

Managing Thrips

A Midsouthern Perspective



S. D. Stewart et al.

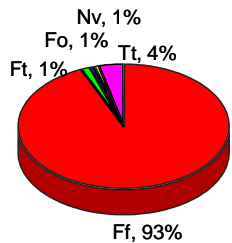


It's a Pest Complex and It Matters

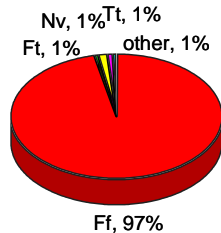


- Identification is not easy ... and forget about immature stages
- Imidacloprid worse than Cruiser on WFT
- WFT harder to control with foliar insecticides

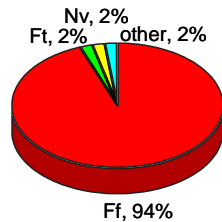
The good news ...



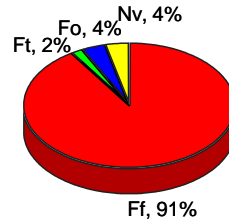
Keiser, AR



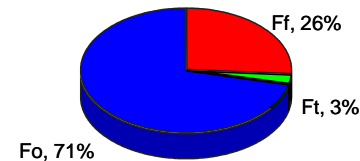
Marianna, AR



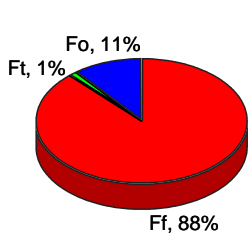
Rohwer, AR



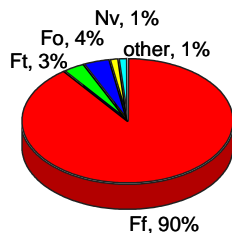
ABAC Farm, Tift Co., GA



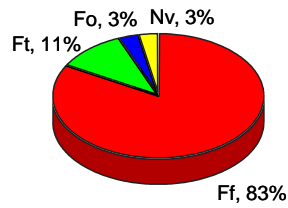
Lang Farm, Tift Co., GA



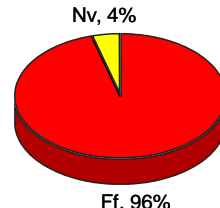
Macon Ridge, LA



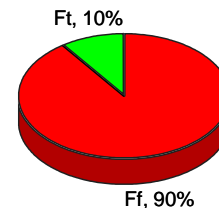
Red River Res. ST., LA



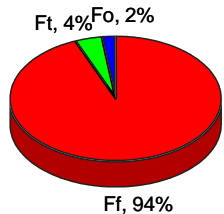
Portageville, MO



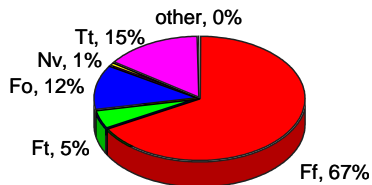
Raymond, MS



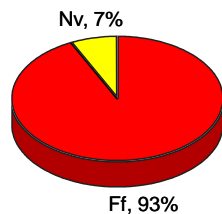
Starkville, MS



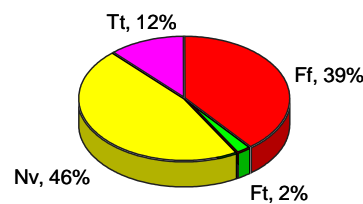
Stoneville, MS



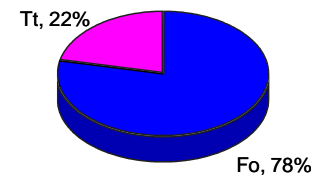
Raleigh, NC



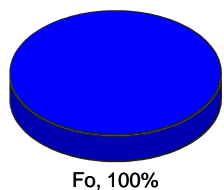
Blackville, SC



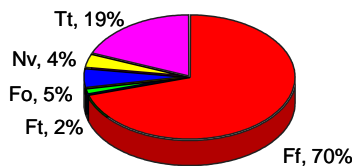
Jackson, TN



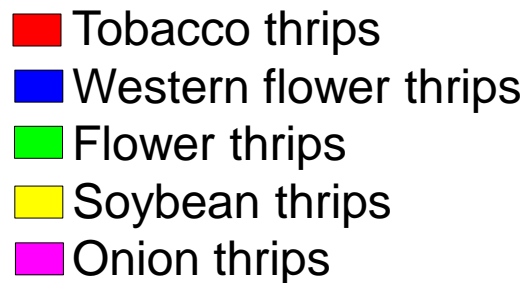
Dimmitt, TX



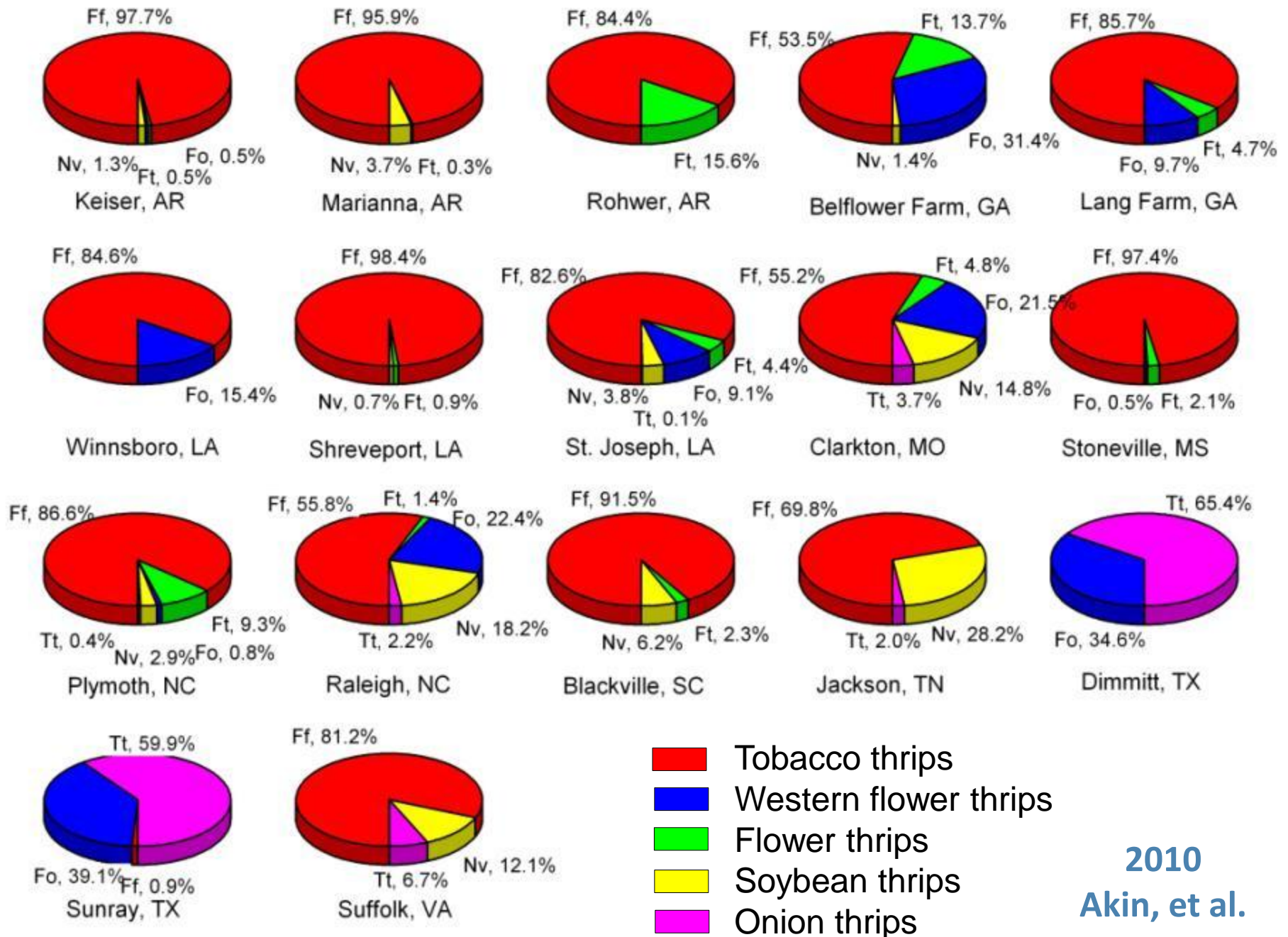
Sunray, TX



Suffolk, VA



Species percentage composition of thrips by location computed across treatments and sample dates.



