

Cotton IPM Update - 2010

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Thrips Foliar Insecticide Use

- Thrips damage is easily observed, convenient to add an insecticide with POST herbicides.
 - NO AUTOMATIC SPRAYS
- Foliar Insecticides (Overused?)
 - Disrupt natural controls, potential flaring of cotton aphid, spider mites, others.

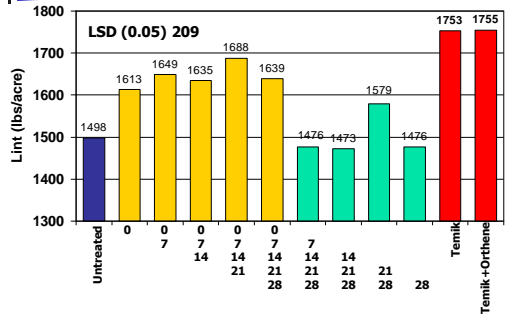


Seedling Thrips

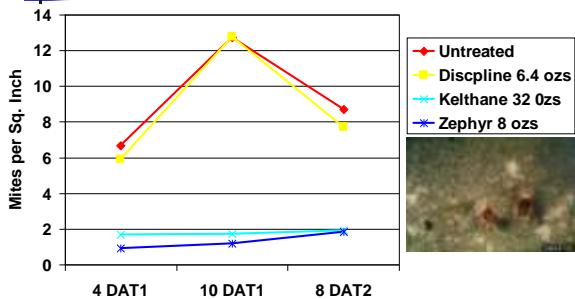
- Predictable insect pest.
 - Damage includes leaf distortion, stunted plants, delays in maturity, loss of apical dominance, reduced yield potential, and in severe cases stand loss.
 - Slow seedling growth results in increased injury symptoms and plant damage.
 - Preventive treatment recommended at planting.
 - Consistent yield response.
 - Threshold for foliar spray: 2-3 thrips per plant and **immatures** present (NEW).
 - Assumes preventive treatment is used.



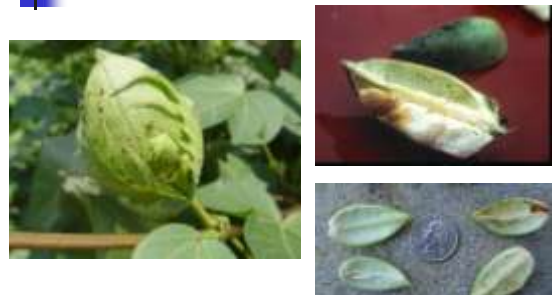
Progressive / Regressive Yield - Georgia 2009



Spider Mite Trial - 2009



Stink Bugs



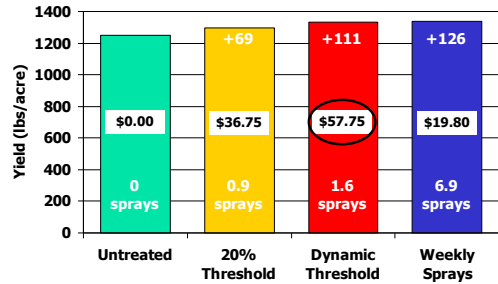
Dynamic Stink Bug Threshold NEW for 2009

Assumes normal fruiting pattern.

- The boll injury threshold should be adjusted up or down based on the number of susceptible bolls present.
 - Use a 10-15% boll injury threshold during weeks 3-5 of bloom (numerous susceptible bolls present).
 - 20% during weeks 2 and 6.
 - 30%(+) during weeks 7(+) of bloom (fewer susceptible bolls present).
- Detection of 1 stink bug per 6 row feet would also justify treatment.
 - 7 day evaluation
 - 14(+) day spray interval in most situations.

Week of bloom	Threshold % Damage
1	Retention
2	20
3	10-15
4	10-15
5	10-15
6	20
7+	30+

Dynamic Threshold Trials Georgia (2006-2009, n=16)

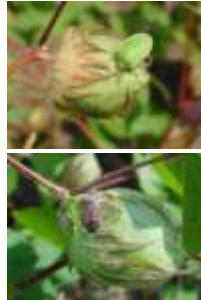


Net = \$0.65/lb – \$9.00/appl

Insecticides for Stink Bugs

Brown to Southern Green Ratio

- Pyrethroids: Bugs and Larvae
 - Southern Green Stink Bug
 - Corn Earworm and Fall Armyworm
 - Tank-mix with OP for Browns
- Organophosphates: Bugs Only
 - Brown Stink Bugs



Scouting is a must regardless of technology used.

