaf Spot o...
11. Corynespora cassiicola
12. Conclusions for Corynesp...
13. Cotton Populations Are U...
14. Target Spot
15. Target Spot: 3rd Week of...
16. Through a Glass, Darkly
17. Between a Rock and a Ha...
18. Region of Greatest Conce...
19. Target Spot Risk Zones
20. Target Spot in Cotton
21. Target Spot Risk Factors

Search...



TARGET SPOT OF COTTON

Six years after first report

Part 1



**Dr. Bob Kemerait, Dr. Marin Brewer, Ms. Leilani Sumabat
and Dr. Austin Hagan**

Dept. of Plant Pathology and Dept. of Entomology and Plant Pathology
University of Georgia and Auburn University



< PREV

NEXT >



Robert C. Kemeraite, Jr.,...

Professor and Extension Specialist, University of...

[More info](#)

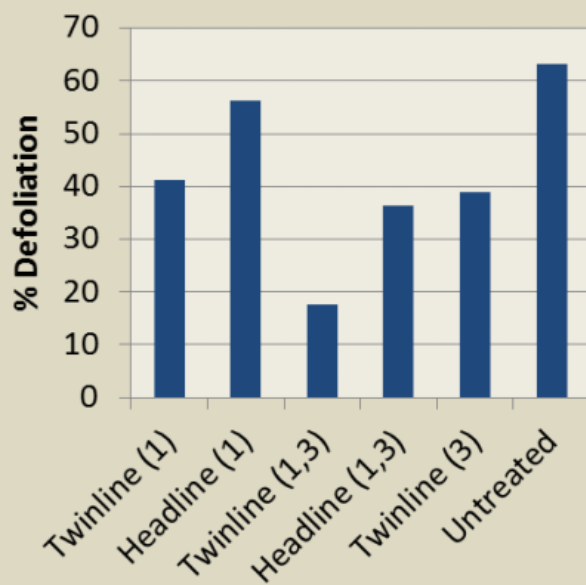
Menu

10. Corynespora Leaf Spot o...
11. Corynespora cassiicola
12. Conclusions for Corynesp...
13. Cotton Populations Are U...
14. Target Spot
15. Target Spot: 3rd Week of...
16. Through a Glass, Darkly
17. Between a Rock and a Ha...
18. Region of Greatest Conce...
19. Target Spot Risk Zones
20. Target Spot in Cotton
21. Target Spot Risk Factors
- 22. 2012 Stripling Irrigation P...**
23. Target Spot Risk Index
24. Target Spot Management
25. Cotton Variety Selection
26. Fungicide Impact on Final...
27. Fungicide Impact on Lint ...
28. 2012 Cotton Defoliation ...
29. 2013 Variety Trial, Mitche...
30. For More Information

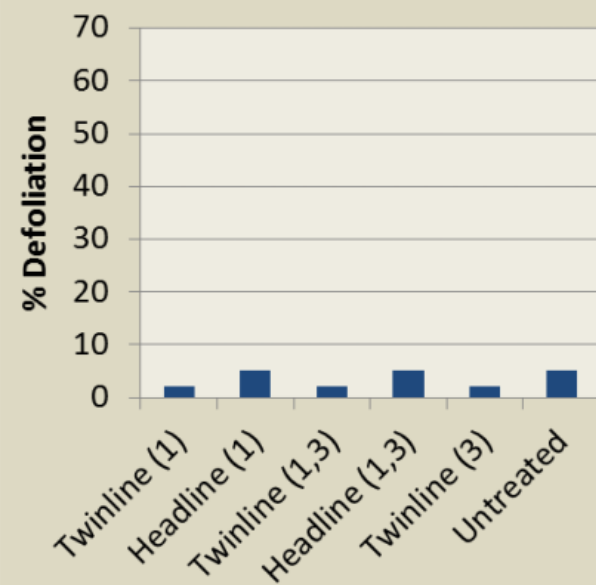
2012 Stripling Irrigation Park, Mitchell County

Target Spot

Overhead Irrigation



Non-Irrigated



Search...



< PREV

NEXT >

COTTON



CULTIVATED

<http://cottoncultivated.cottoninc.com>

News

Customized Twitter & news feeds

Weather

Up-to-the-minute & local

Research

40 years of research dedicated to advancing cotton: searchable by topic or region.