Thrips Control Demonstration - 33 DAP (2011)

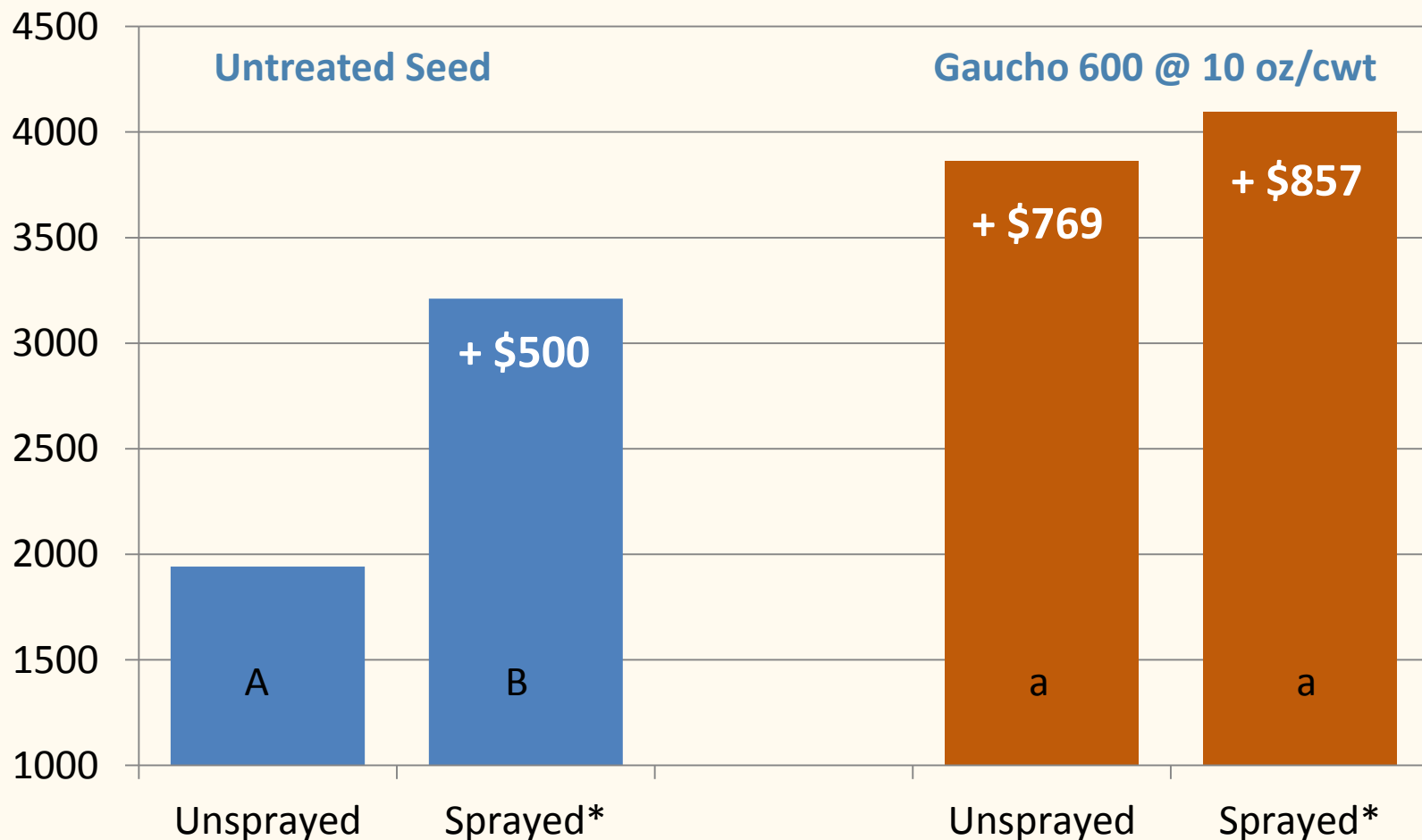
Most severe yield losses occur when some plant mortality is observed





Thrips Control Demonstration (Tennessee)

Seedcotton Yield (PHY375 WRF, Planted May 9, 2011)



* Sprayed at 2nd leaf (3 WAP) with Acephate 90S ... untreated sprayed second time at 4th leaf

Cotton Seed Treatment Choices (2012)

Company Offerings (Active Ingredients)

Delta Pine (Monsanto)			Phytogen (Dow)			Stoneville, FiberMax (Bayer)		
Acceleron I	Acceleron FI	Acceleron N	Cruiser	Cruiser Dynasty	Avicta Complete	Aeris	Aeris + Trilex Advanced	+ Poncho/ Votivo
Imidacloprid	Imidacloprid	Thiamethoxam	Thiamethoxam	Thiamethoxam	Thiamethoxam	Imidacloprid	Imidacloprid	Clothianidin
Pyraclostrobin* 2X	Pyraclostrobin 2X	Pyraclostrobin 2X	Fludioxonil*	Azoxystrobin	Azoxystrobin	Triadimenol*	Trifloxystrobin	<i>Bacillus firmus</i>
Trifloxystrobin*	Ipconazole	Ipconazole	Mefenoxam*	Fludioxonil	Fludioxonil	Metalaxyl*	Triadimenol	
Metalaxyl*	Trifloxystrobin	Trifloxystrobin	Myclobutanil*	Mefenoxam	Mefenoxam	Ipconazole*	Metalaxyl	
Myclobutanil*	Metalaxyl	Metalaxyl	TCMTB*	Myclobutanil	Myclobutanil	Thiodicarb	Ipconazole	
	Myclobutanil	Myclobutanil		TCMTB	TCMTB		Thiodicarb	
		Abamectin			Abamectin			

INSECT	DISEASE	NEMATODE	* Asterisk = base fungicides if no insecticide or nematicide treatments are ordered (at 1X rates).
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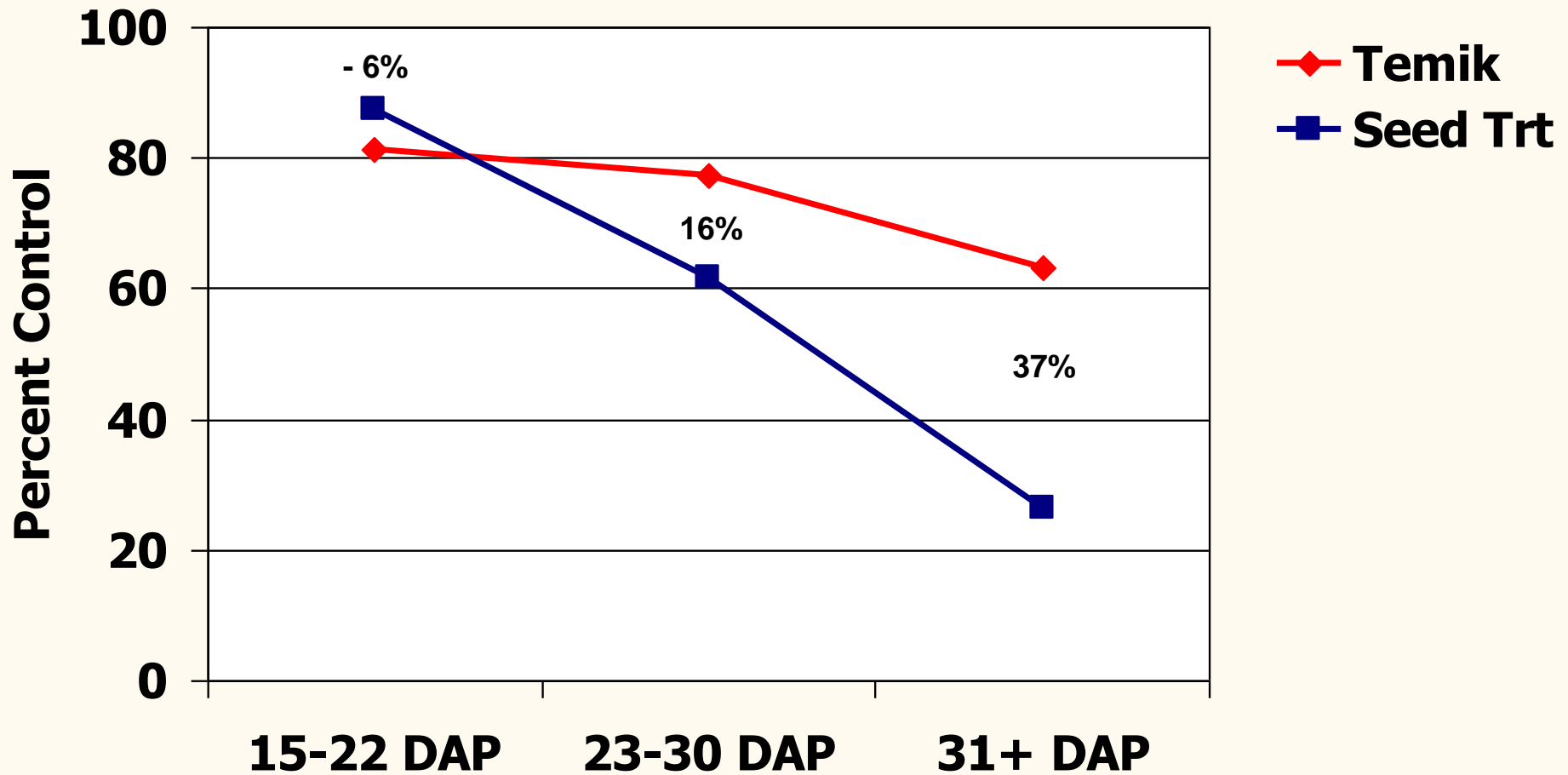
Clothianidin = Poncho, Thiamethoxam = Cruiser, Imidacloprid = Gaucho

Percent Thrips Control

Temik and Seed Treatments, 14 Trials (2003-2007)

(3.5-5 lbs)

(Gaucho Grande/Aeris/Cruiser/Avicta CP)

