<table>
<thead>
<tr>
<th>Agenda</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Gin Management Zoom Meeting</td>
<td>July 23, 2020 – 1:00 – 3:00 PM Central</td>
</tr>
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</table>

<table>
<thead>
<tr>
<th>Topic</th>
<th>Presenter</th>
</tr>
</thead>
<tbody>
<tr>
<td>Opening Remarks</td>
<td>Curtis Stewart</td>
</tr>
<tr>
<td>NCC Remarks</td>
<td>Gary Adams</td>
</tr>
<tr>
<td>COVID Gin Employer Requirements</td>
<td>Dusty Findley and Kelley Green</td>
</tr>
<tr>
<td>Contamination Prevention</td>
<td>Harrison Ashley and Curtis Stewart</td>
</tr>
<tr>
<td>USDA-ARS Gin Lab Report</td>
<td>Greg Holt and Derek Whitelock</td>
</tr>
<tr>
<td>Bale Packaging</td>
<td>Lauren Krogman</td>
</tr>
<tr>
<td>Cottonseed Survey</td>
<td>Harrison Ashley</td>
</tr>
</tbody>
</table>
Covid–19 & Cotton Gins

Dusty Findley
Southeastern Cotton Ginners Association, Inc.
Dawsonville, Georgia
706–344–1212

Kelley Green
Texas Cotton Ginners’ Association
Round Rock, Texas
512–615–1102
Goals

- Protect yourself and your employees (especially high-risk)
- Prevent initial infection
- Prepare for infection of any employee (especially key individuals)
- Minimize disruption to your business
No Applicable Regulations for Covid
  ◦ Executive Orders from Local, State, Federal
  ◦ Much Guidance for Local, State, Federal

Follow CDC Guidance as primary source
  ◦ Most other agencies are following CDC lead
  ◦ OSHA has some additional information, but mainly follows CDC
Must-Have Components

- Covid-19 Company Response Team
  - Committee of Manager, Superintendent, Ginners
  - Need to be fully trained on Company Covid Procedures and Policies.

- Develop Procedures and Policies
  - Screening
  - Face Coverings and potentially PPE
  - Distancing and Grouping of Employees
  - Sanitation and Cleaning
  - Exposure Response
Covid-19 Company Response Team
- Each member must be able to communicate your Covid-19 program elements to
  - Employees
  - Customers
  - Regulatory Officials
Develop Procedures and Policies

- Screening
  - Could be temperature checks (100.4 Deg F)
  - Must include checking for symptoms per CDC guidance

- Masks and potentially PPE
  - Face coverings are important – liability, perception, reality
  - Other PPE may be needed depending on task
Develop Procedures and Policies

- Distancing and Grouping of Employees
  - This is a key feature – protect your workforce
  - Minimizes exposure to complete shutdown
  - Groups should be eliminated, or as small as possible
    - Can you use barriers to keep people separated?
    - Keep gin workers, office workers and truckers separate
    - Keep customers and workers separate if possible
  - Separate workers by shift
    - Analyze workflow to minimize standing or gathering
      - Time Clock – can you have touchless process?
      - Lunch Break
      - Safety Meetings
    - Are staggered shifts and staggered lunches possible?
    - Consider housing arrangements to keep groups separate
Covid-19 & Cotton Gins
STOP

To do our part in preventing the spread of COVID-19 in our community and workplace, we are restricting access to this facility for anyone who may have recently been exposed to the virus. Please read this carefully.

By entering this facility, you are affirming and attesting that:

(a) You have **not** in the last 14 days had any close contact with anyone who is either confirmed or suspected of being infected with COVID-19, including anyone who was experiencing or displaying any of the known symptoms of COVID-19 (which are listed in item (c) below); AND

(b) You have **not** in the last month traveled to a restricted area that is under a Level 2, 3, or 4 Travel Advisory according to the U.S. State Department (including China, Italy, Iran, and most of Europe); AND

(c) You do **not** currently experience or display, and you have **not** in the last 14 days experienced or displayed, any of the following symptoms:
   - Elevated temperature or fever of 100.4°F or higher,
   - Cough,
   - Shortness of breath and/or difficulty breathing,
   - Loss of smell and/or taste,
   - Fatigue, or
   - Persistent headaches.

