

# The Cotton Jassid: What We Learned and Management in 2026

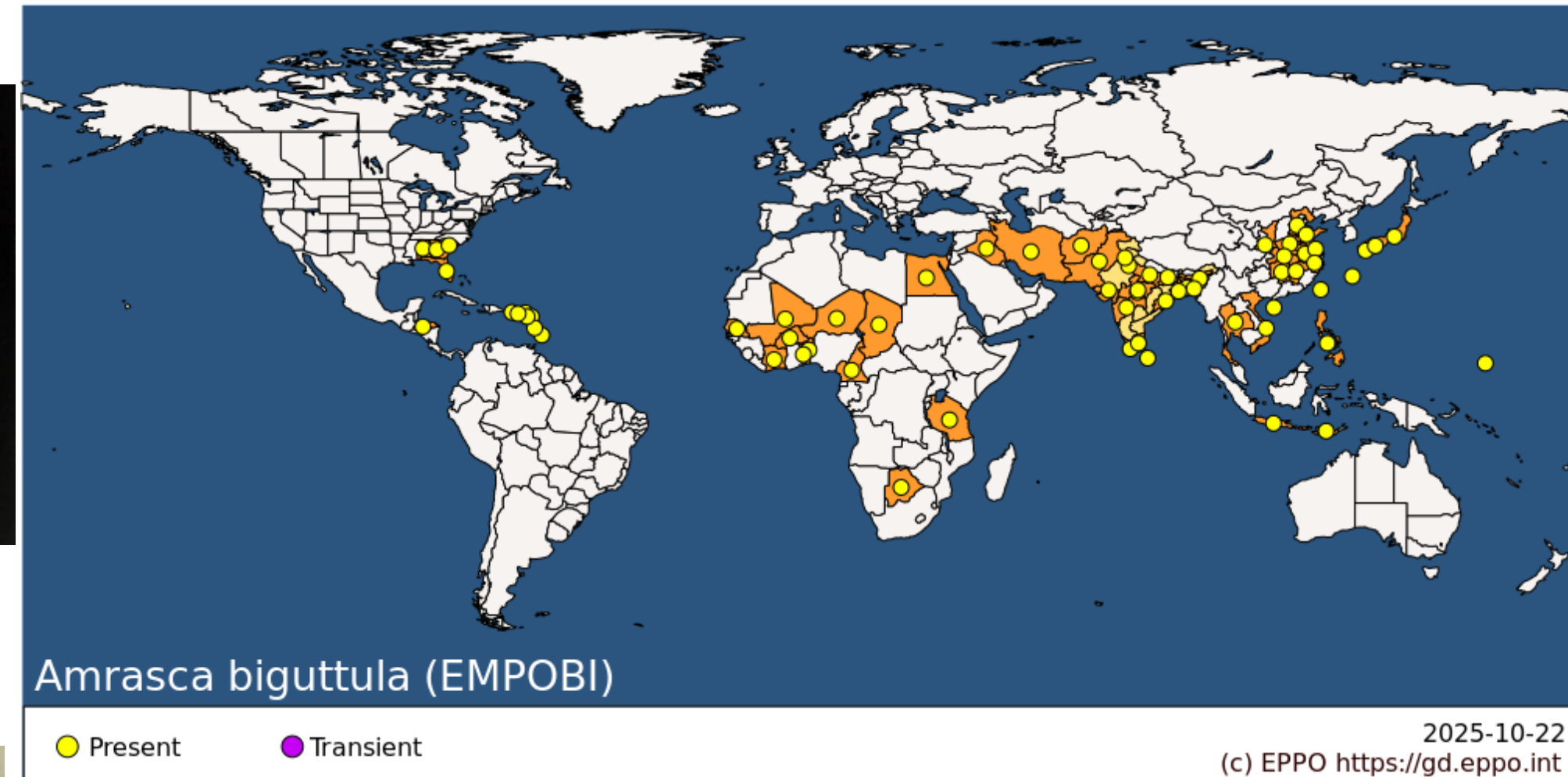


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**Education Center**

# Two Spot Cotton Leafhopper *Amrasca biguttula*

Also known as the Cotton Jassid

- **Easier to say Jassid!**
- Native to the Indian Subcontinent, east to Japan and Micronesia
- Ivory Coast 2023
- Puerto Rico 2023
- Florida 2024→2025
- Honduras 2025

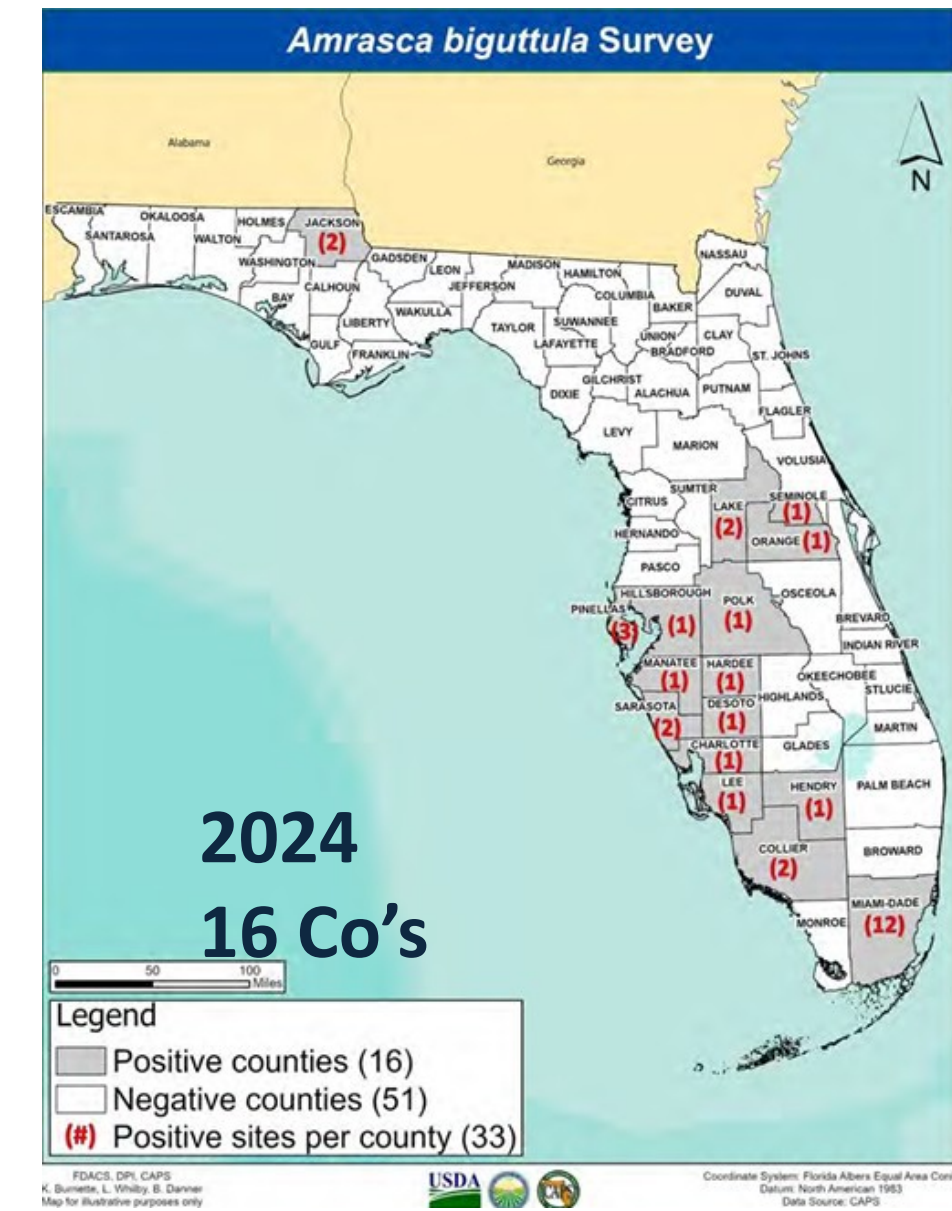
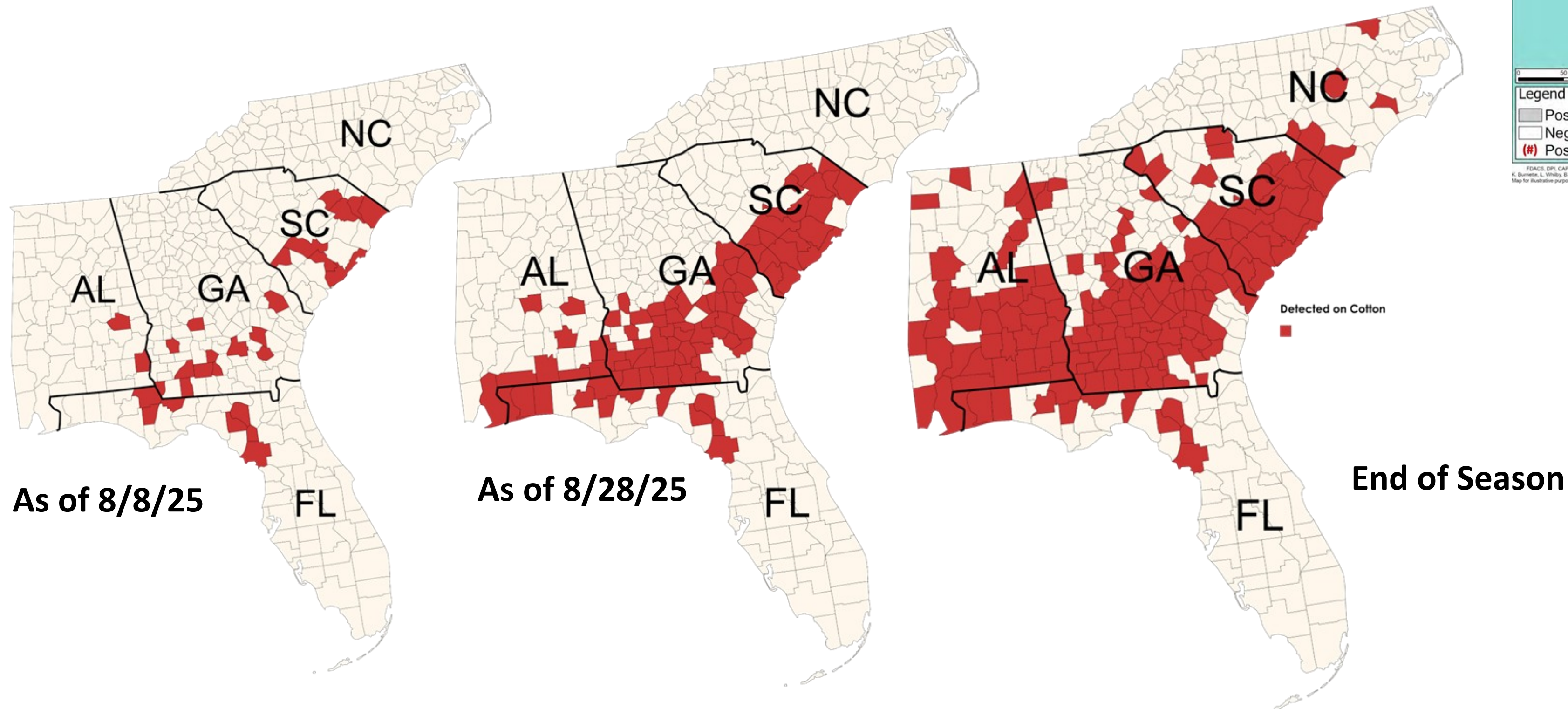