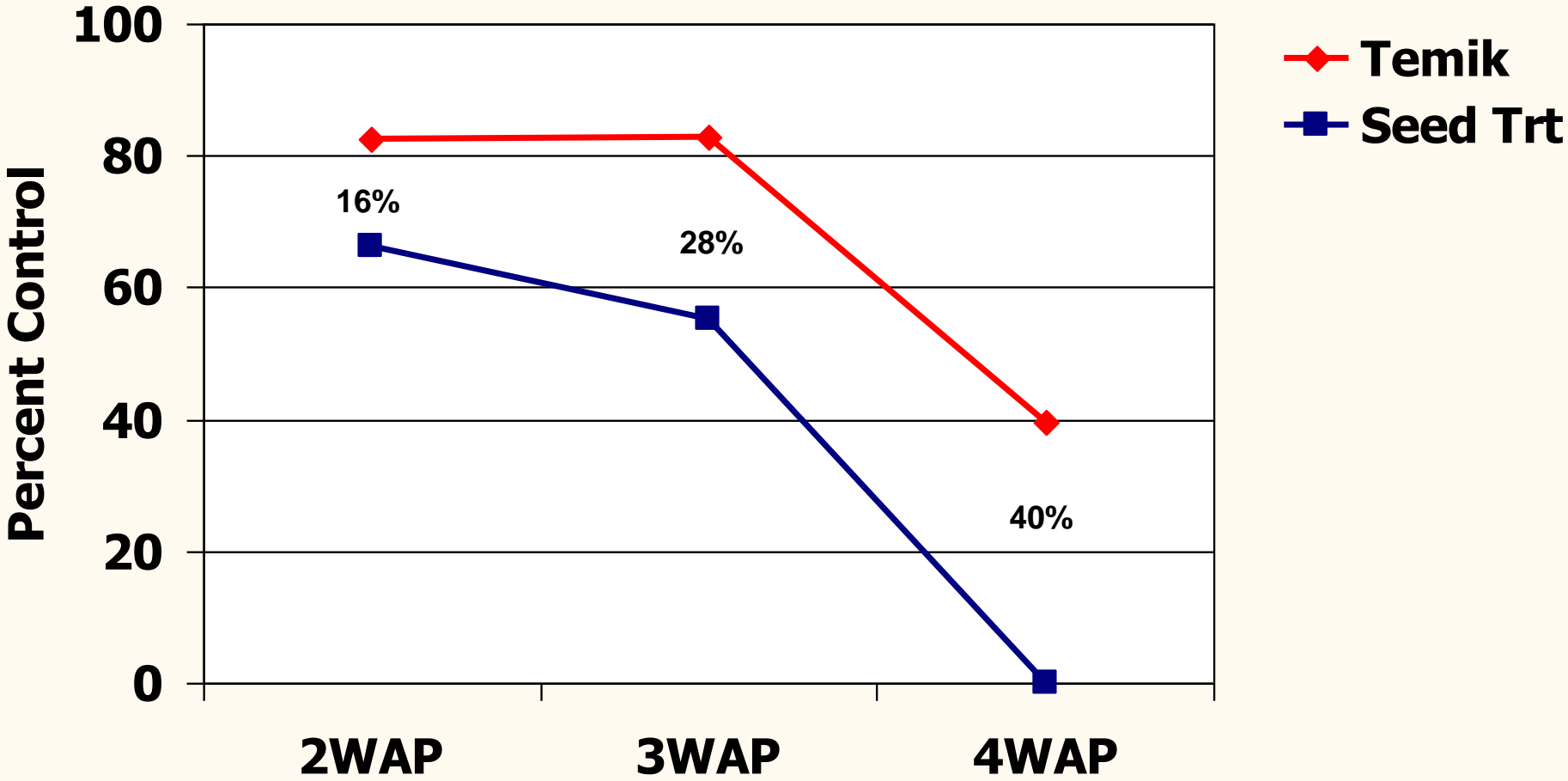


Percent Thrips Control

Temik and Seed Treatments, 28 Trials (2000-2006)

(3.5-5 lbs)

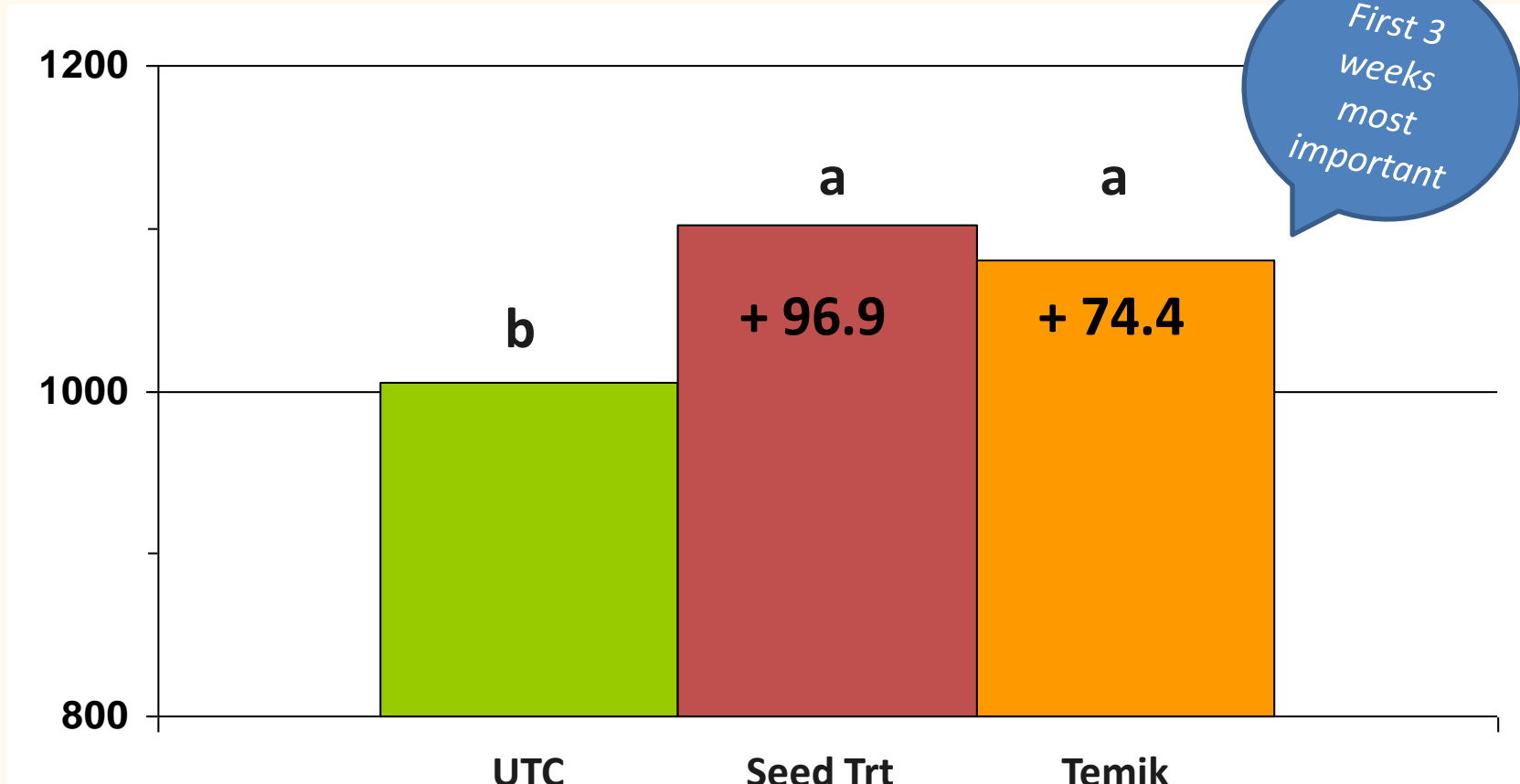
(Gaucho Grande/Cruiser/Avicta Complete Pak)



Thrips Trials - Yield (Lb Lint/Acre)

Stewart (UT) and Lorenz (UA)