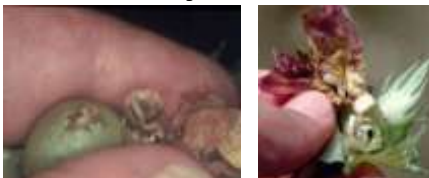
Bt Cottons

	TBW Tobacco Budworm	CEW Corn Earworm	SBL Soybean Looper	BAW Beet Armyworm	FAW Fall Armyworm
Bollgard II (Cry1Ac/Cry2Ab)	+++	+++	+++	+++	+++
Bollgard (Cry1Ac)	+++	++	o/+	+	o/+
WideStrike (Cry1Ac/Cry1F)	+++	+++	+++	++	+++

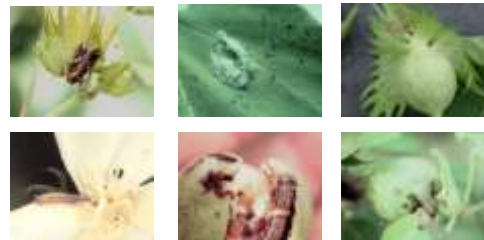
o=no activity, +++=very good

Corn Earworm

- CEW Threshold: 8 larvae (¼ inch or greater in length) are found per 100 plants.
 - Scouting blooms and bloom tagged bolls.
 - Bollgard – experience treating small larvae (25/100 blooms).
 - 2-Gene Bts need more experience, trigger on larvae > ¼ inch in length.**



Fall Armyworm



FAW Threshold and Treatment

All treatments erratic, coverage and timing.

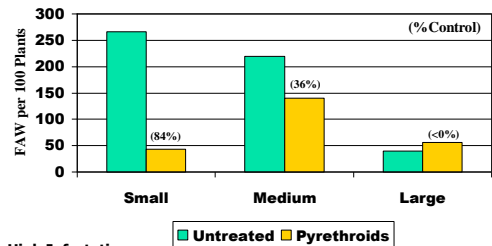
- Apply when 10-20 small larvae (<1/4 inch in length) are found per 100 plants. Control of large larvae (>1/2 inch in length) is difficult; higher rates should be used.
 - Pyrethroids** (Pyrethroids at high rates provide good suppression of larvae less than 1/8 inch in length.)
 - diflubenzuron (Dimilin 2L)
 - emamectin benzoate (Denim 0.16)
 - chlorantraniliprole (Coragen 1.67)
 - flubendiamide (Belt 45C)
 - indoxacarb (Steward 1.25SC)
 - methomyl (Lannate LV 2.4)
 - methoxyfenozide (Intrepid 2F)
 - novaluron (Diamond 0.83EC)
 - profenfos (Curacron 8E)
 - spinosad (Tracer 4)
 - thiodicarb (Larvin 3.2)

**FAW threshold
2 times
CEW threshold**

Do Not attempt to eliminate FAW

1998 Fall Armyworm Trial

Tim Flanders, Grady County

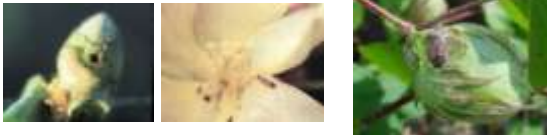


**Very High Infestation
526 FAW/100 plants.**

Insecticides for Stink Bugs

How does insecticide selection affect the SYSTEM?

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 - Southern Green Stink Bug
 - Corn Earworm** and **Fall Armyworm**
 - Tank-mix with OP for Browns
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Palmer amaranth and Beet Armyworm



Large Larvae Movement to Bt Cotton

- Large larvae are more tolerant to the Bt toxin regardless of species.
- Evaluations typically conducted in weed-free environments.
 - Pest species hatches on the Bt plant and are exposed to the toxin as neonate larvae.
- Could potentially have problems with several species if large larvae migrate to Bt cotton.
- CEW threshold based on 1/4 inch larvae.

IPM principles and practices are still needed and provide value to the grower.

Bt Cottons

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Bollgard (Cry1Ac)	+++	++	o/+	+	o/+
WideStrike (Cry1Ac/Cry1F)	+++	+++	+++	++	+++

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