If you answered YES to any of the above statements, you may **NOT** enter this building.

Thank you for your cooperation.

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EMPLOYEE RIGHTS
PAID SICK LEAVE AND EXPANDED FAMILY AND MEDICAL LEAVE UNDER THE FAMILIES FIRST CORONAVIRUS RESPONSE ACT

The Families First Coronavirus Response Act (FFCRA or Act) requires certain employers to provide their employees with paid sick leave and expanded family and medical leave for specified reasons related to COVID-19. These provisions will apply from April 1, 2020 through December 31, 2020.

- **PAID LEAVE ENTITLEMENTS**
  Generally, employers covered under the Act must provide employees:
  Up to two weeks (80 hours, or a part-time employee’s two-week equivalent) of paid sick leave based on the higher of their regular rate of pay, or the applicable state or Federal minimum wage, paid at:
  - 100% for qualifying reasons #1-3 below, up to $11.00 daily and $550.00 total;
  - 50% for qualifying reasons #4 and #5 below, up to $200 daily and $2,000 total; and
  - Up to 12 weeks of paid sick leave and expanded family and medical leave paid at 50% for qualifying reason #5 below for up to $200 daily and $12,000 total.

  A part-time employee is eligible for leave for the number of hours that the employee is normally scheduled to work over that period.

- **ELIGIBLE EMPLOYEES**
  In general, employees of private sector employers with fewer than 500 employees, and certain public sector employers, are eligible for up to two weeks of fully or partially paid sick leave for COVID-19 related reasons (see below). Employees who have been employed for at least 30 days prior to their leave request may be eligible for up to an additional 10 weeks of partially paid expanded family and medical leave for reason #5 below.

- **QUALIFYING REASONS FOR LEAVE RELATED TO COVID-19**
  An employee is entitled to take leave related to COVID-19 if the employee is unable to work, including unable to telework, because the employee:

  1. is subject to a Federal, State, or local quarantine or isolation order related to COVID-19;
  2. has been advised by a health care provider to self-quarantine related to COVID-19;
  3. is experiencing COVID-10 symptoms and is seeking a medical diagnosis;
  4. is caring for an individual subject to an order described in (1) or self-quarantine as described in (2);
  5. is caring for his or her child whose school or place of care is closed (or child care provider is unavailable) due to COVID-10 related reasons; or
  6. is experiencing any other substantially similar condition specified by the U.S. Department of Health and Human Services.

- **ENFORCEMENT**
  The U.S. Department of Labor’s Wage and Hour Division (WHD) has the authority to investigate and enforce compliance with the FFCRA. Employers may not discharge, discipline, or otherwise discriminate against any employee who lawfully takes paid sick leave or expanded family and medical leave under the FFCRA, files a complaint, or institutes a proceeding under or related to this Act. Employers in violation of the provisions of the FFCRA will be subject to penalties and enforcement by WHD.

  For additional information or to file a complaint:
  1-866-487-9243
  TTY: 1-877-666-5627
dol.gov/agencies/whd

Symptoms of Coronavirus (COVID-19)

Know the symptoms of COVID-19, which can include the following:

- Cough
- Fever
- Chills
- Muscle pain
- Shortness of breath or difficulty breathing
- Sore throat
- New loss of taste or smell

Symptoms can range from mild to severe illness, and appear 2-14 days after you are exposed to the virus that causes COVID-19.