14 Trials from 2003-2007, WTES and Arkansas



N = 8 in TN, 6 in AR

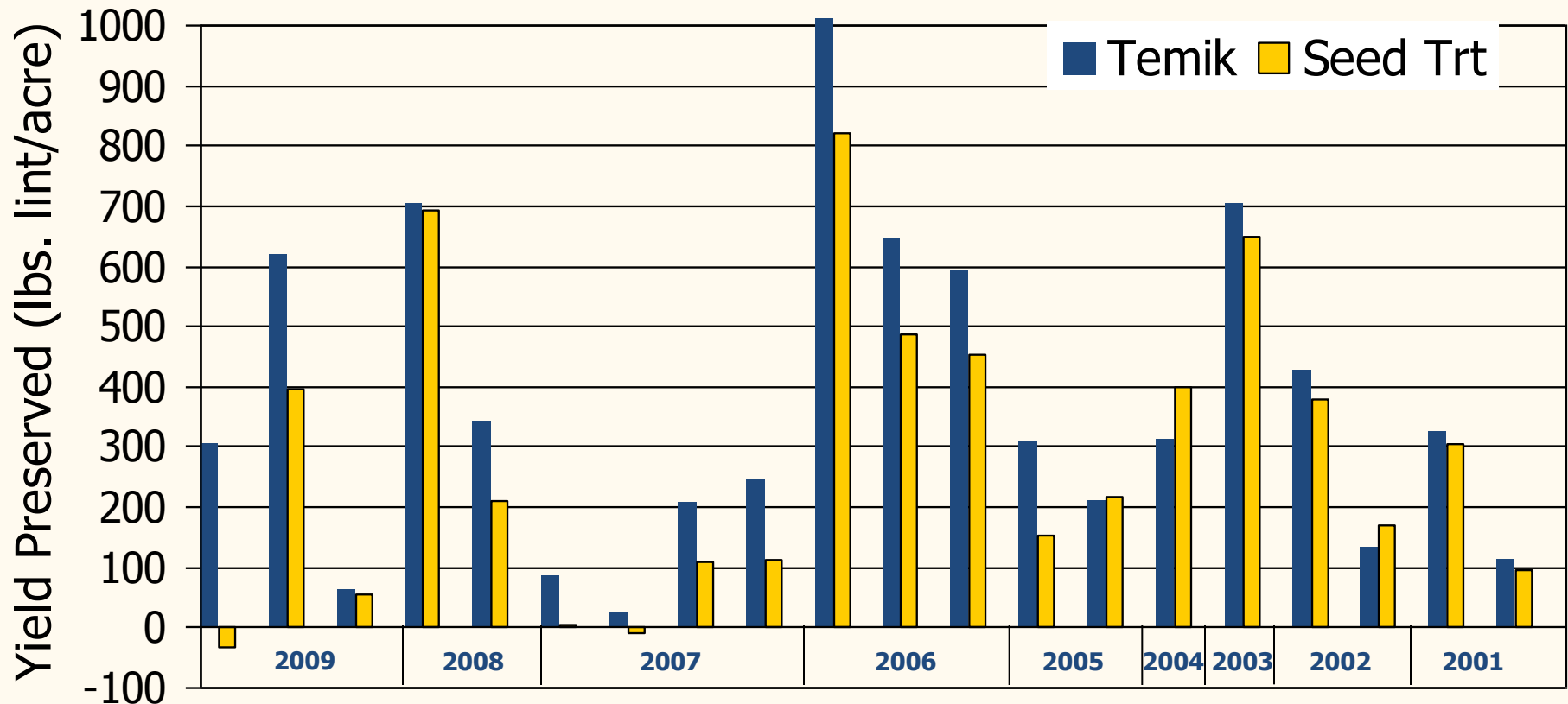
P < 0.05

Yield Response to Thrips Control

Temik and Seed Treatments, 20 Trials (Roberta, GA 2001-2009)

(3.5-5.0 lbs/acre) (Cruiser/Avicta and Gaucho/Aeris)

Average increase = 329 lb lint/acre in high-risk environments



At-planting treatments are not always necessary but are also not always enough (especially seed treatments)

Regional Thrips Project

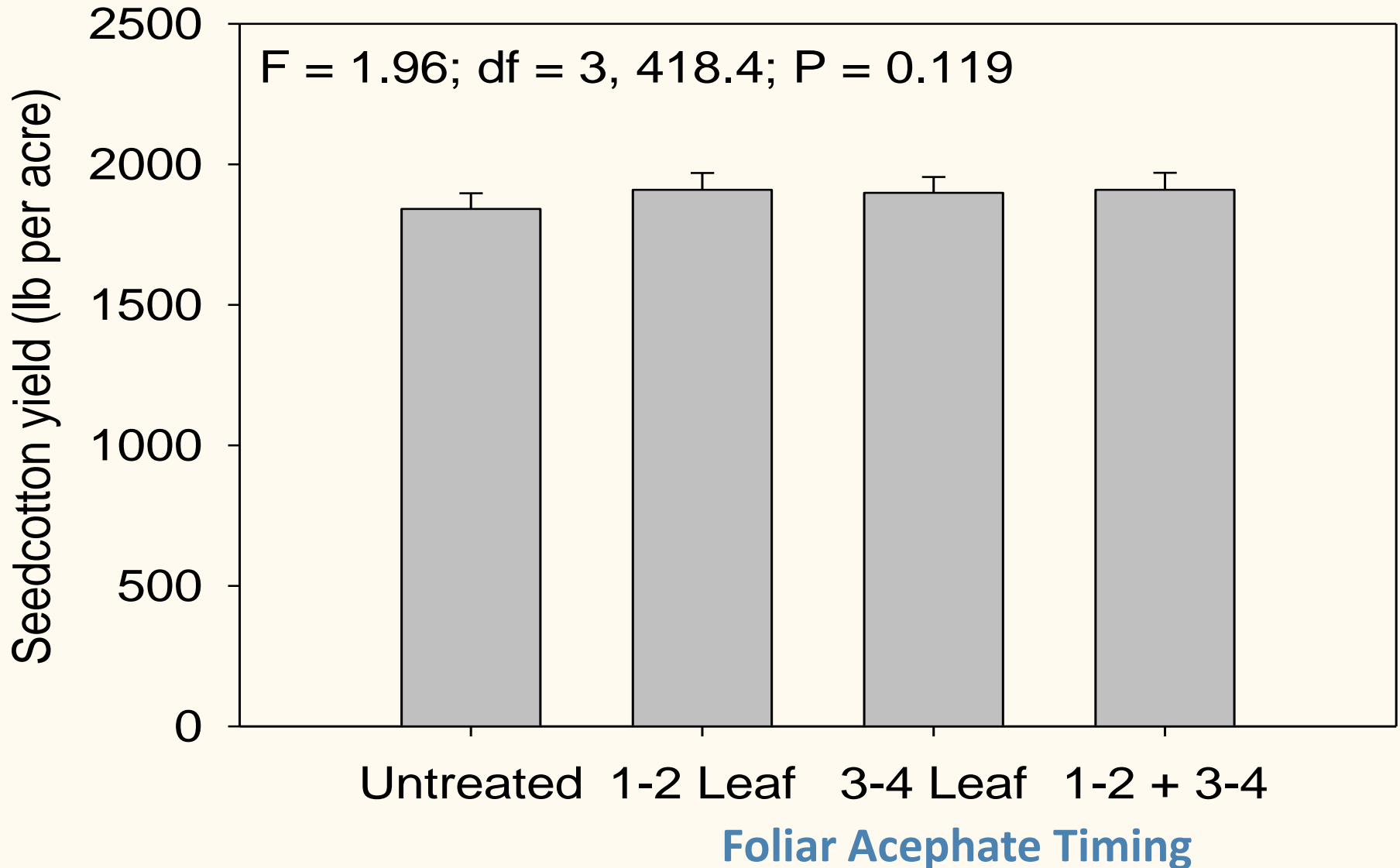
Akin, Toews, et al. (2009-2011)

- ❑ 3 x 4 factorial, 4 reps
- ❑ At-plant insecticide
 - None (UTC)
 - Temik
 - Aeris
- ❑ Foliar application of 0.2 lb ai/acre acephate
 - Unsprayed
 - 1-2 leaf stage
 - 3-4 leaf stage
 - 1-2 and 3-4 leaf stages



Seedcotton Yield, 2009

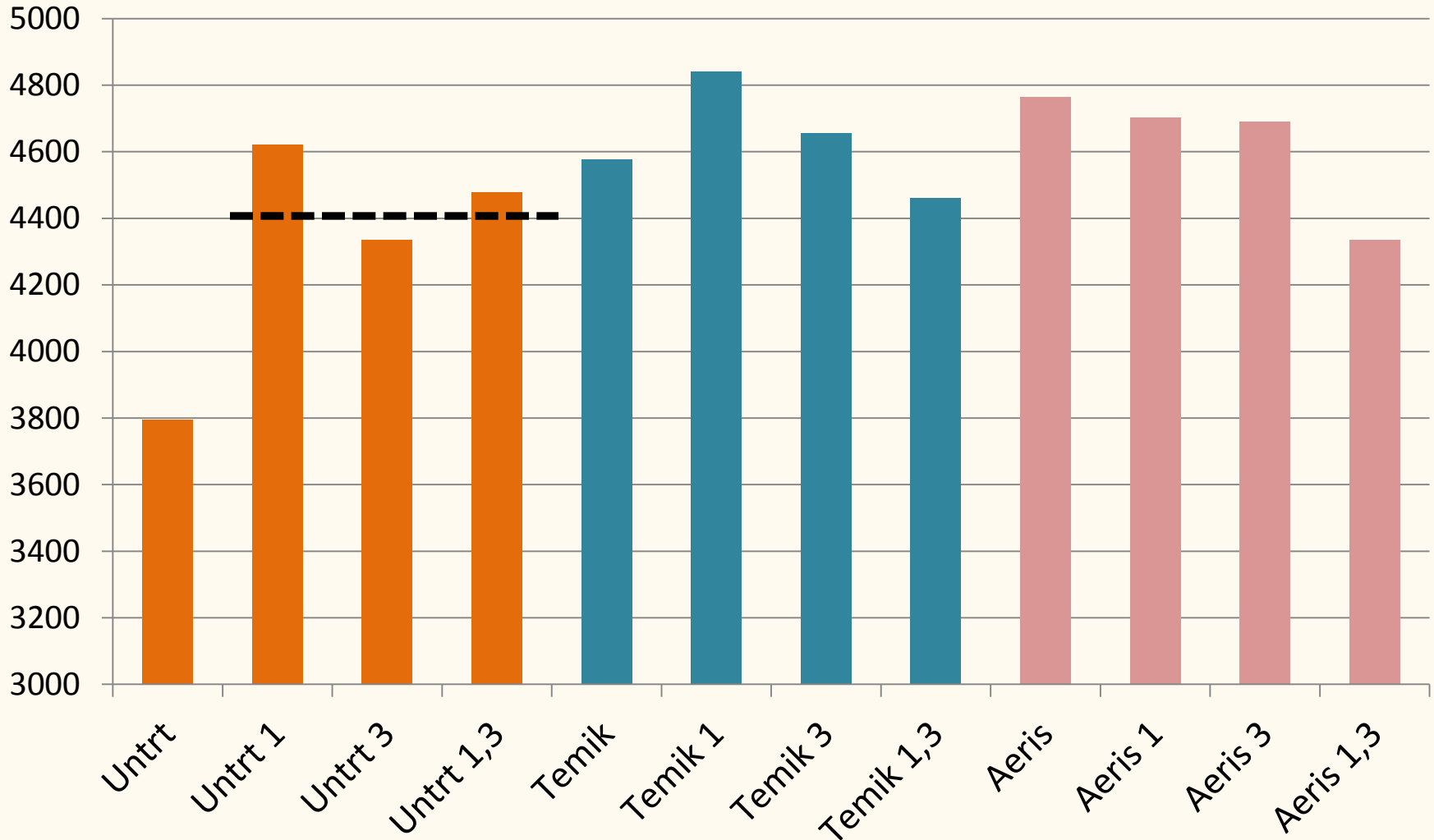
Across all locations and at-planting treatments