# When was it here?

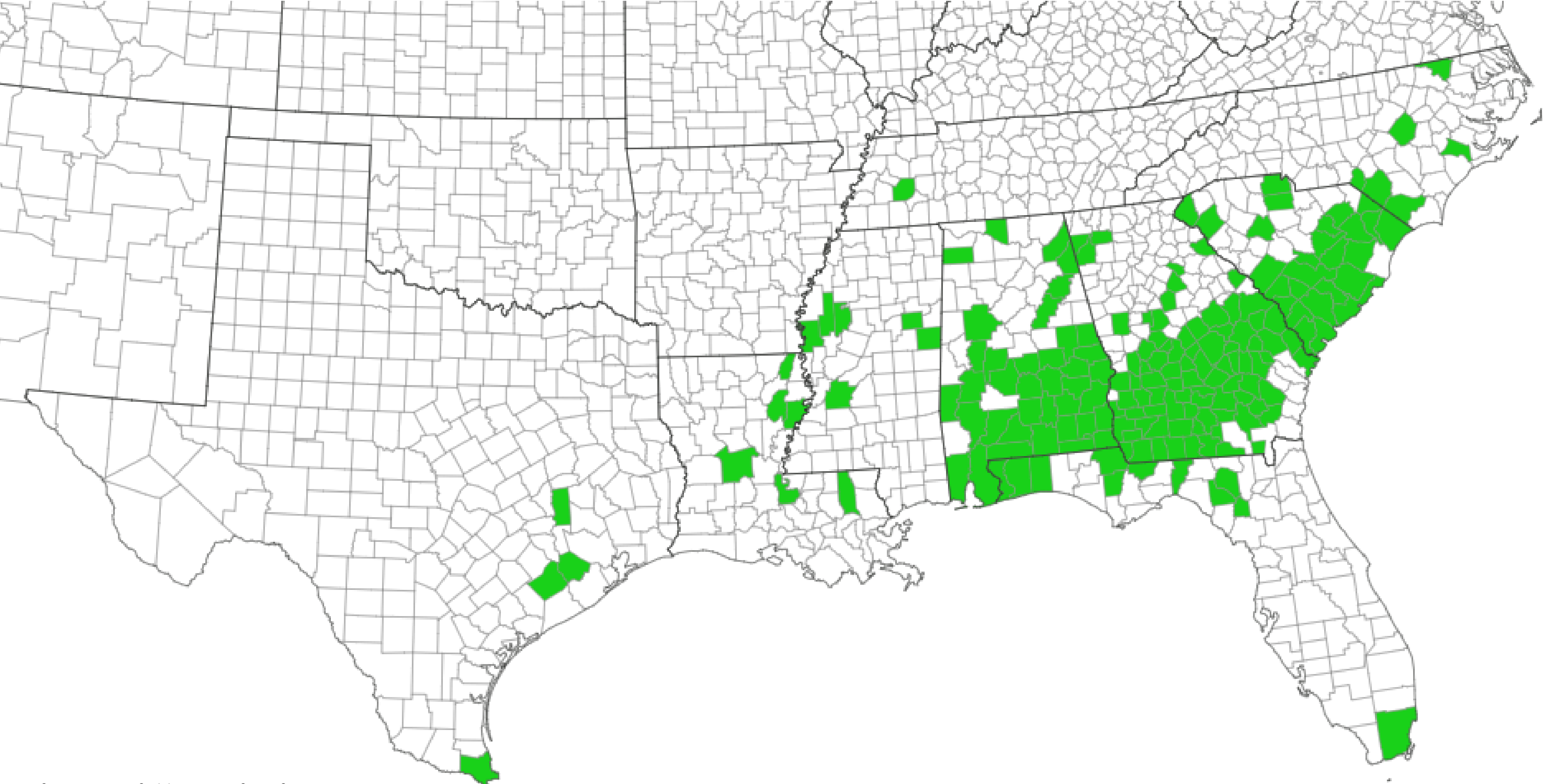
- First Detection in 25:
  - Gilchrest Co. (FL) 7/3/2025
  - Found in 115 Co. in SE in 4 weeks
  - MS and NC 9/8/25