*Seek medical care immediately if someone has emergency warning signs of COVID-19.*

- Trouble breathing
- Persistent pain or pressure in the chest
- New confusion
- Inability to wake or stay awake
- Bluish lips or face

This list is not all possible symptoms. Please call your medical provider for any other symptoms that are severe or concerning to you.
cdc.gov/coronavirus

WAGE AND HOUR DIVISION
UNITED STATES DEPARTMENT OF LABOR

WHD3 REV/0393
3/17/20, 8:05:54 AM
Develop Procedures and Policies

- Sanitation and Cleaning
  - This is especially important in office and housing
  - There are sanitation companies that have products that have 30-day protection properties
  - Housing, office, break areas, bathrooms should have regular cleaning schedule for high-touch surfaces and someone in charge of the cleaning.
  - High-touch areas more difficult to define in gin
  - Be sure you have a cleaning procedure for an area if you have a worker test positive
  - Train employees who are doing the cleaning
Develop Procedures and Policies

- Exposure Response
  - Be sure workers are trained to report if they have symptoms or potential exposure
  - Have pre-defined responses to the following
    - Worker that has a potential exposure
    - Worker exhibiting symptoms
    - Worker that has tested positive
    - How to quarantine Workers
    - Will the workers be paid?
Develop Procedures and Policies

- Exposure Response
  - Have pre-defined responses to the following
    - Worker that has a potential exposure
      - May need to be sent home – critical infrastructure
      - Must be separated from other workers
      - Must screen daily
    - Worker exhibiting symptoms
      - Must be sent home – sanitize employees work area.
      - Inform potentially affected employees
    - Worker that has tested positive
      - Must be sent home – sanitize employees work area.
      - Inform Local Authorities
      - Inform potentially affected employees
      - Contact Tracing – 6–15–48
Any employee who worked in close proximity (within six feet) for a prolonged period of time (15 minutes depending upon particular circumstances, such as how close the employees worked and whether they shared tools or other items) with the affected employee during the 48-hour period before the onset of symptoms must be identified. These employees will be sent home for 14 days under CDC Guidance to ensure the infection does not spread. While quarantined, those employees should self-monitor for symptoms, avoid contact with high-risk individuals, and seek medical attention and notify employer if symptoms develop.
Return to Work

- Follow Health Professional Instructions
- Follow CDC Guidelines – Current Guidelines:
  - An employee displaying symptoms should not return to work for 72 hours after recovery (no fever, no fever medication) AND improvement in respiratory symptoms AND 7 days since symptoms first appeared
  - An employee that has tested positive should not return to work until the fever has resolved without medication, respiratory symptoms have improved AND two negative test results more than 24 hours apart have been obtained.
  - An employee that has tested positive with no symptoms may return to work seven days after the test if there is no subsequent illness and there are no further symptoms. For three additional days this worker must maintain 6’ distance from other employees and wear a facemask.
Additional Considerations

- Worker Housing
  - Ventilation
  - Spacing in Housing
  - Separate Accommodations for sick or high-risk workers
  - Post CDC Guidelines in Barracks
  - Hand-washing/sanitation facilities
  - Greater Frequency for Cleaning
  - 6 Feet Between Beds
  - Workers Sleep Head to toe
  - Person Designated for Sanitation
Policies for Workers Traveling off-site
- Seed and Bale Truck Drivers
- Parts pickup

Policies for Visitors/Customers
- Where are visitors/customers allowed
- Procedures for visitors/customers
Additional resources
- https://www.gapconnections.com/resources/covid-19-resources
- https://www.fisherphillips.com/faqs
- https://www.cotton.org/issues/members/covid19/index.cfm?

Questions?

WASH YOUR HANDS!
CONTAMINATION FROM PLASTICS

• Plastics have been a concern for many years
• Plastics have become the most prevalent non-plant contaminant
• There are many types and forms
USDA AMS 2018 ANNOUNCEMENT:

New plastic code (71 or 72) implemented July 1 beginning with the 2018 crop to distinguish Plastic from Other Extraneous Matter (61 or 62)
Plastic Contamination
2017/18 vs. 2018/19 vs. 2019/20 Crops