Regional Thrips Trial (TN, 2011)

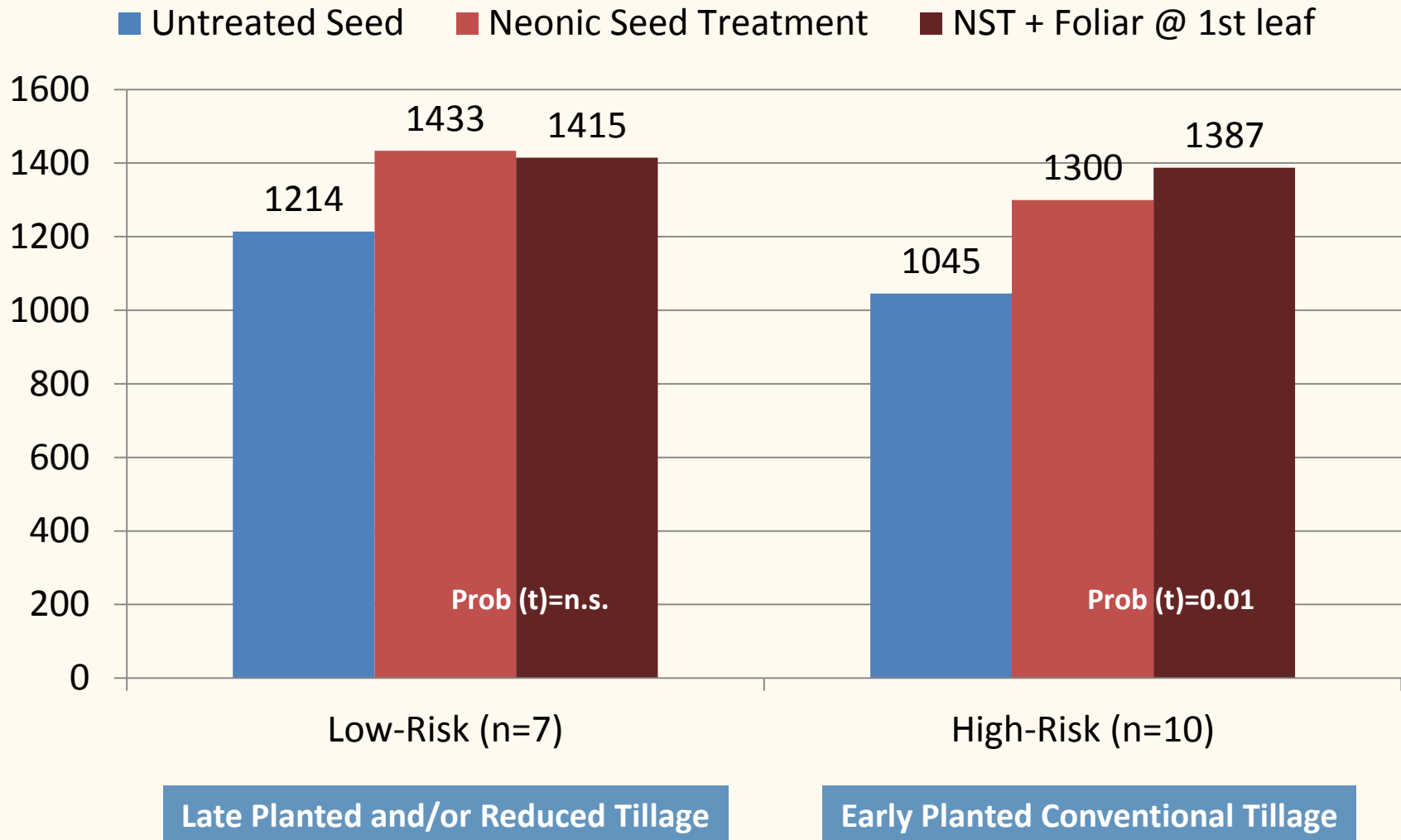
At-Planting and Acephate Applications (1st, 3rd or 1st + 3rd Leaf)

Seedcotton (Lb/A)