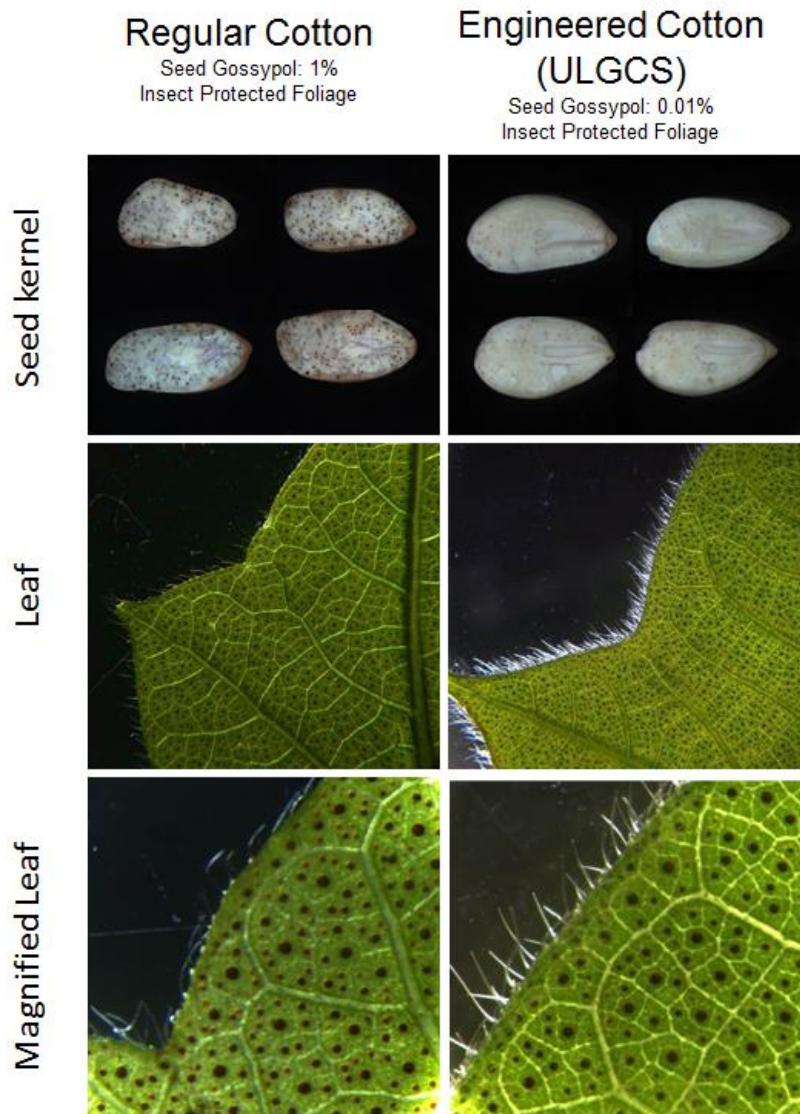
Resources

Useful, trusted sources on a variety of cotton topics: searchable by topic or region

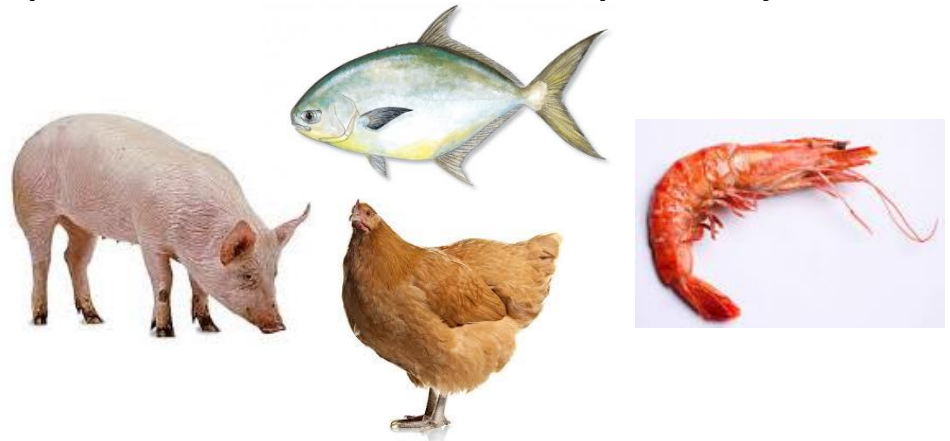
Your one-stop destination for ***grower information***