Samples Called Plastic

<table>
<thead>
<tr>
<th>Year</th>
<th>US Total Plastic</th>
<th>Total Bales Classed</th>
</tr>
</thead>
<tbody>
<tr>
<td>2017</td>
<td>2,651</td>
<td>17,000,000</td>
</tr>
<tr>
<td>2018</td>
<td>3,035</td>
<td>17,812,931</td>
</tr>
<tr>
<td>2019</td>
<td>4,918</td>
<td>19,397,276</td>
</tr>
</tbody>
</table>

(through 5/19/2020)
2019 Plastic 71 vs. 72

(through 5/19/2020)
2019/20 Crop - Plastic Calls by Color

- 58.2% Yellow
- 22.3% Pink
- 9.6% Black
- 4.0% Blue
- 2.0% Green
- 1.1% Pink
- 0.7% Red
- 0.3% Clear
- 1.9% Other

(thru 5/19/2020)
Prevention of Plastic Contamination

Lost reputation/lost market potential

...significant loan discounts

<table>
<thead>
<tr>
<th>Year</th>
<th>Grade</th>
<th>71</th>
<th>72</th>
</tr>
</thead>
<tbody>
<tr>
<td>2018/19</td>
<td>UP</td>
<td>-460</td>
<td>-695</td>
</tr>
<tr>
<td></td>
<td>ELS</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2019/20</td>
<td>UP</td>
<td>-510</td>
<td>-775</td>
</tr>
<tr>
<td>2020/21</td>
<td>UP</td>
<td>-1870</td>
<td>-2080</td>
</tr>
<tr>
<td>2020/21</td>
<td>ELS</td>
<td>-4000</td>
<td>-4000</td>
</tr>
</tbody>
</table>

Concern is how many are **not** called
USDA AMS 2020 ANNOUNCEMENT:

Beginning July 1, 2020, if the original classification had a plastic extraneous matter code (e.g. 71 & 72), the following modifications will be made:

- The plastic extraneous matter code will be automatically applied to the Review or Rework classification for that sample; and
- All other factors (e.g. Grade, Leaf, Micronaire, Length, Strength, Uniformity, Color and % Area) will be classed as normal including the module averaging rules for certain factors.
- The Review and Rework classification for all other extraneous matter codes remains unchanged.
NCC and JCIBPC Contamination Policy

Prevention is CRITICAL:

• Revise and update educational material

• Contamination Awareness and Prevention efforts with growers, ginners & warehouses

• Closely monitor complaints from mills and shippers

• Internet form for reporting contamination incidents
## Prevention of Plastic Contamination - Recommended Best Practices for Producers & Ginters

<table>
<thead>
<tr>
<th>Chapter</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Introduction to Prevention of Plastic Contamination</td>
</tr>
<tr>
<td>2</td>
<td>In The Field</td>
</tr>
<tr>
<td>3</td>
<td>During Harvest</td>
</tr>
<tr>
<td>4</td>
<td>Machine Operation</td>
</tr>
<tr>
<td>5</td>
<td>Module Handling</td>
</tr>
<tr>
<td>6</td>
<td>How to Stage Modules in the Field</td>
</tr>
<tr>
<td>7</td>
<td>Loading a Module Truck</td>
</tr>
<tr>
<td>8</td>
<td>Loading a Flatbed Truck</td>
</tr>
<tr>
<td>9</td>
<td>Unloading Modules Onto a Gin Yard</td>
</tr>
<tr>
<td>10</td>
<td>How to Handle Round Modules at the Gin</td>
</tr>
<tr>
<td>11</td>
<td>Unwrapping/ Cutting Open Modules</td>
</tr>
<tr>
<td>12</td>
<td>Conclusion</td>
</tr>
</tbody>
</table>

### Additional Resources
- Play All: Prevention of Plastic Contamination
- Meeting Materials
- Exit
Education Videos

National Cotton Council Website:  
http://www.cotton.org/tech/quality/contamfree.cfm

Texas A&M AgriLife Extension Zoom seminar:  
https://youtu.be/GeFBzgbMO4k

National Cotton Council YouTube:  
https://www.youtube.com/watch?v=5Pja_HbMEIA

NCGA Safety Video Volume VI  
Round Module Safety - Unwrapping, Handling and Storage  
Also available on USB flash drive
TamaWrap™ Blue Value Introduction