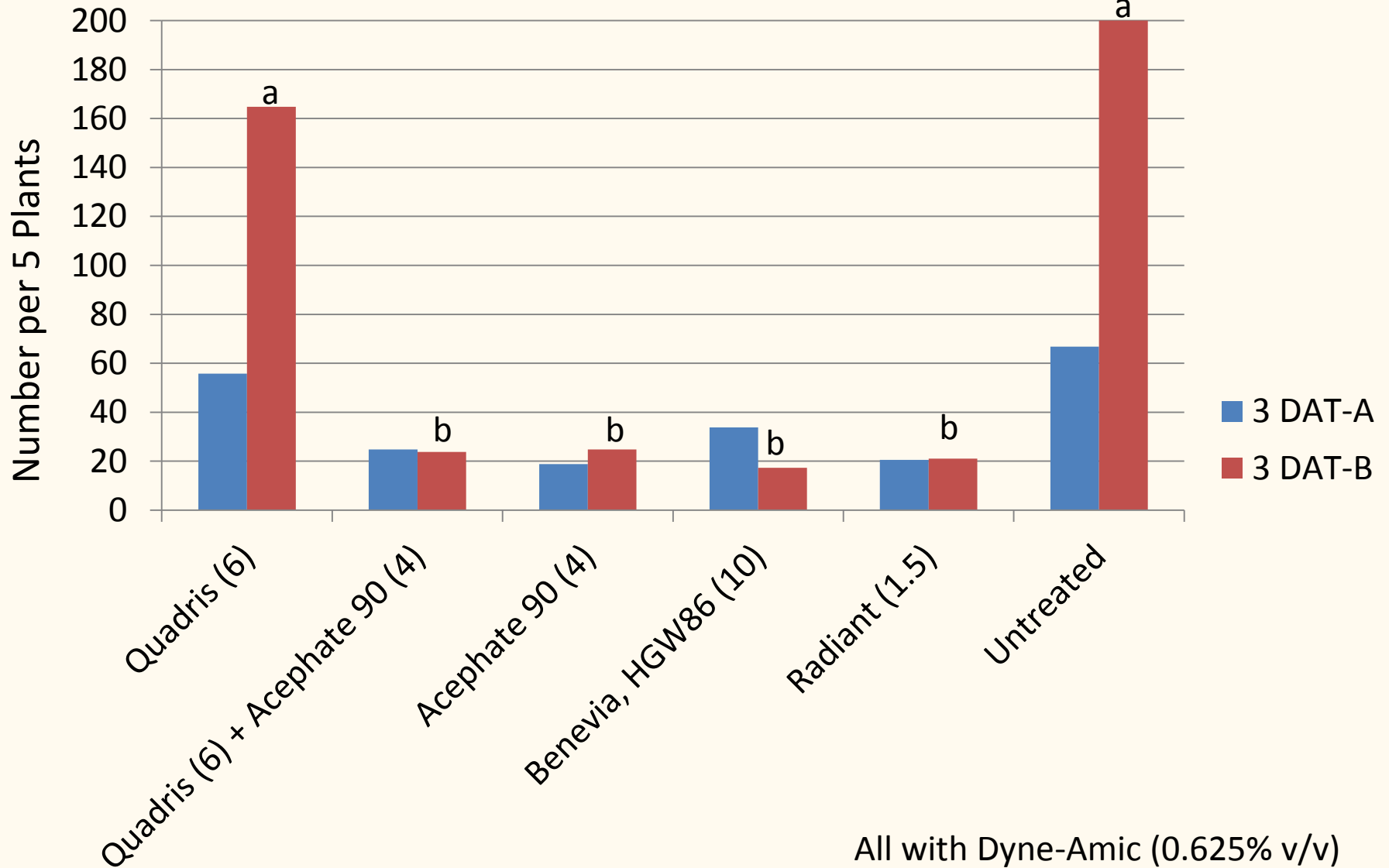
Thrips vs. Environment

Roberts, University of Georgia



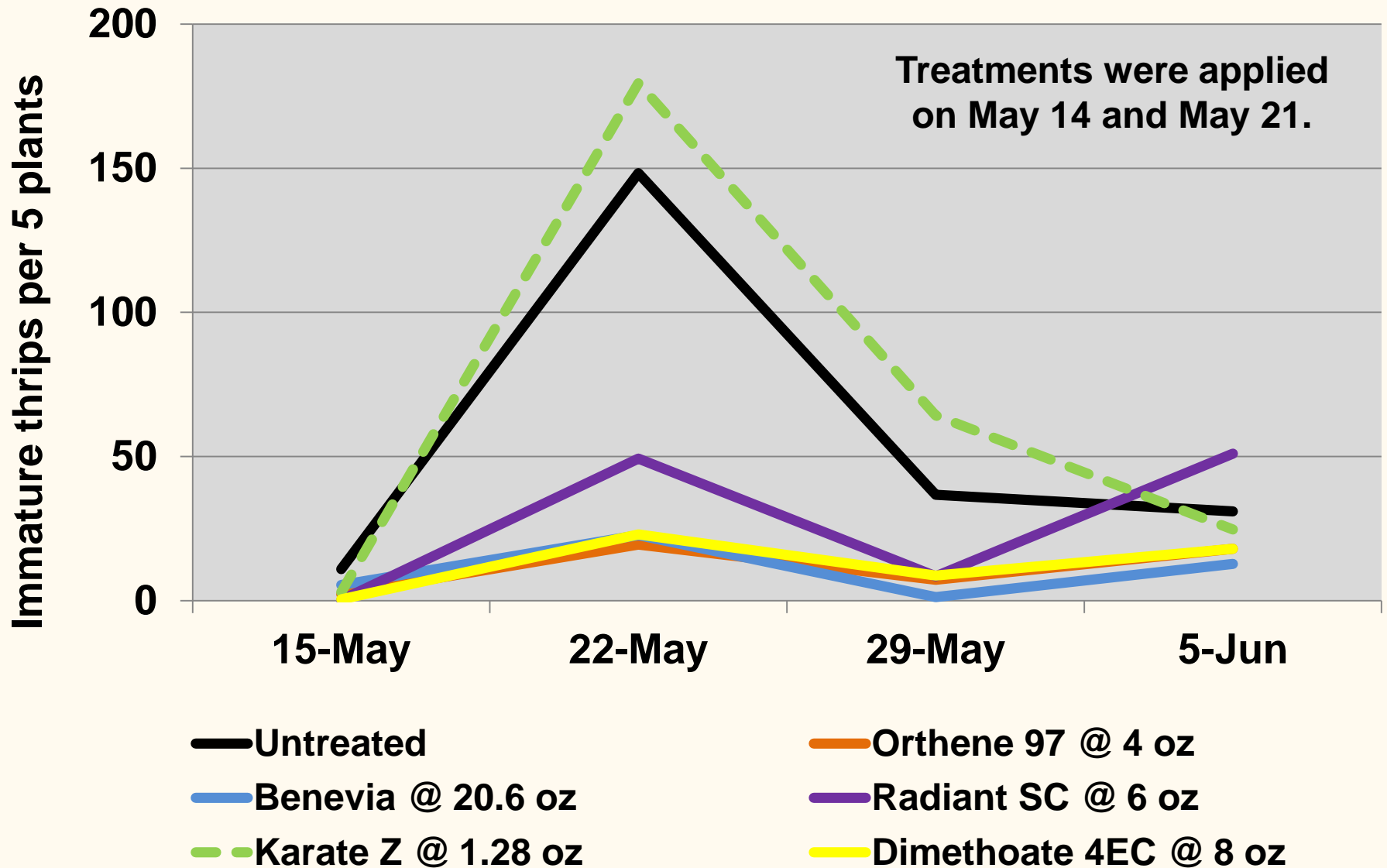
Foliar Options

Thrips Trial in Cotton (TN, 2012)



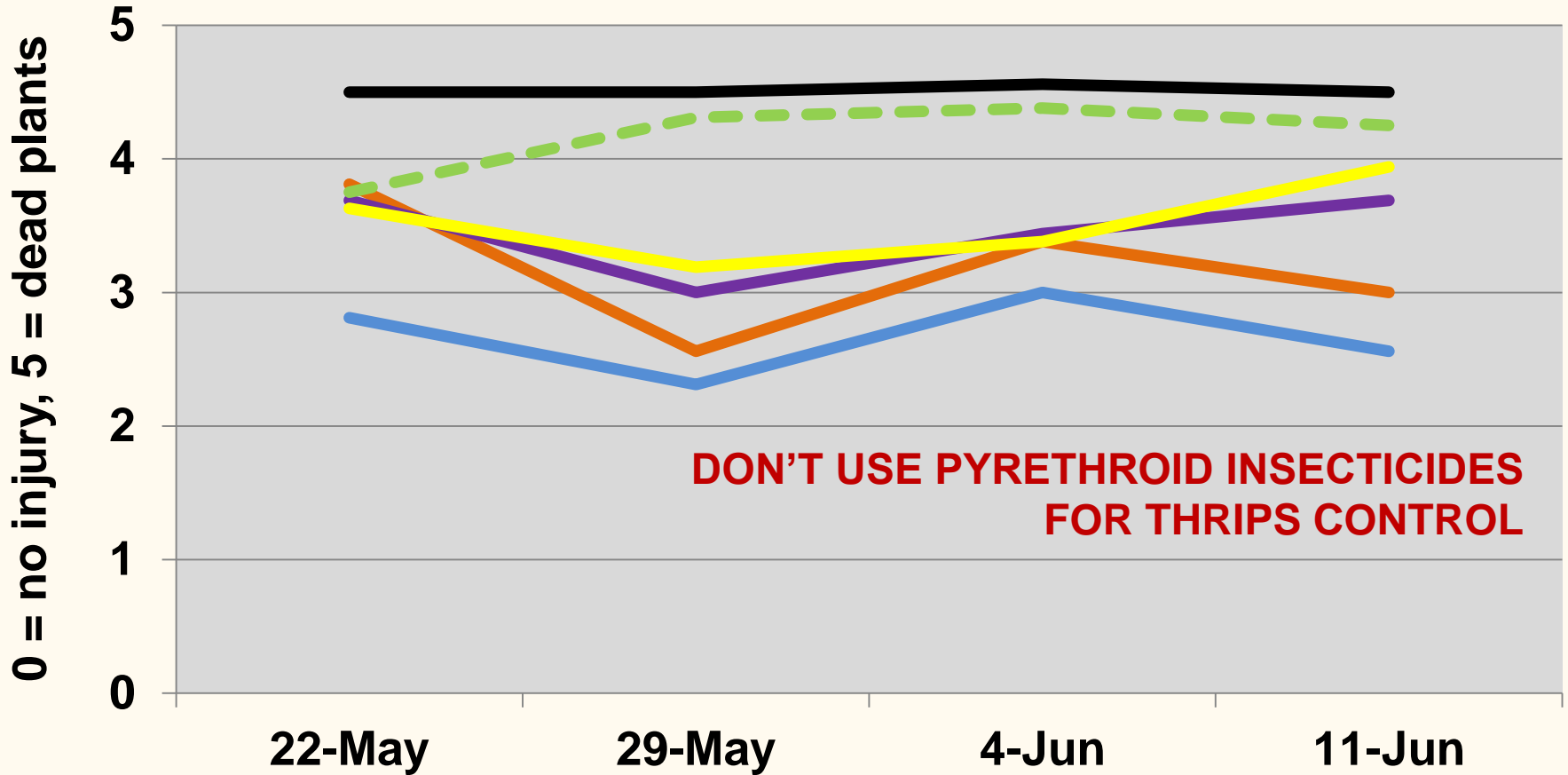
Foliar Options

Immature Thrips – Selected Treatments (Herbert, 2012, VA)



Foliar Options

Plant Injury – Selected Treatments (Herbert, 2012, VA)