Expand cotton's use as a food crop



Removing gossypol from just the cottonseed opens up feed for aquaculture, swine and poultry:



- Provides cooking oil, multi-functional feed and a protein rich food from the local gin
- Texas A&M University developed
- U.S. regulatory approval on track for 2017 submission

Expand Cotton's Sustainability (PTXD phosphite weed suppression)

$\text{PO}_3 \rightarrow \rightarrow \rightarrow \rightarrow \rightarrow \rightarrow \rightarrow \rightarrow \text{PO}_4$
(4 to 12 months naturally in soil)

$\text{PO}_3 \rightarrow \text{PO}_4$
(minutes in PTXD plants)

$\text{PO}_3 \nrightarrow \text{PO}_4$
(never in weeds and non-PTXD crops)

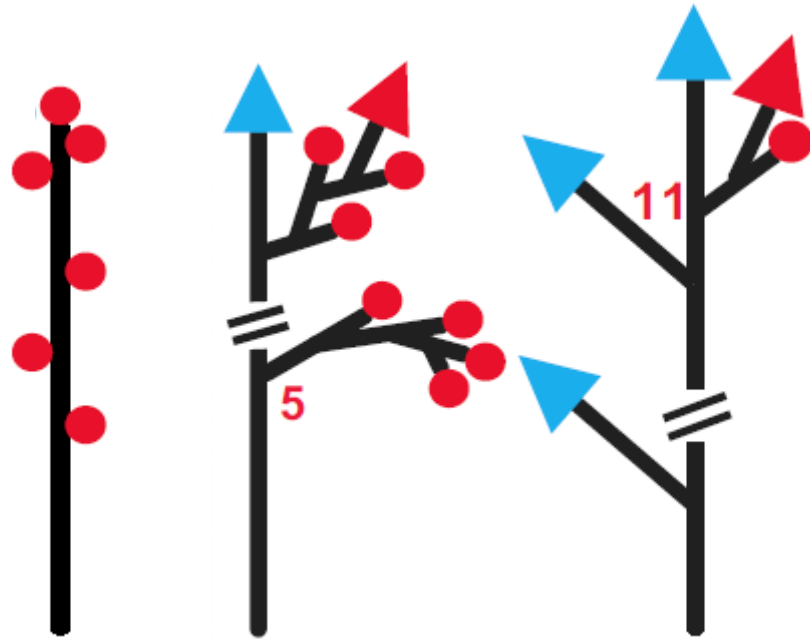
PO_3 binds to PO_4 weed receptors
(weeds "think" plenty of P while starving for P)

Provides broad spectrum weed suppression, reduced P fertilizer input and reduced water quality degradation

PTXD cotton and morning glory weeds



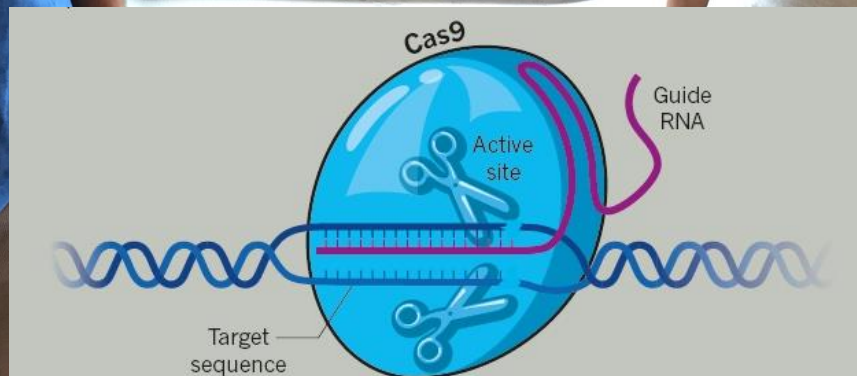
Expand Cotton's Efficiency & Quality



Genome Editing with CRISPR

What is it?

Plant Molecular Biology 2017 (*Baohong Zhang*)
Scientific Reports 2017 (*Keerti Rathore*)



Genome Editing with CRISPR

What does it do?