**2024: Found on:**

Okra, Hollyhock, Cotton, Hibiscus,  
Wireweed, Black Nightshade,  
Eggplant



# Cotton Jassid Distribution Across the Cotton Belt

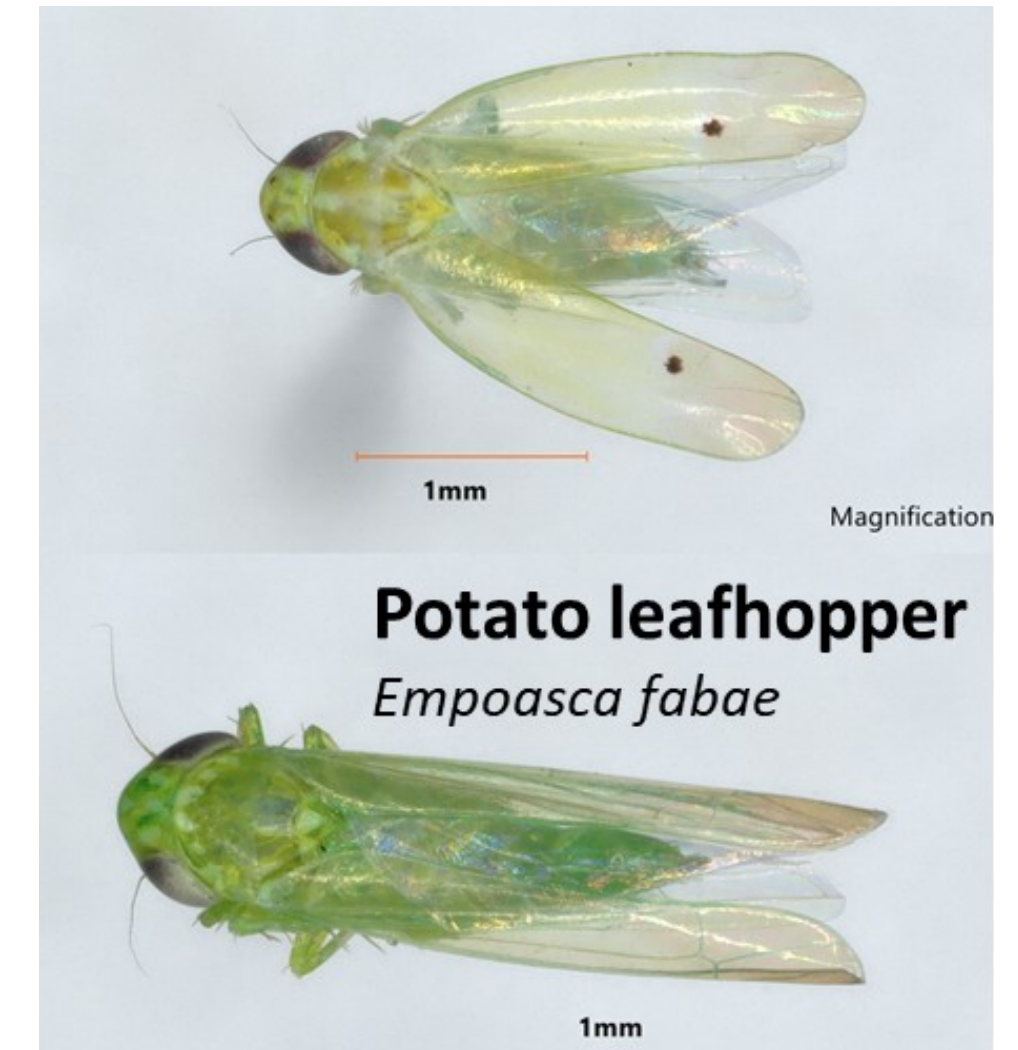
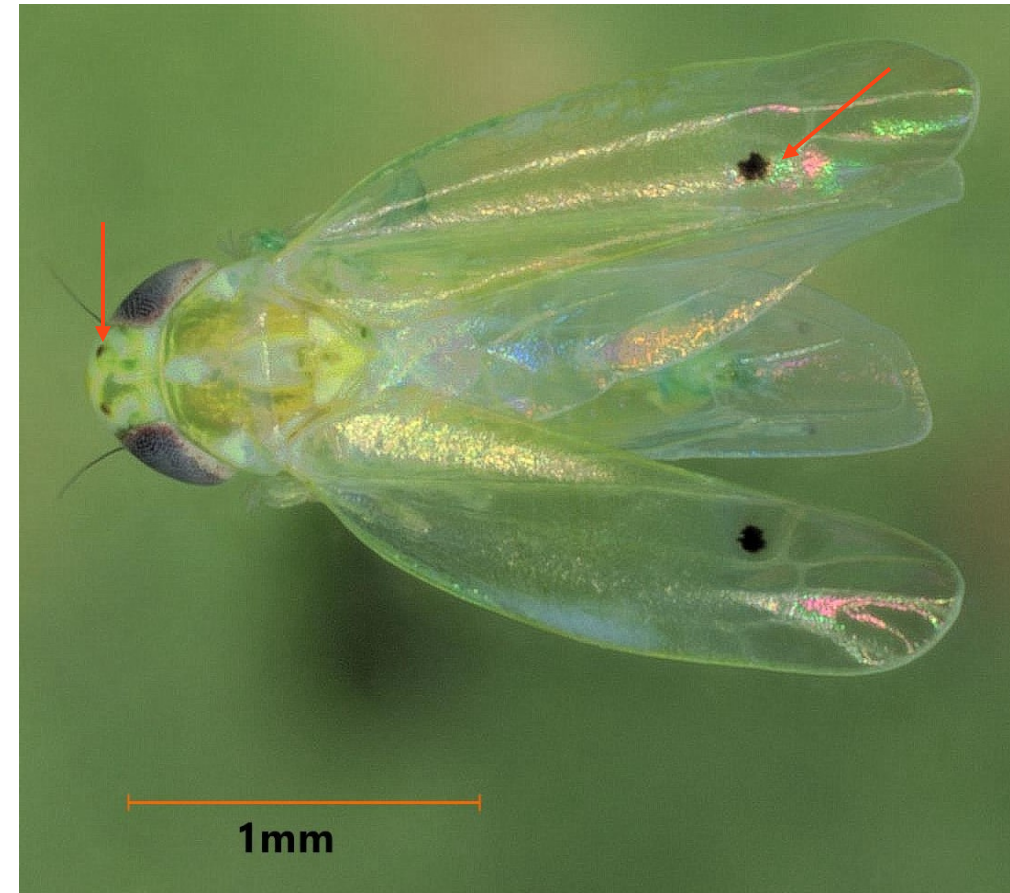


All reports from cotton fields except for a few FL counties

# *Amrasca biguttula* (Hemiptera: Cicadellidae: Typhlocybininae: Empoascini)

## Identification

- Adults: Small (~2mm)
  - Pale green w/yellowish green wings
  - Similar to Potato leafhopper
- Distinguished by pair of black spots:
  - apex of brachial cell on forewings
  - crown of the head → can fade
- Nymphs:
  - wingless pale green
  - Later instars → black spots on wingpads
  - Fast 'crab walk' movement
- Need male genitalia for species confirmation.



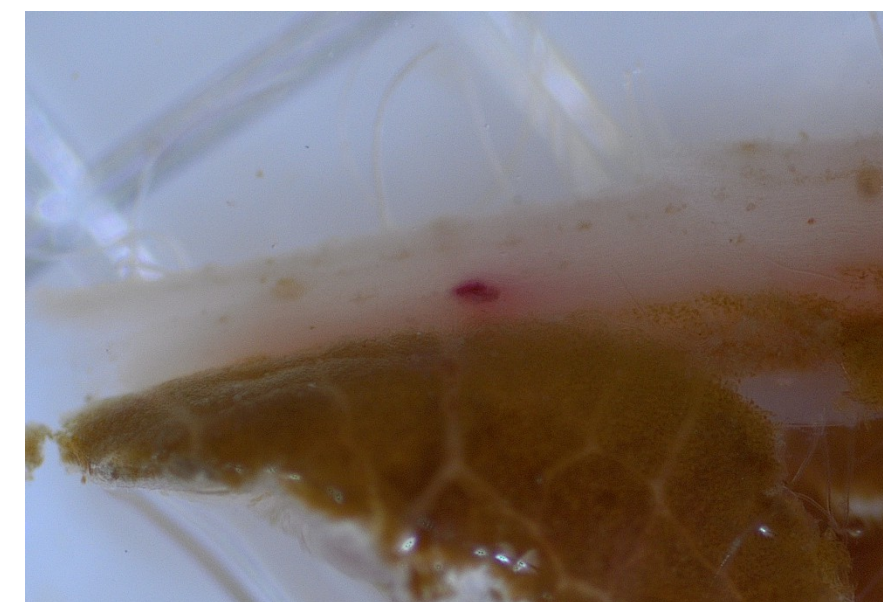
Late Instar nymph w/  
Black dots on wing pads



# Two Spot Cotton Leafhopper *Amrasca biguttula*

## Life History:

- Eggs are inserted into plant tissues in the spongy layer between the vascular bundles and the epidermis.
- Eggs hatch in 3-4 days
- Nymphs: 5 instars ( $\approx 10$  days)
  - Range: 5-16 days depending on temperature
- Adults:  $\approx 15$  days
  - Range: 12-37 days
- Generation  $\approx 2$  weeks



Eggs embedded in midvein of leaf  
oblong/crescent shaped

# Two Spot Cotton Leafhopper *Amrasca biguttula*

## Host Plants:

- Selectively polyphagous
  - Reproductive on > 25 species across 15 families
  - Preference for Malvacea & Asteraceae
- Cotton, Okra, Eggplant
- Ornamental Hibiscus
- Reproductive hosts observed on in FL 2025
  - Soybean: only adults found



