COTTON COMPENSATION FOR FRUIT LOSS DUE TO INSECTS

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COTTON COMPENSATION AND IMPORTANCE

- Compensation:
  - The plants ability to recover from some degree of damage or fruit loss
- Delayed Maturity
- Yield Loss
FACTORS THAT IMPACT COMPENSATION POTENTIAL:

- Damage
- Timing
- Severity
- Location of Damage
- Environmental conditions
POTENTIAL IMPACT OF PESTS ON COTTON YIELD

Planting ~May 1
1st Square ~June 1
1st Flower ~July 1
Peak Flower ~July 21
Cutout ~Aug 25
JENKINS & MCCARTY MONEY TREE

- **1st position:** 66-75%
- **2nd position:** 18-21%

Useful Tools in Managing Cotton Production:

End of Season Plant Maps
## PERCENTAGE OF BOLLS: NODES

<table>
<thead>
<tr>
<th>Nodes</th>
<th>DP1555 B2RF</th>
<th>DP1851 B3XF</th>
<th>DP117 B2RF</th>
<th>ST4554 B2RF</th>
</tr>
</thead>
<tbody>
<tr>
<td>5-8</td>
<td>26</td>
<td>12</td>
<td>40</td>
<td>41</td>
</tr>
<tr>
<td>9-12</td>
<td>37</td>
<td>42</td>
<td>45</td>
<td>44</td>
</tr>
<tr>
<td>13+</td>
<td>37</td>
<td>46</td>
<td>15</td>
<td>15</td>
</tr>
</tbody>
</table>
## PERCENTAGE OF BOLLS: POSITIONS

<table>
<thead>
<tr>
<th>Position</th>
<th>DP1555 B2RF</th>
<th>DP1851 B3XF</th>
<th>DP117 B2RF</th>
<th>ST4554 B2RF</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>67</td>
<td>63</td>
<td>75</td>
<td>75</td>
</tr>
<tr>
<td>2</td>
<td>25</td>
<td>31</td>
<td>20</td>
<td>19</td>
</tr>
<tr>
<td>3</td>
<td>7</td>
<td>5</td>
<td>5</td>
<td>5</td>
</tr>
</tbody>
</table>
PEST MANAGEMENT EXAMPLES
THRIP DAMAGE 3-4 LEAF

GAUCHO | CRUISER | UTC | AVICTA | AERIS | ORTHENE
--- | --- | --- | --- | --- | ---
a | ab | b | c | cd | f

p = 0.02
STIMULATED FRUIT REMOVAL

- Fruiting structures removed at first bloom.
STIMULATED BOLLWORM DAMAGE

- Boll injury
  - Drilling a hole completely through the boll
- Stimulate late instar larvae
  - >L4
- Plots were injured once at various injury levels
  - 0, 2.5, 5, 10, 20, 40, 80
SEED COTTON OF ST474

SEEDCOTTON YIELD

WEEK 1  WEEK 2  WEEK 3  WEEK 4

0  2.5  5  10  20  40  80

*
PARTITIONING BY ZONE

TOP

MIDDLE

BOTTOM

Huff et al
YIELD LOSS BASED ON ZONE

- **TOP**
  - 48% Damage: 7.8 bolls
- **MIDDLE**
  - 48% Damage: 6.9 bolls
- **BOTTOM**
  - 48% Damage: 8.6 bolls

LINT PER ACRE vs. PERCENT DAMAGE

- 0% Damage: 700 bolls
- 15% Damage: 200 bolls
YIELD LOSS BASED ON POSITION

- POS1
- POS2
- POS3

LINT PER ACRE vs PERCENT DAMAGE

- POS1: 65% at 6.9 bolls
- POS2: 29% at 7.8 bolls
- POS3: 6% at 7.8 bolls
ECONOMIC INJURY LEVELS & ECONOMIC THRESHOLDS
POINTS TO REMEMBER

DAMAGE ≠ ECONOMICAL

SMART DECISIONS

REALISTIC EXPECTATIONS