TGCTTTTCAAGATACCCAGATCATAT - GAAGGGCACGACTTCTTCAAGAGCGCCATGCCT 0

TGCTTTTCAAGATACCCAGATCATAT - AAGCGGCACGACTTCTTCAAGAGCGCCATGCCT -1

TGCTTTTCAAGATACCCAGATCATA - AAGCGGCACGACTTCTTCAAGAGCGCCATGCCT -2

TGCTTTTCAAGATACCCAGATCATA - AGCGGCACGACTTCTTCAAGAGCGCCATGCCT -3

TGCTTTTCAAGATACCCAGATCATAT - gAGCGGCACGACTTCTTCAAGAGCGCCATGCCT -2, +1

TGCTTTTCAAGATACCCAGATCATAT - AGCGGCACGACTTCTTCAAGAGCGCCATGCCT -2

TGCTTTTCAAGATACCCAGATCATAT - AAGCGGCACGACTTCTTCAAGAGCGCCATGCCT -1

TGCTTTTCAAGATACCCAGATCATA - AGCGGCACGACTTCTTCAAGAGCGCCATGCCT -3

TGCTTTTCAAGATACCCAGATCATATtGAAGCGGCACGACTTCTTCAAGAGCGCCATGCCT +1

TGCTTTTCAAGATACCCAGA - AGCGGCACGACTTCTTCAAGAGCGCCATGCCT -8

TGCTTTTCAAGATACCCAGATC - GAAGCGGCACGACTTCTTCAAGAGCGCCATGCCT -4

TGCTTTTCAAGATACCCAGATCAT - GAAGCGGCACGACTTCTTCAAGAGCGCCATGCCT -2

Genome Editing with CRISPR

Where are we?

- Crops created from deletion are not regulated
 - DuPont corn with high value cornstarch using CRISPR
 - Penn State anti-browning mushroom using CRISPR
- Crops created from Genome Edited inserts have not been assessed for regulatory requirements
 - DuPont scientist claims 10,000 to 15,000 base pair insertion with CRISPR