Eggplant



Ceaser Weed



Turks Cap



Soybean



Swamp Hibiscus



Poke weed

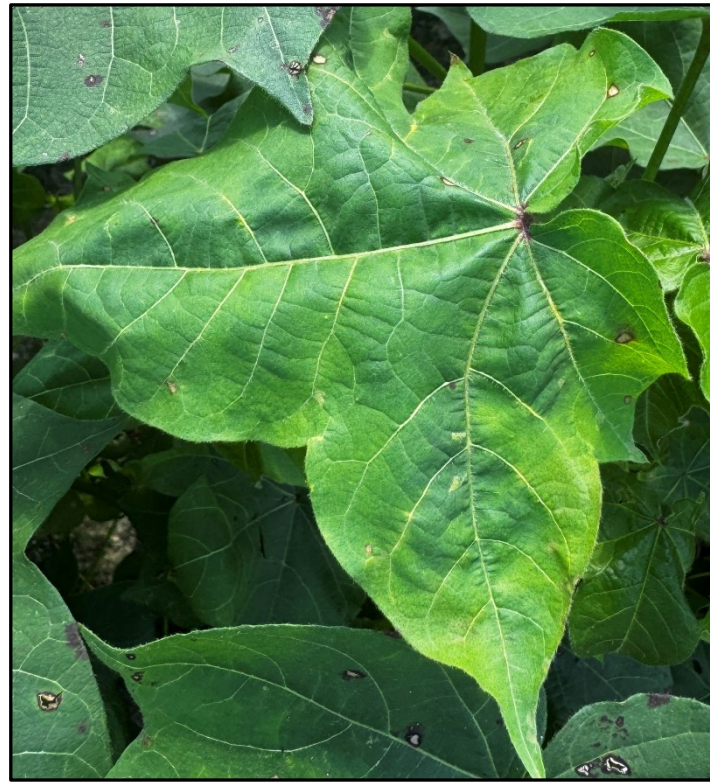


Florida Pusley

# Cotton Jassid Biology

## Plant Injury:

- Feed on the lower surface of leaves (introduce salivary toxins).
- Yellowing, reddening, then browning of leaves, “**hopperburn**”, can lead to the complete desiccation of the plants.
- Plants go downhill quickly from the first signs of hopper burn



Early discoloration



From Friday to Monday went from slight discoloration to this



Upward cupping of leaves



# Symptoms Intensify Quickly



Aug. 15

**4 DAYS**

Aug. 19

Jackson Co. (FL)  
≈30 jassids/leaf



# How Do We Manage A New Invasive Pest?

## Questions that must be addressed:

- How do we look for it?
- How do we kill it?
- When do you kill it?
- Does it even matter?
- When does it matter?



# Scouting for Cotton Jassid

- Count jassid nymphs on underside of individual mainstem leaf 4 nodes below the terminal.
- Sample at least 25 leaves per field
- Populations tend to build on field borders first
- Use isolated plants on field border as “indicator” plant – tend to be infested/symptomatic first
- **FIELD SHOULD BE SCOUTED AT LEAST WEEKLY**
- **Threshold is 1 jassid per LEAF**



# How Do We Kill it?

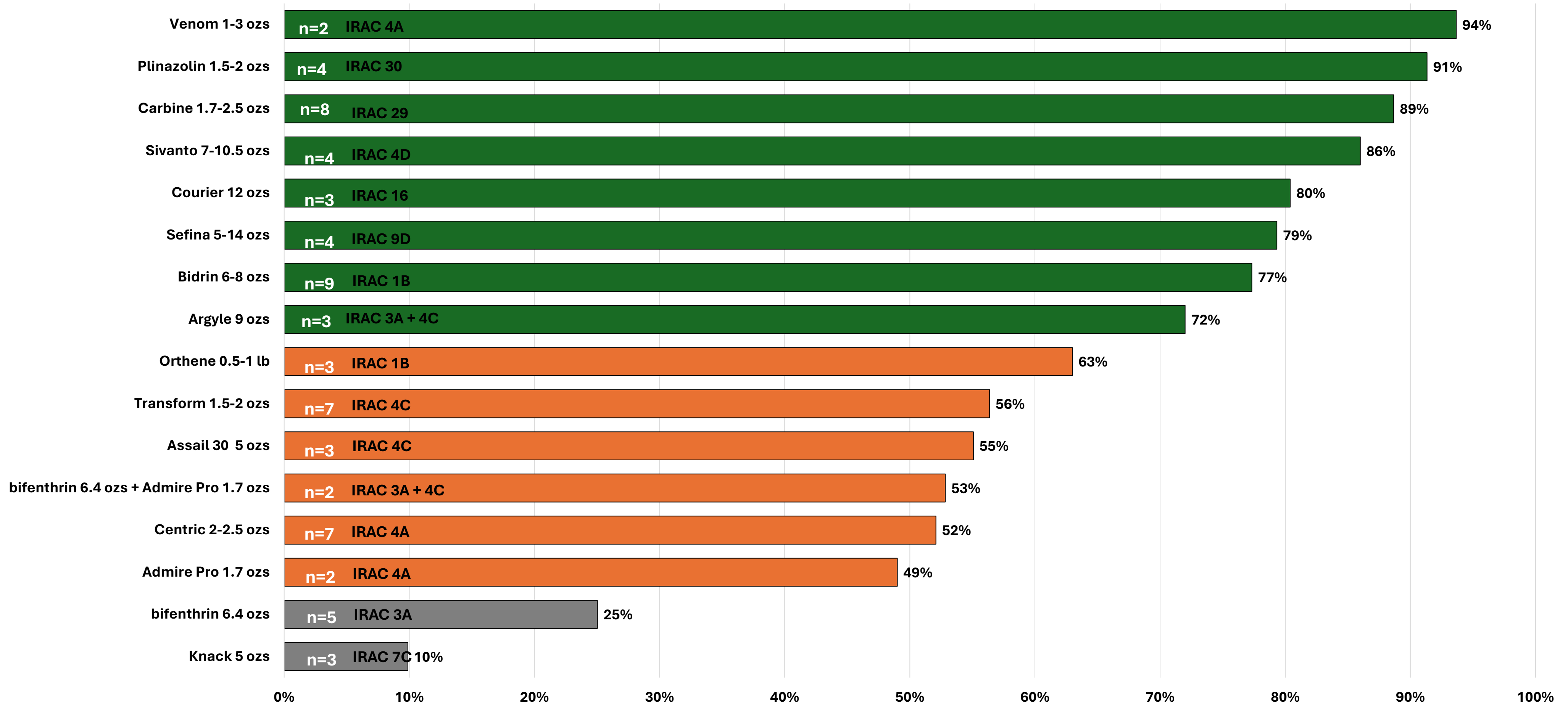
## Efficacy Trials:

- Replicated on-farm and small-plot research trials were conducted in AL, FL, GA, and SC in 2025
- Several options provided very good to moderate control
- Insecticide price and availability mostly drove selection in 2025
- Rotation will be critical in 2026 – cotton jassid is resistant to every class of chemistry used for control in its native range



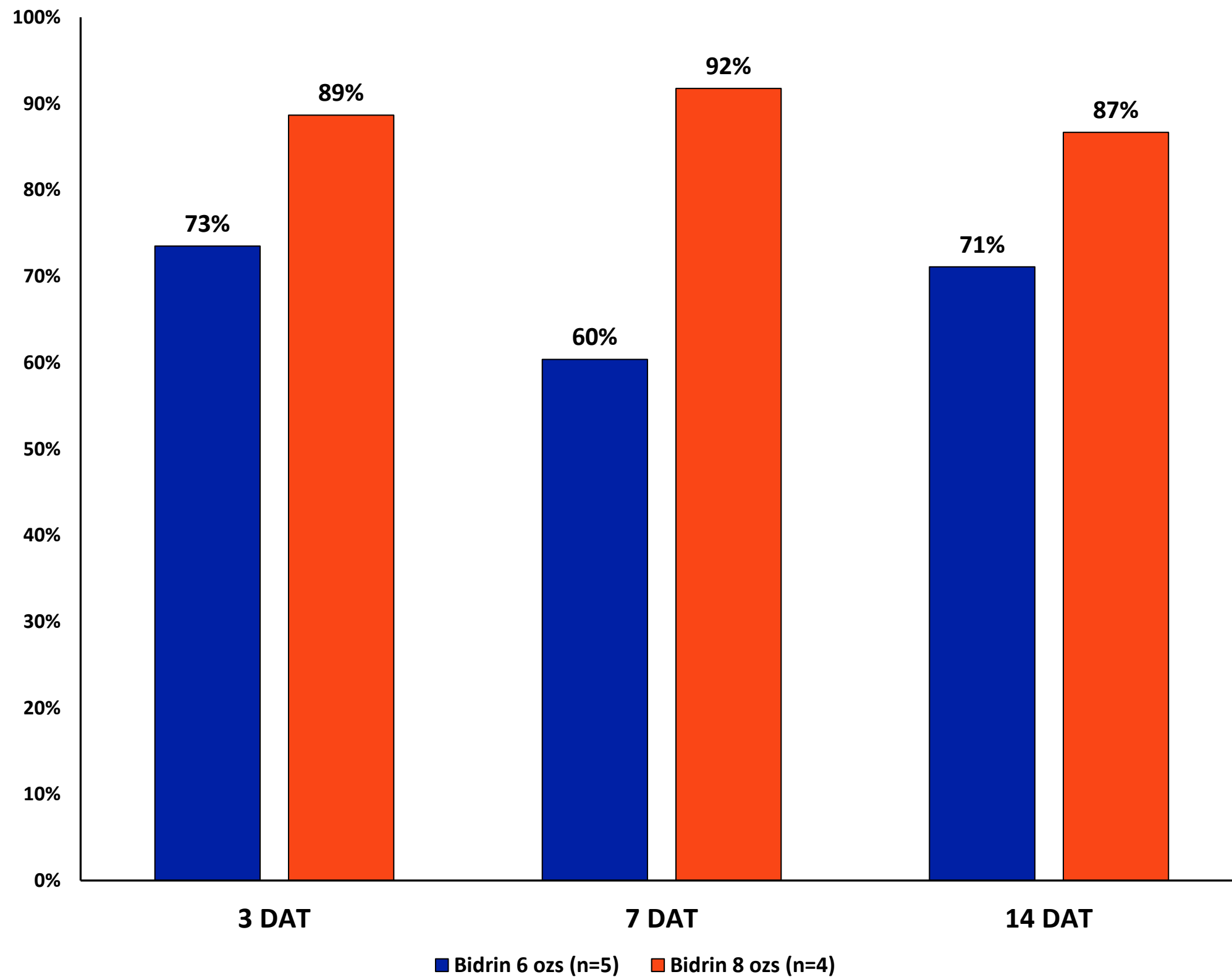
# Cotton Jassid Mean Percent Control (3, 7, 14 DAT)