- TamaWrap™ (RMW®) Blue Value was developed, designed and produced by Tama, to offer a value alternative to our customers.
- In order to achieve this significant cost reduction, some of the materials were changed, thus TamaWrap™ Blue Value can be more susceptible to damage due to less robust construction than TamaWrap Premium.
- Please carefully review the recommendations in pages 10 and 11, to minimize the risk of cotton contamination.
Handling Recommendations

- **General recommendation:** Handle with care and do not allow the module to drag on the ground or on stalks during staging.
- **Spear loaders:** Do not allow module to drag on the ground when inserting or withdrawing spears.
- **Rear and front loaders:** Make sure arms are completely on the ground before opening and closing to avoid "over squeezing".

![Spear Loader](image1)
![Rear and Front Loaders](image2)

Transportation Recommendations

As modules wrapped with Blue Value wrap may squat more, please follow the below recommendations:

- **Module trucks:**
  - Module diameter should not exceed 100 inches (254 CM). Thus, maximum recommended harvester monitor set size is 92", since TamaWrap™ Blue Value may squat more than TamaWrap™ Premium. If larger than 100", further reduce the set size.
  - Insure that recommended chains are used on module trucks.

- **Other trucks:**
  - Make sure there are no sharp edges or other sharp objects which may cause tears in modules.
Unwrapping Recommendations

- Extra care while unwrapping modules at the Gin is required!
- Examine module carefully PRIOR to unwrapping / cutting, and remove any and ALL loose pieces of plastic and other potential contaminants.
- Gins which cut wraps:
  - Use the Tama Cut Indicator™ to locate the recommended cutting zone (3 feet / 1 meter) from the Tama Cut Indicator, with the direction of the arrows.
  - Make ONE clean cut across the module, rather than several short cuts.
  - Make sure you removed ALL pieces of wrap AFTER unwrapping / cutting.
Blue Tama Econowrap

• Meet competition from Chinese wrap manufacturers
  • Material used not as robust as premium wraps
  • More prone to squat, rip and puncture
  • Does not have adhesive layer as found with premium
  • Only small adhesive strip
ASABE Standard

Round Module Wrap Performance Standard Development

• Data collection underway with third-party testing of TamaWrap to create baseline performance data

• Voluntary standard

• Next steps:
  • Complete data analysis
  • Review results with sub-committee (including John Deere and Tama)
  • Identify and complete any additional testing needed
  • Draft standard for consideration by committee
PET Strapping
PET Strapping
Questions
Bale Packaging

National Cotton Ginners Association Gin Management Zoom Meeting
July 23, 2020
2020 Specifications Review

- February 26, 2020—JCIBPC met and amended Specifications
- April 2, 2020 – Specification’s Review Committee approved revisions
- April 9, 2020- USDA approved the 2020 Specifications recommendations

- The Specifications are available at: http://www.cotton.org/tech/bale/specs/index.cfm
Specification Revisions

- Removed all references to Cold Rolled High Tensile Steel Strapping
- Replaced NAFTA references with USMCA
- Added light blue (Pantone 306 C) as an additional approved color for woven polypropylene
## 3.1. Tare Weights

<table>
<thead>
<tr>
<th>Wrapping Materials</th>
<th>PET Plastic Strap&lt;sup&gt;2&lt;/sup&gt;</th>
<th>All 6-Wire</th>
<th>All 8-Wire</th>
</tr>
</thead>
<tbody>
<tr>
<td>Polypropylene (Woven) [Approved or Experimental]&lt;sup&gt;3&lt;/sup&gt;</td>
<td>2</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>Polyethylene (Woven)&lt;sup&gt;4&lt;/sup&gt;</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Polyethylene (PE) Film Bagging,&lt;sup&gt;5&lt;/sup&gt;</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>Lightweight Woven Cotton Bagging [Experimental, West Region/Export Only]&lt;sup&gt;6&lt;/sup&gt;</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>Cotton Bagging [Fully Approved]&lt;sup&gt;7&lt;/sup&gt;</td>
<td>4</td>
<td>6</td>
<td>7</td>
</tr>
<tr>
<td>Fully Restrained PET Bagging [GinFast™]&lt;sup&gt;8&lt;/sup&gt;</td>
<td></td>
<td>3 (does not utilize traditional ties)</td>
<td></td>
</tr>
</tbody>
</table>
## 3.2. Bagging and Tie Codes