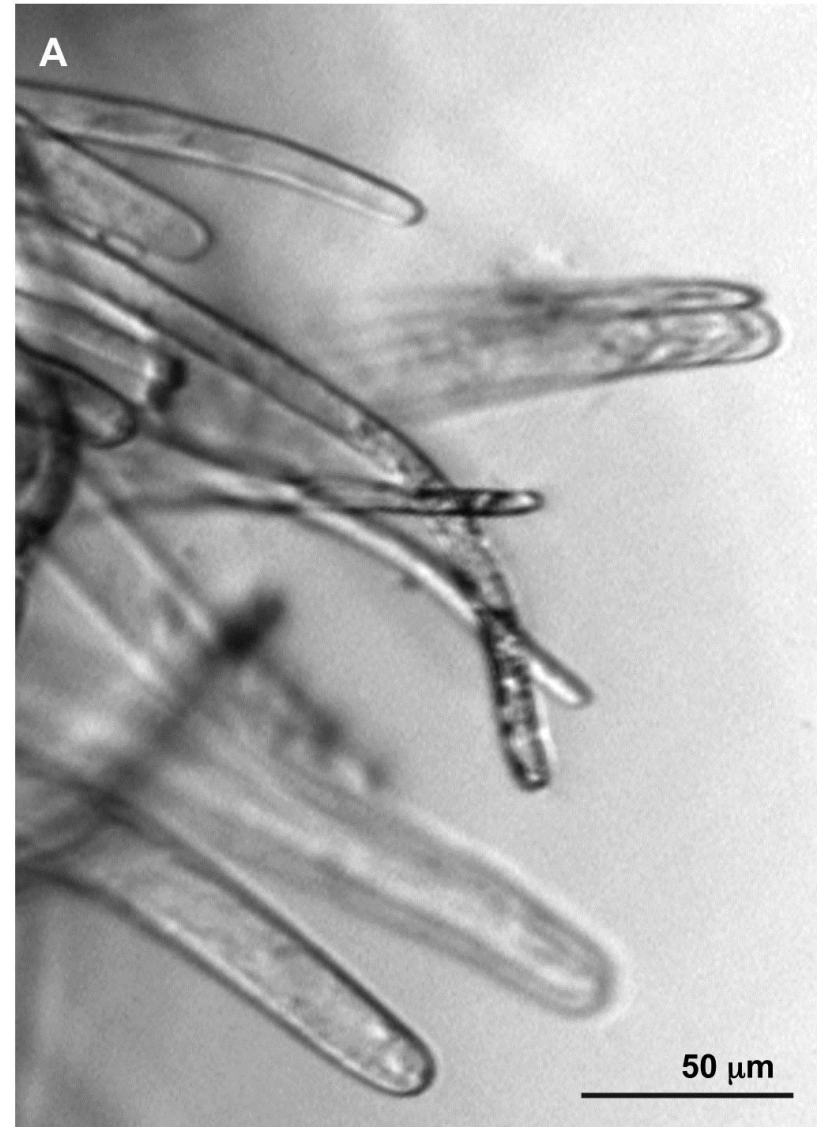
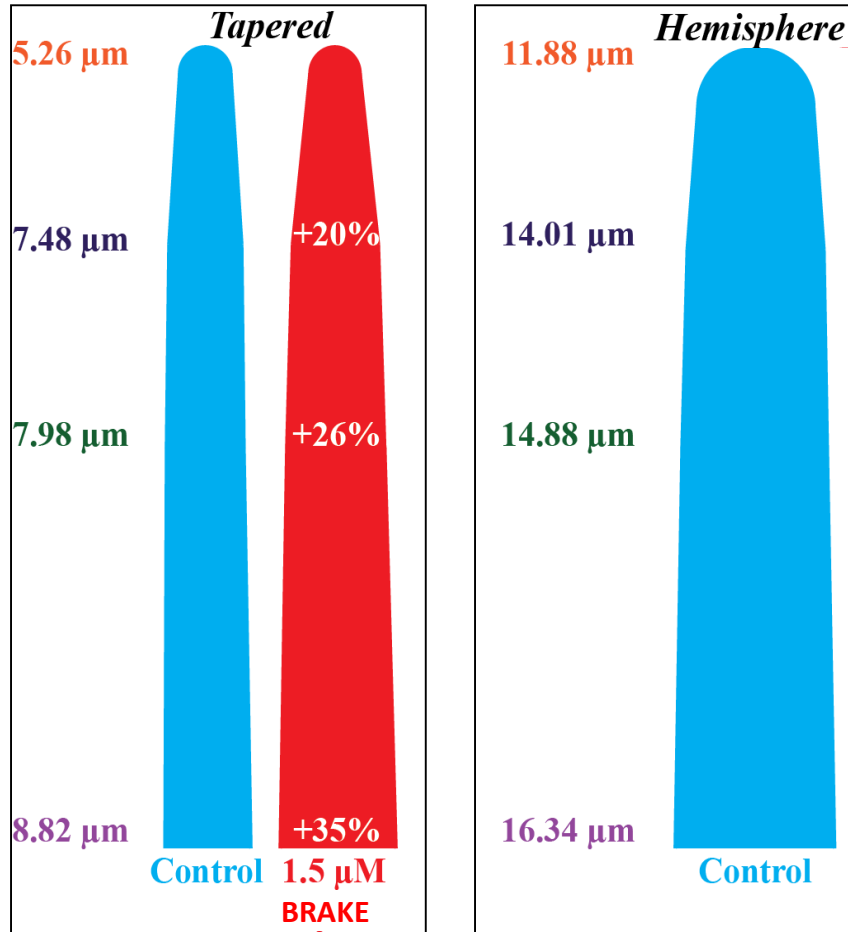
Genome Editing with CRISPR

What are the Sustainability implications?

- Likely most (all?) future biotech traits will be Genome Edited because site specific nature reduces cost and improves predictability
- US regulatory process currently clear for base pair deletions, but uncertain for insertions
- Global regulatory discussions ongoing, next 2 years informative
- Consumers **MAY** be more acceptive
- **WILL** broaden diversity of genome edited crops and of traits in current biotech crops

Expand Fiber Quality (with genome editing)

“Hang a Pima fiber on an Upland seed”



Expand Fiber Quality (with genome editing)



wild cotton focused
on “staying alive”



domesticated cotton
still sacrifices fiber to
make seed



we now understand
what regulatory network
to edit out

A man in a striped shirt, jeans, and a cap stands in a field of tall, dry grass. He is looking towards the right. The sky is filled with large, grey clouds. The text "Thank You for visiting us" is overlaid in the center of the image.

**Thank You
for visiting us**