— Untreated

— Benevia @ 20.6 oz

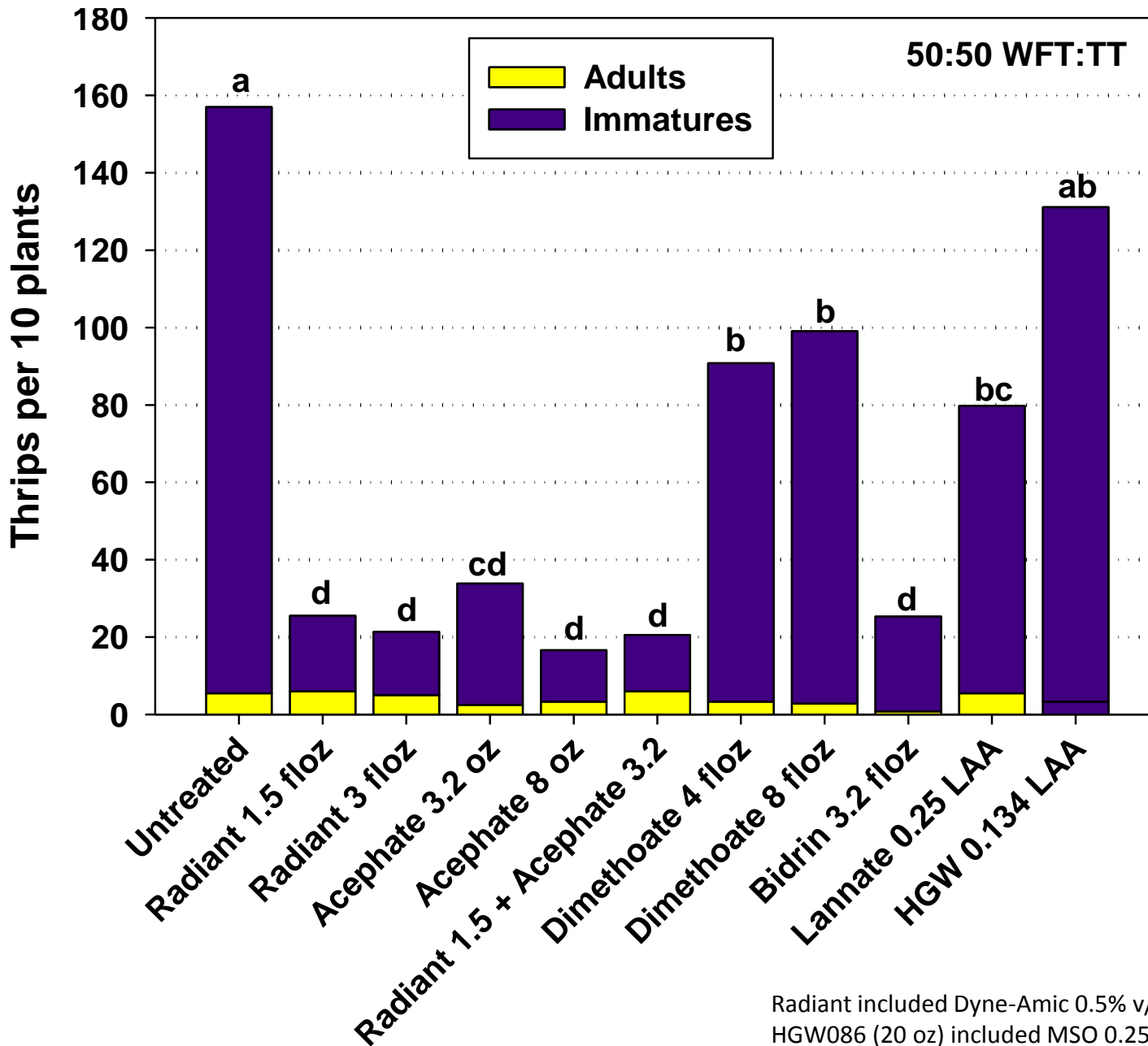
- - Karate Z @ 1.28 oz

— Orthene 97 @ 4 oz

— Radiant SC @ 6 oz

— Dimethoate 4EC @ 8 oz

Foliar Sprays for Thrips (4 DAT)

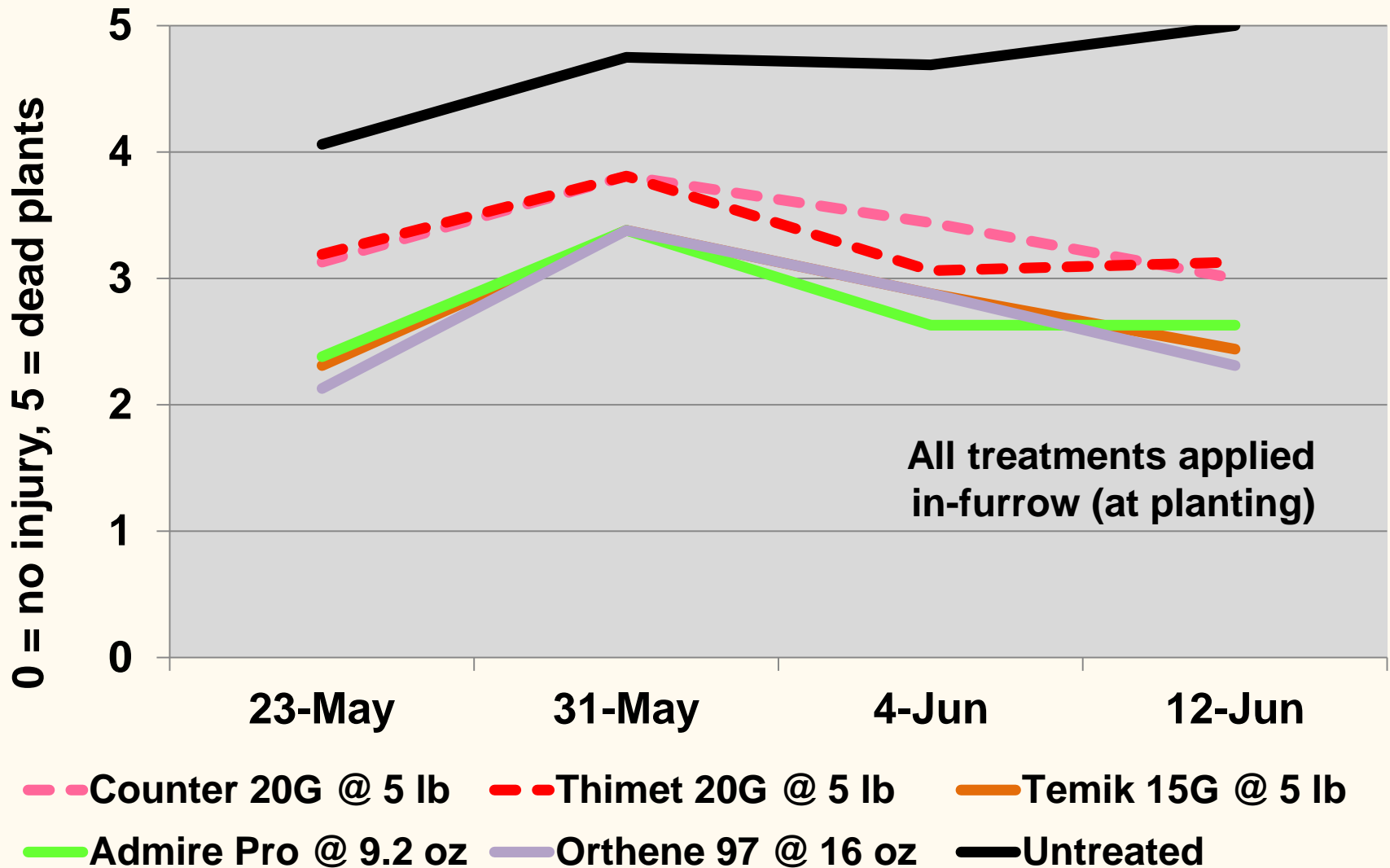


David Kerns
LSU AgCenter 2012

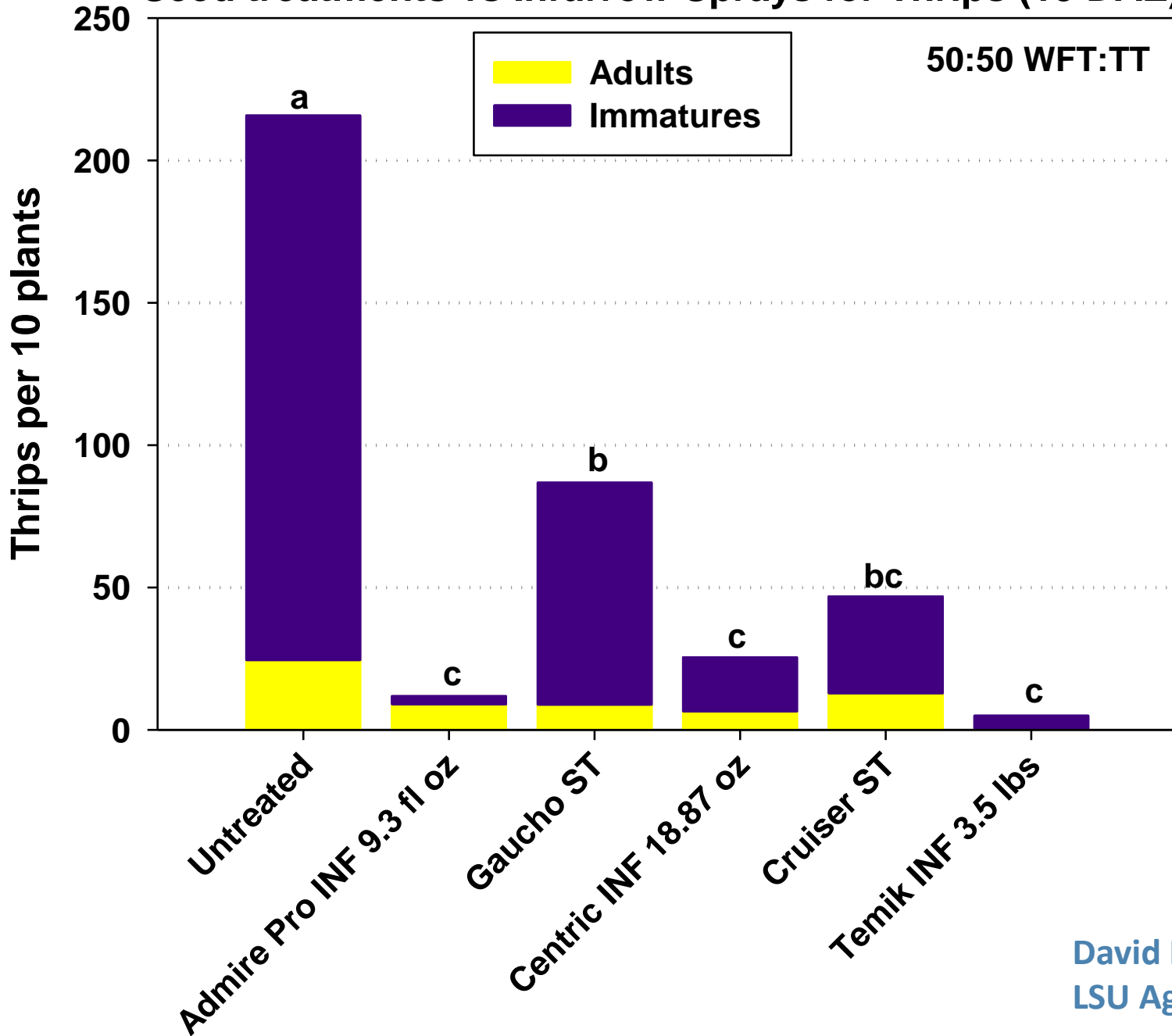
Radiant included Dyne-Amic 0.5% v/v
HGW086 (20 oz) included MSO 0.25% and Buffer Xtra 0.125%