## (n) at least 2 data points

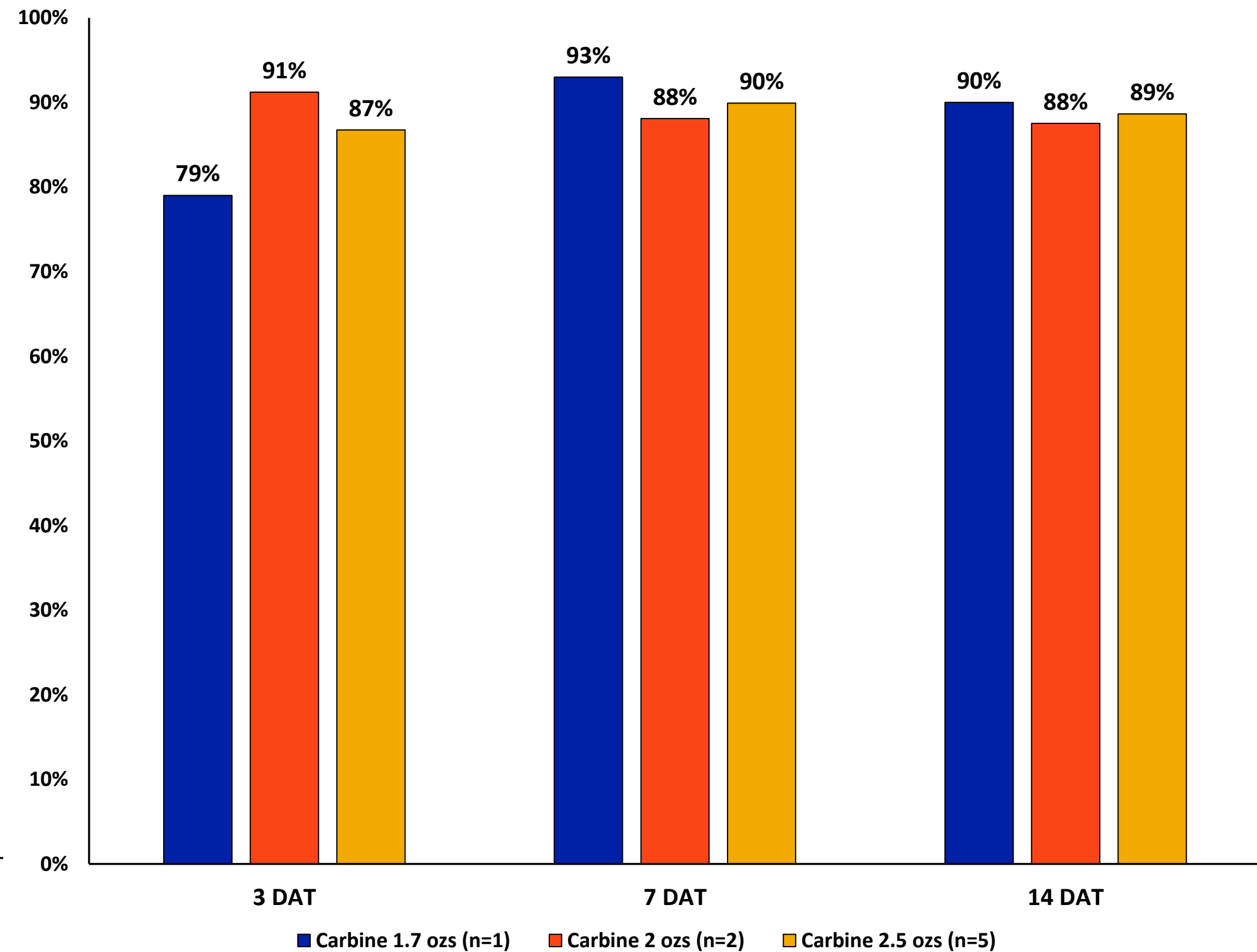


# Cotton Jassid Insecticide Efficacy

## Bidrin



## Carbine



# Insecticide Use Strategies

- Jassids will likely infest cotton when other pests are present, thus at certain times, multiple pest species may need to be addressed at the same time
- Consider using “soft” chemistry early season to preserve beneficials
- Using different classes of chemistry in a logical sequence (and manner) can prevent or delay resistance