<table>
<thead>
<tr>
<th>Type of Bagging</th>
<th>Position 36</th>
<th>Type of Strap\Tie</th>
<th>Position 37</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cotton, [Fully Approved]</td>
<td>C</td>
<td>PET (Polyester) – 6-strap</td>
<td>1</td>
</tr>
<tr>
<td>Polyethylene (Film)</td>
<td>P</td>
<td>Steel – 6-wire</td>
<td>2</td>
</tr>
<tr>
<td>Polypropylene (Woven)</td>
<td>W</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Light weight cotton, [West Region/Export Only]</td>
<td>L</td>
<td>Steel – 8-wire</td>
<td>4</td>
</tr>
<tr>
<td>Experimental</td>
<td>X</td>
<td>Experimental</td>
<td>0 (zero)</td>
</tr>
</tbody>
</table>
Approved Woven Polypropylene Color

• Pg. 11- 2.2.3.1.2.3. Color: The color of the fabric containing HALS shall be translucent white, translucent light gold, or translucent light blue equivalent to Pantone color 306 C, unless otherwise approved by the JCIBPC.
Recertification of All Approved Materials

- All bagging and tie manufacturers were sent a recertification notice last summer
- Currently collecting samples and lab results
  - Delayed due to COVID-19
  - Acknowledgement received from 18 out of 34 total sent
  - 5 materials have been reapproved
The PBI Tag Subcommittee has been reinstated and met on March 20 to review complaints from overseas mills on tag background color and the use of dashes and spaces in the eye-readable segment of the PBI tag. Additional meeting will be held pending the results of the mill survey.
Mill Bale Packaging Survey

- A Bale Packaging Survey was created with assistance from CCI to question mills (domestic/international) about bale packaging preferences, contamination, and sustainability
- Survey was released mid-May and closed mid-June
- Response Regions: 9 domestic mills/158 international mills
- Report to the full JCIBPC by mid-August
Cotton Bale Bag Project

- Test to determine the market supply chain acceptance of the fully-approved 3lb. cotton bag (1974)
- Contamination/Sustainability
- Project funded by a merchant, ACSA, AMCOT, and the NCC
- 13,600 bags landed in early February
- 2 more containers (27,200 bags) have been ordered, expected to land end of August
- Bags will be available for the 2020 crop
Thank you!

Questions?

Lauren Krogman
lkrogman@cotton.org
USDA-ARS Cotton Ginning Labs
Southwestern Cotton Ginning Research Laboratory Status

COVID-19 Impacts

- Maximum Telework since mid-March
  - Shop crew on half-time rotating schedule to move essential research projects forward
  - Scientists/Engineers and Technicians mostly teleworking and at Lab for essential research work

- Next 5-year Research Plan (2020-2025) completed

Hiring

- Engineer
  - Five applications reviewed
  - Two interviews the week of August 3

- Machinist
  - Posting closed 8 Jul, should receive the applications this week
High Capacity Roller Gin Reclaimer

- Capacity to match high speed roller ginning
- Collaboration with Lummus Corporation
- Testing 2 prototypes

- Conventional
  - Small amount of seed loss
  - Very large lint loss

- Experimental
  - Higher speed = more lint loss
  - Lower speed = more seed loss
  - 700 Feeder - best overall performance

- Series Reclaimers
  - Commercial gin
Cryogenic Gin Saw Treatment

- Las Cruces & Lubbock Gin Labs, Lummus Corporation, NMSU
- West Texas Gin
- Cryogenics treatment to improve wear
- Two thicknesses to reduce power
- 3,000 gin saws
  - Weight, Thickness, Broken teeth & tooth area
- 2019 Season – 1st replication
- 2020 Season – 2nd replication

- Laboratory saw thickness/power test
- NMSU
  - Treated saw properties
  - Measure shaft fatigue to predict shaft failure
Improve Fiber Length Uniformity

- Uniformity loss at controlled-batt saw-type lint cleaner feedworks.
- All 3 ARS Gin Labs & Cotton Incorporated funded
- Five different lint cleaner technologies
  - Las Cruces, Stoneville, & Georgia
  - Western, High Plains, & Mid South cottons

Roller gin coupled lint cleaner

Saw gin coupled lint cleaner

Lummus Sentinel

Cherokee Regal

Controlled-batt lint cleaner
Plastic Contamination

No. 1 Cotton Industry Issue
- Loss of reputation and premium
- Collaboration: Gin Labs, Universities, Industry

- Detection with Imaging
- Thermal Extraction
- Removal Machinery

Cotton flow simulation conveyor
Passive Thermal Plastic Removal

At about 100° C (200° F)

- Plastic melts & sticks
- Cotton is unharmed
GoldenLion Contamination Cleaner

- Increasing air flow improved performance
  - Plastic capture increased (12 to 50%)
  - Increased seed cotton capture (0.8 to 67 lb per bale)
- Light weight RMW and shopping bags captured within the range of the manufacturer's claims
- Thicker, stiffer RMW was not effectively removed
- Plastic (& cotton) stripped from screen drum by airflow
Stoneville Ginning Laboratory
UAV in-field plastic contamination detection - prior to harvest
Cotton Transport

- Material flow at rates above Ginners Handbook recommendation
- High Speed video
- Particle motion modeling with Texas A&M
Other Stoneville activities

- Ginning energy – continuing work from Bobby Hardin and Clif Boykin
  - Impact of variety on energy consumption during ginning
  - Compact sensors built for deployment on breeder gins
- Lint Cleaners
  - After COVID-19, explore NEW approaches to lint cleaning
- Partnerships for Data Innovation (Mike Buser – ARS National Program Leader for Engineering)
  - Coordinate field, harvest, ginning, and fiber quality data
  - How can ginning outcomes be improved by knowing variety and production history prior to ginning?
    - Varieties respond differently to ginning (data collected at David Blakemore’s gin)
- Staff!!!
Status of Lubbock Gin Lab (July 23, 2020)

• Under “Maximize Telework” mandate. Waiting to go to Phase 1.
• Have been permitted to have support technicians and one Engineer come in a few days a week, with restrictions, since the end of May.
• All travel associated with research has been severely restricted/denied. Only allowed 35 mile radius of lab.
• Working to increase time onsite (gin and shop) for support staff.
• Currently focusing on select projects - Plastic Contamination (gin stand and module feeder), RFID, and Field Cleaner Validation Testing.
Camera Detection and Removal System over Feeder Apron
Plastic Sensor Lab Test Setup
Gin Stand Feeder Apron provides Optimal location for detection-removal station in Cotton-Gins
Camera Housing Design with Cooling and Self-cleaning Optics
Images Captured by System above Feeder Apron
Visual Imaging Plastic Removal – VIPR system
VIPR Testing – GA, Feb 18, 2020

% Removed

- 2"x 2"
- 4"x 4"
- 4"x 8"

Legend:
- Green
- Yellow
- Average
Samples Kicked Out by VIPR System During Testing
What’s Next?

- Plastic Contamination Inspection (PCI) System.
- Train system to recognize white and clear plastic.
- Looking at other locations upstream of Feeder Apron.
- Other technologies?
- Look at adaptation to cotton harvester?
Plastic Contamination Inspection (PCI) System

- Address the comment, “I don’t know if I have a problem, I don’t think we do…”

- Experimental Unit to Allow a Survey of Gins to Ascertain Depth of Industry Contamination Problem.