## Considerations of Other Key Pests

**Seedling**

**Pre-Bloom**

**Early Bloom**

**Peak Bloom**

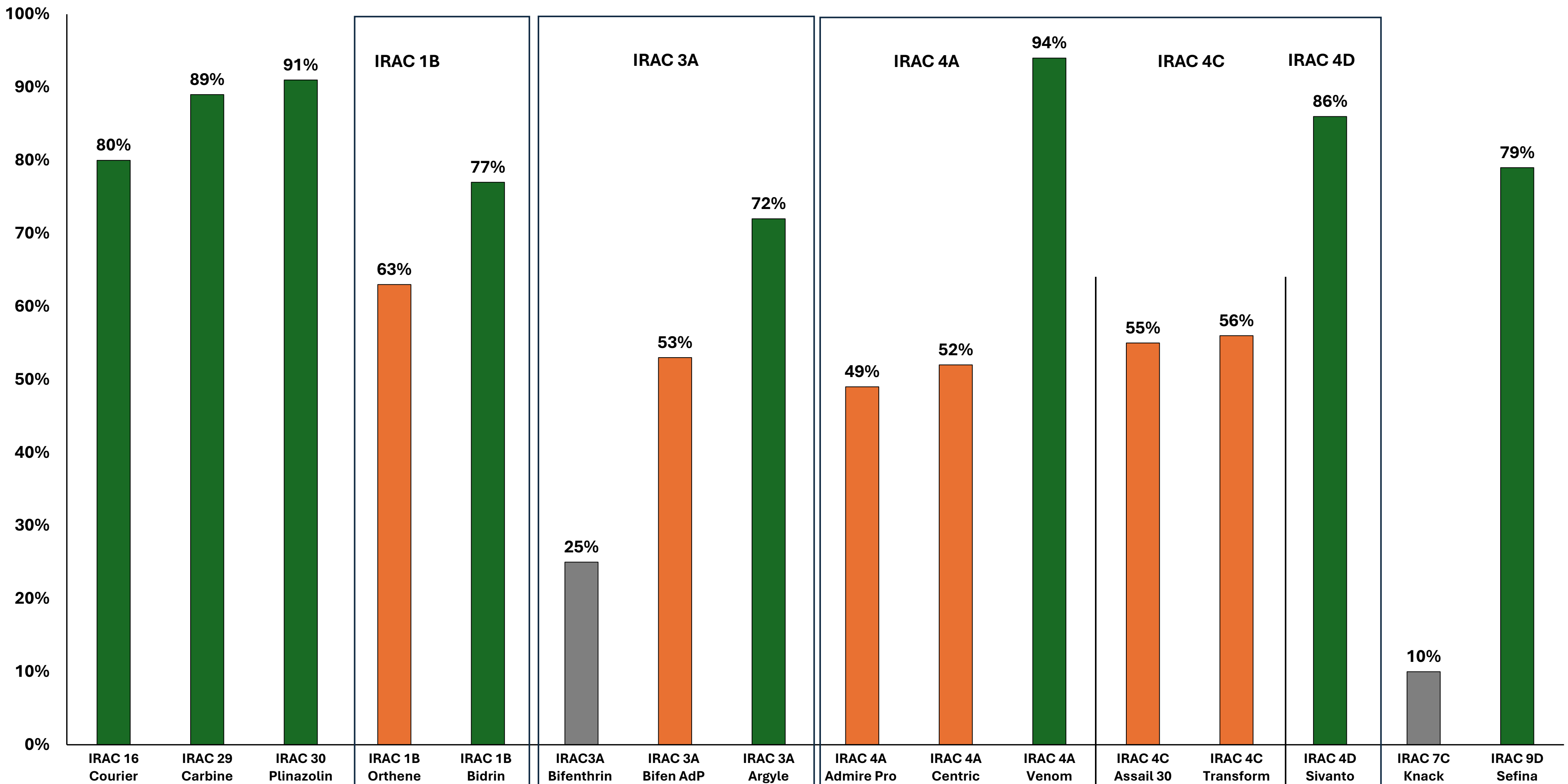
**Thrips**

**Plant Bugs, Aphids**

**Stink Bugs, Plant Bugs**

How do we rotate to preserve beneficials, kill other pests and delay resistance???

# Cotton Jassid Mean Percent Control (3, 7, 14 DAT) By IRAC Group



**21 Aug**  
**14 DAT**



**28 Aug**  
**21 DAT**



**4 Sep  
28 DAT**



**4 Sep  
28 DAT**



**9 Sep**  
**33 DAT**



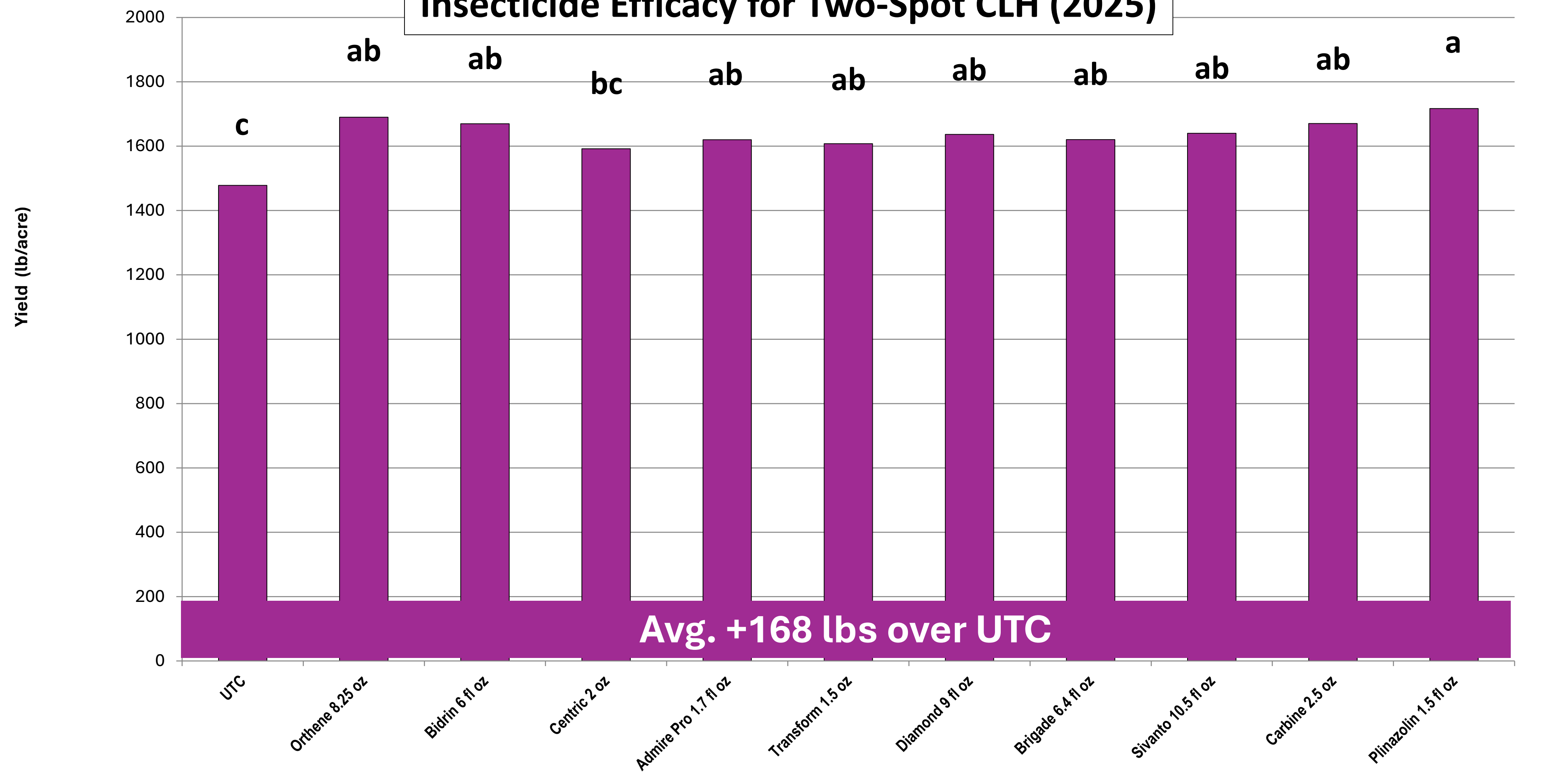
**9 Sep**  
**33 DAT**



An aerial photograph showing a vast field of young, light-colored plants, likely a cover crop, planted in neat, parallel rows. The rows recede into the distance, creating a strong sense of perspective. In the upper left, a paved road runs parallel to the field. The background is filled with a dense line of green trees under a clear sky. A white text box is overlaid in the top right corner.

**24 Sep  
48 DAT**

# Insecticide Efficacy for Two-Spot CLH (2025)



Sprayed 7 Aug, Harvested 7 Oct (All 8 rows)

Blackville, SC

# When Do You Kill It? Preliminary Threshold Trial



## *NFREC-Quincy, FL*

### Threshold:

~~August 1-17: 3 jassids per leaf~~

~~August 18: 2 jassids per leaf~~

~~August 26: 1-2 jassids per leaf –or- early injury symptoms somewhere in the field~~

**September 8: 1 jassid per leaf –or- early injury symptoms somewhere in the field**



Photo 8/09/25

# Preliminary Threshold Trial

- Treatments

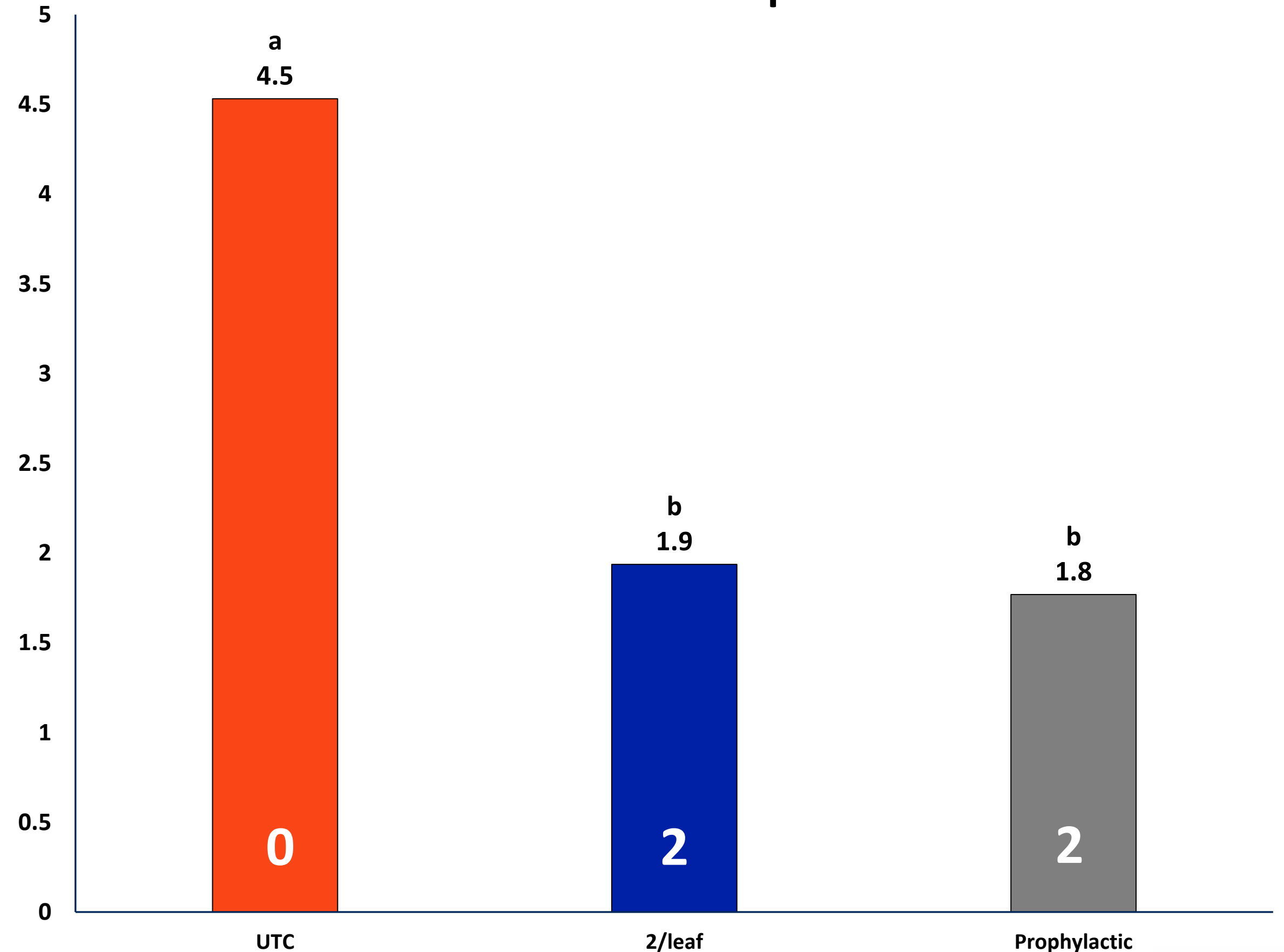
- UTC
- 2/leaf (8.18.25, 8.28.25 )
  - Carbine 2.5 oz/A
- Prophylactic (8.6.25, 8.28.25)
  - Bidrin 6 oz/A

- Varieties

- 2211 BG3TXF
- 2127 BG3XF

- First counts 8/6/25

Cotton Jassids per Leaf



# Does it Matter?

UTC



142 lbs/acre

4.5 Jassids per leaf

Treated @ 2/leaf



1,295 lbs/acre

Carbine 2.5 oz (Aug. 18 and 25)

1.9 Jassids per leaf

Prophylactic Control



1,383 lbs/acre

Bidrin 6 oz (Aug. 6 and 25)

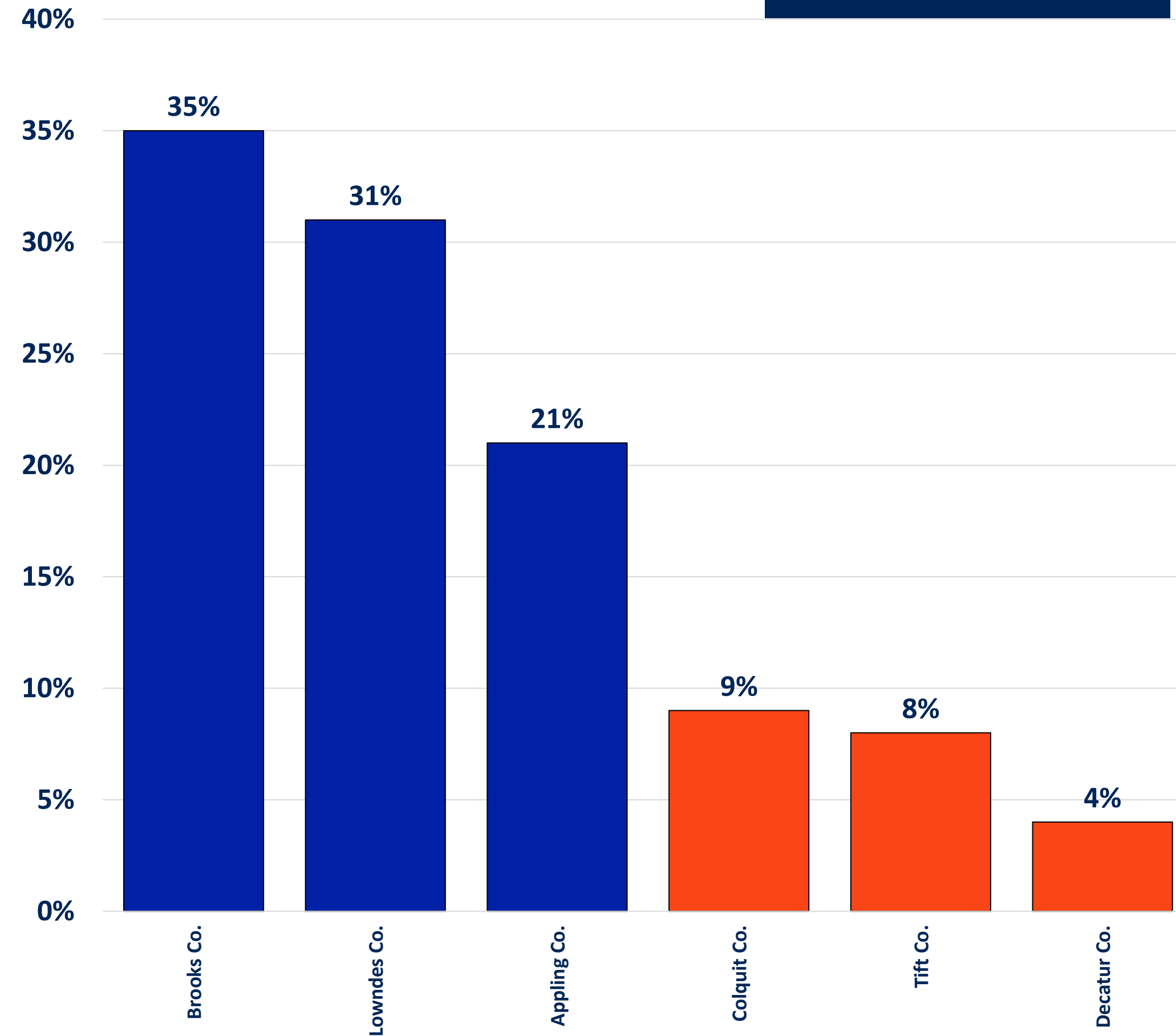
1.8 Jassids per leaf

# Does it Matter (Yield)?

*Mean Loss 13%, Range 1% to 46%*

**Avg. from 18 trials**  
Loss greater when  
infested earlier

| County      | Standard    | Non-Treated | % Loss     |
|-------------|-------------|-------------|------------|
| Brooks      | 855         | 463         | 46%        |
| Brooks      | 965         | 730         | 24%        |
| Lowndes     | 1005        | 692         | 31%        |
| Appling     | 830         | 633         | 24%        |
| Appling     | 1151        | 927         | 19%        |
| Colquitt    | 1435        | 1303        | 9%         |
| Decatur     | 1007        | 943         | 6%         |
| Decatur     | 1445        | 1428        | 1%         |
| Tift        | 782         | 777         | 1%         |
| Tift        | 1309        | 1260        | 4%         |
| Tift        | 1170        | 983         | 16%        |
| Tift        | 1172        | 1015        | 13%        |
| Tift        | 1243        | 1192        | 4%         |
| Tift        | 1237        | 1085        | 12%        |
| Tift        | 1216        | 1165        | 4%         |
| Tift        | 1188        | 1180        | 1%         |
| Tift        | 1232        | 1071        | 13%        |
| Tift        | 1343        | 1124        | 16%        |
| <b>Mean</b> | <b>1144</b> | <b>998</b>  | <b>13%</b> |





# How Will Seedling Cotton be Impacted?

- We don't know how early jassids will build in the spring
- Preliminary trials in AL, GL and GA suggest at-plant insecticides may provide some suppression but likely not enough under heavy pressure
- These trials were planted in September – likely unrealistically high pressure (Headland, Tifton) and more realistic pressure (Prattville)