- Deploy to Select Commercial Gins to help Raise Awareness.
Camera Detection System in Module Feeder
New Camera for Module Feeder
Application of RFID Feeder Bridge to Track Potential Plastic Contamination Events

RFID Scanning Tower and IP Cameras to Record Unloading/Unwrapping Process

RFID Scanning System and NVR to Record Module Handling
Application of RFID Feeder Bridge to Track Potential Plastic Contamination Events

RFID Scanning Log Shows Date and Time for Each Module Processed

Cameras Mounted on RFID Bridge Capture Unloading/Unwrapping Events That May Cause Contamination

Module Feeder Inspection System Captures Images of Plastic Caught on MF Cylinders
Harvester Research Projects

- To be published: Influence of Spindle Harvester Drum Arrangement on Fiber Quality and Yield
  - Inline versus opposed drum arrangement
  - Testing in the U.S. and Australia

- Planned test this fall
  - Compare the basket 9996 to the CP690
  - Quality differences especially leaf
Thank You
Cottonseed Price Gin Survey
Cottonseed Price and Gin Survey

- April 7 letter to Sec. Perdue with industry support recommendations stated that cottonseed prices had remained relatively stable, but they were being monitored
- April-May price decline
  - Reported $30 for cottonseed crush components
  - Reported $35-$40 decline in cottonseed prices
# Cottonseed Crush Product Prices

Source: Cottonseed Digest

<table>
<thead>
<tr>
<th>Products</th>
<th>March 27</th>
<th>May 1</th>
<th>Change</th>
<th>July 17</th>
<th>Change</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cottonseed Oil</td>
<td>$128.10</td>
<td>$116.66</td>
<td>-$11.41</td>
<td>$112.09</td>
<td>-$16.01</td>
</tr>
<tr>
<td>Cottonseed Meal</td>
<td>$118.95</td>
<td>$112.85</td>
<td>-$6.10</td>
<td>$112.85</td>
<td>-$6.10</td>
</tr>
<tr>
<td>Cottonseed Linters</td>
<td>$24.00</td>
<td>$19.20</td>
<td>-$4.80</td>
<td>$19.20</td>
<td>-$4.80</td>
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<tr>
<td>Cottonseed Hulls</td>
<td>$39.20</td>
<td>$26.20</td>
<td>-$13.00</td>
<td>$25.20</td>
<td>-$14.00</td>
</tr>
<tr>
<td>Total Product Value</td>
<td>$310.25</td>
<td>$275.31</td>
<td>-$34.94</td>
<td>$269.34</td>
<td>-$40.91</td>
</tr>
</tbody>
</table>

Does not include:
- Average Milling Costs ($62.00)
- Freight From Gin ($14.00)
## Cottonseed Gin Survey

<table>
<thead>
<tr>
<th>Regional Totals</th>
<th>Tons CS in storage and has not been priced</th>
<th>Tons of CS priced not paid for and remain in storage</th>
<th>Average price of CS for the 2019 season prior to April 1</th>
<th>How much onsite CS storage does your gin have available</th>
</tr>
</thead>
<tbody>
<tr>
<td>West - 17</td>
<td>51,350</td>
<td>31,000</td>
<td>$286</td>
<td>203,500</td>
</tr>
<tr>
<td>Southwest - 77</td>
<td>43,990</td>
<td>50,154</td>
<td>$213</td>
<td>370,251</td>
</tr>
<tr>
<td>Mid-South - 58</td>
<td>114,154</td>
<td>57,533</td>
<td>$176</td>
<td>482,530</td>
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<tr>
<td>Southeast - 44</td>
<td>87,417</td>
<td>88,549</td>
<td>$166</td>
<td>389,915</td>
</tr>
<tr>
<td>BW - 196</td>
<td>296,911</td>
<td>227,236</td>
<td>$210</td>
<td>1,446,196</td>
</tr>
</tbody>
</table>
Cottonseed Price

- Impact of Cares Act Food Assistance Program and Food Purchases
- May 12 letter to House and July 10 Senate letter reference cottonseed
- Continue to monitor both whole cottonseed and crush product prices