Non-Treated



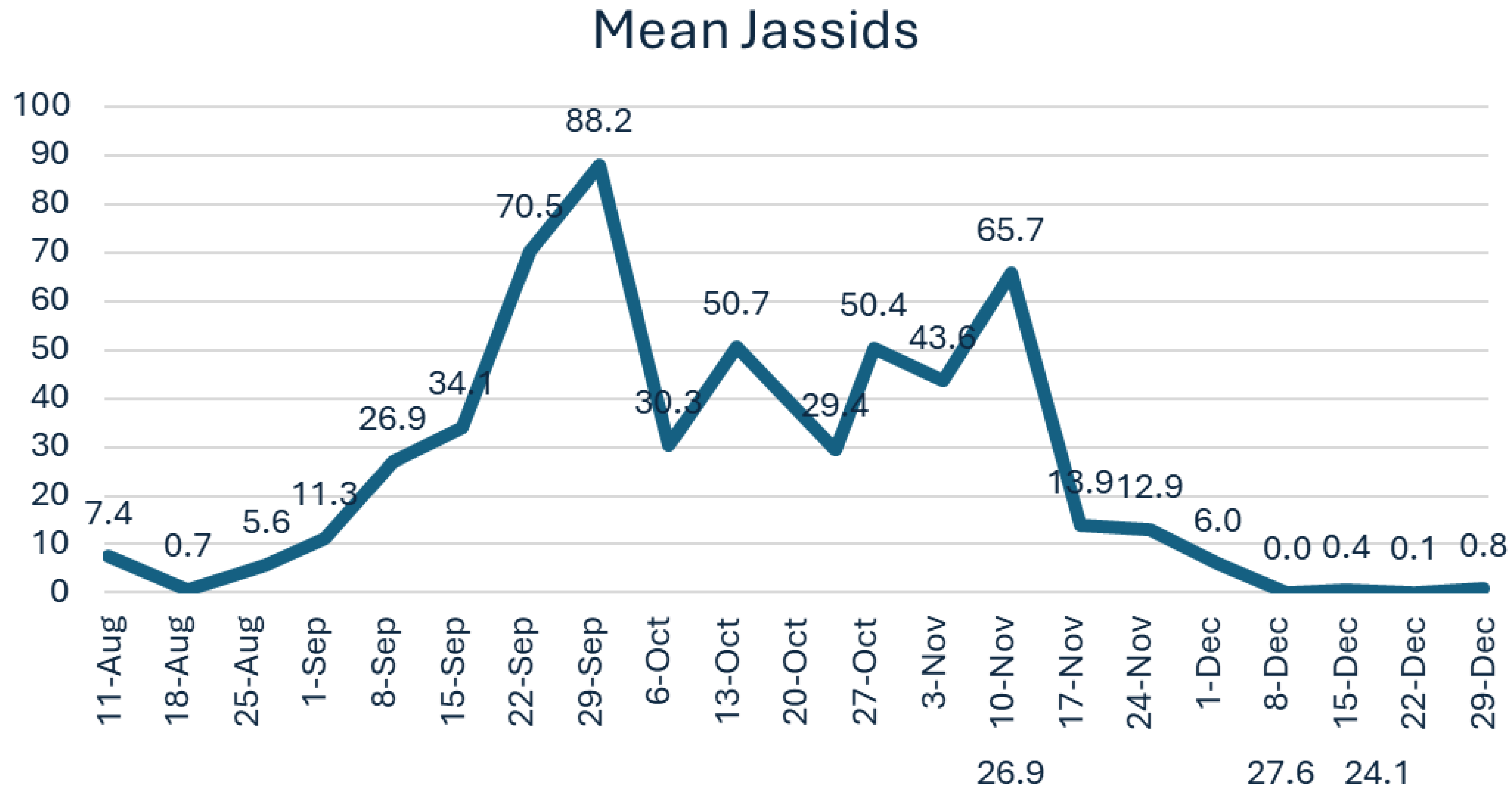
Gaucha IST + 4 apps Carbine

P. Roberts (Tifton, GA)



# How Will Weather Impact Survival?

Sticky Card Traps – Georgia  
P. Roberts





# Can Jassids Overwinter in the Lower SE?

- Jassids do not diapause
- Mild winter temperatures allow jassids to remain active at low levels throughout winter
- How well they survive will be determined by alternate winter hosts
- Eggs are deposited in leaf veins and petioles (protected from harsh cold snaps)
- Adults and nymphs remain active in sheltered areas during warm spells (feeding on weeds or ornamentals??)

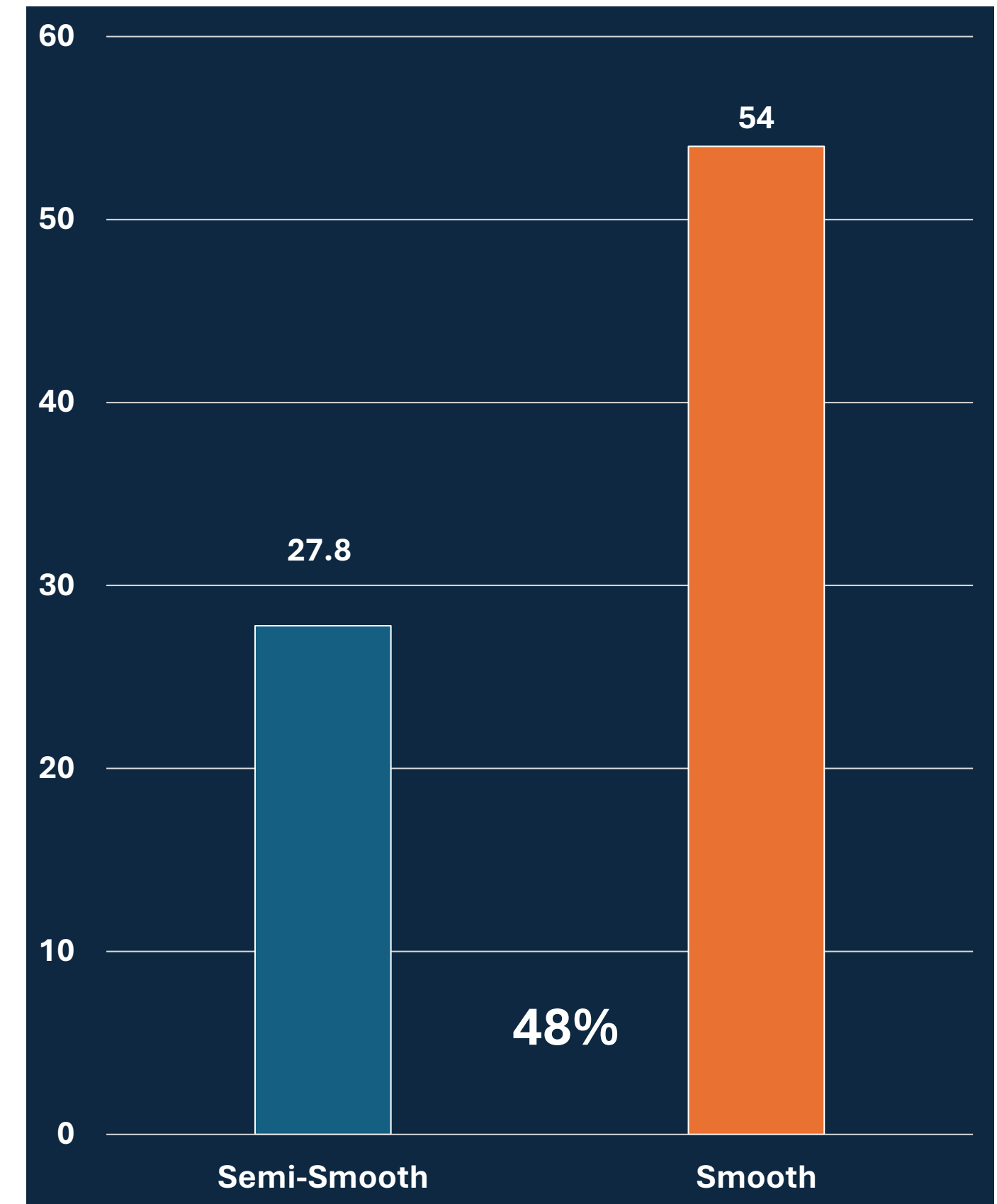




# Factors Influencing Cotton Jassids

- **Soil Fertility**
  - Nitrogen: Jassids will likely be attracted to plants with excess N
  - Potassium: Plants deficient in K seem to “crash” quicker
- **Planting Date**
  - Populations will likely be slower to develop next spring
  - Earlier planted cotton may be able to “out run” or minimize the number of applications needed
- **Varietal Maturity**
  - Short season varieties may also help “out run” jassids
- **Insecticide Timeliness**
  - If sprayers can only get across fields every 10-14 days, consider threshold of 30-50% infested

**Cotton Jassids per 25 Leaves  
Avg. Across Leaf Type**



Eloree, SC – J. Greene



# Cotton Jassid:

## Things we don't know but are working on

- Where are they now?
- How do cold temps affect winter survival?
- When will they infest cotton in 2026?
  - Will thresholds change if earlier
- How long to protect cotton?
- What is the toxin?
- Resistant varieties?





# Thank you!

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