Alternatives to Temik

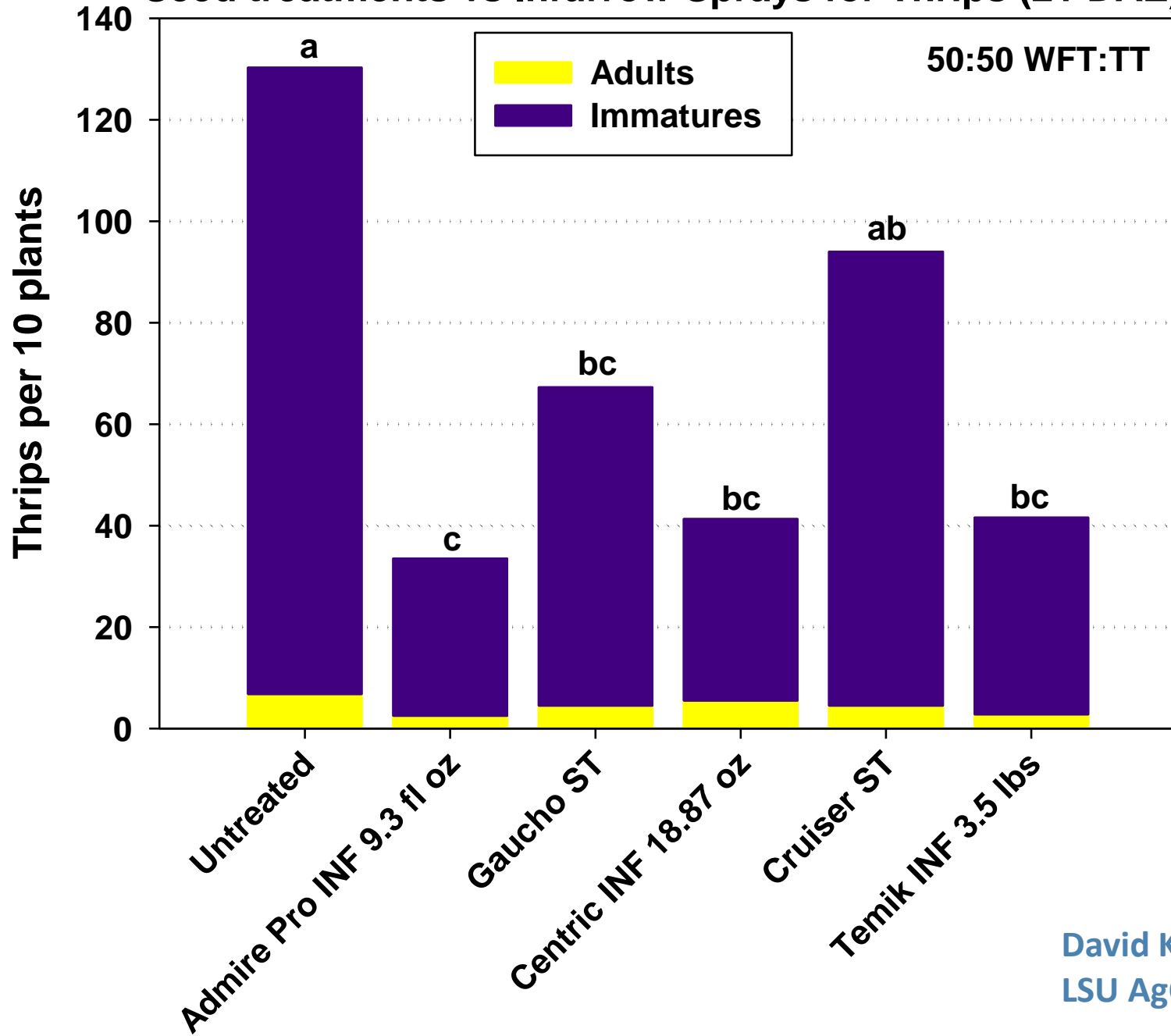
Plant Injury Ratings – High Rates (Herbert, 2012, VA)



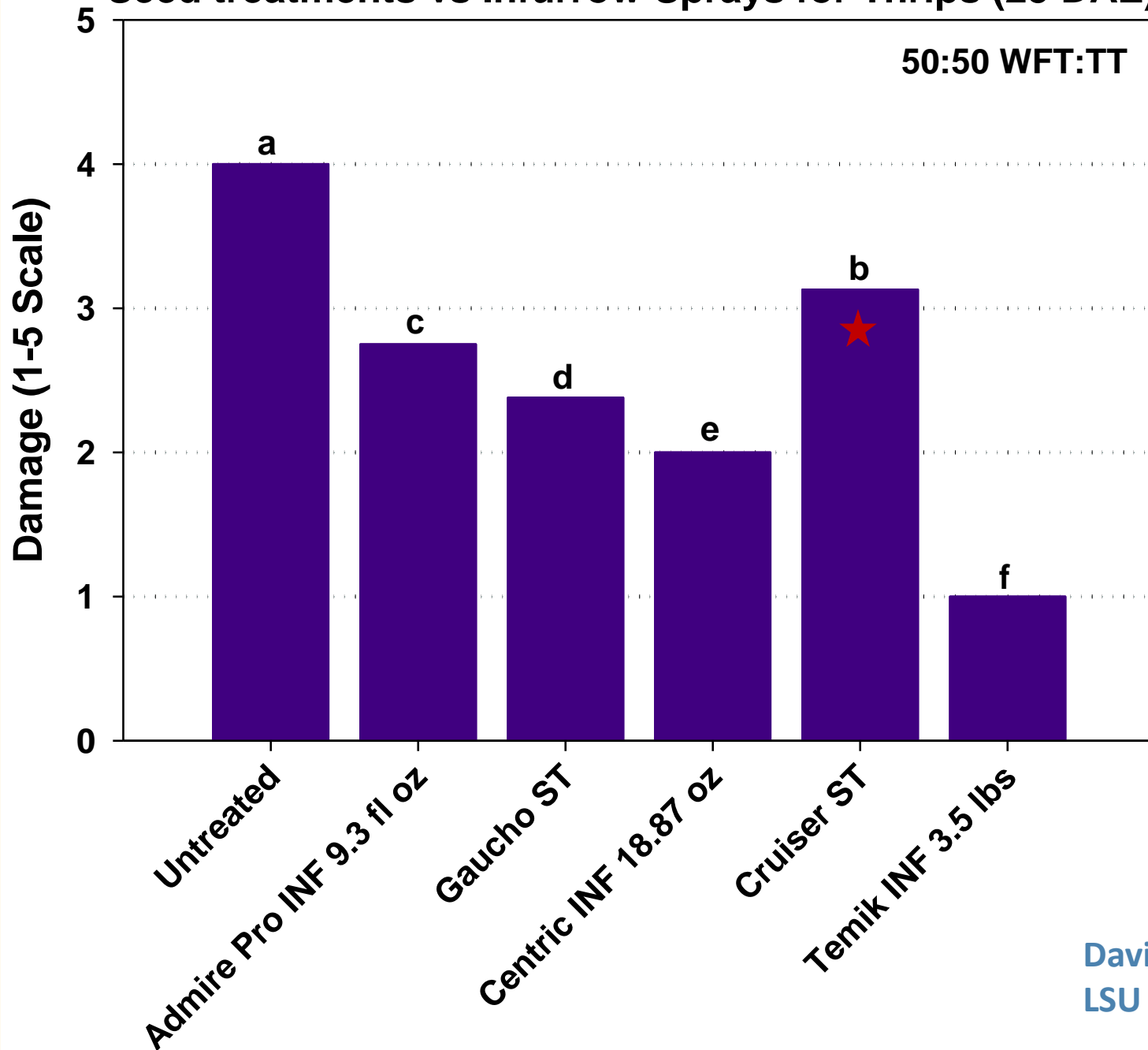
Seed treatments vs Infurrow Sprays for Thrips (13 DAE)



Seed treatments vs Infurrow Sprays for Thrips (21 DAE)



Seed treatments vs Infurrow Sprays for Thrips (25 DAE)



Thrips Injury

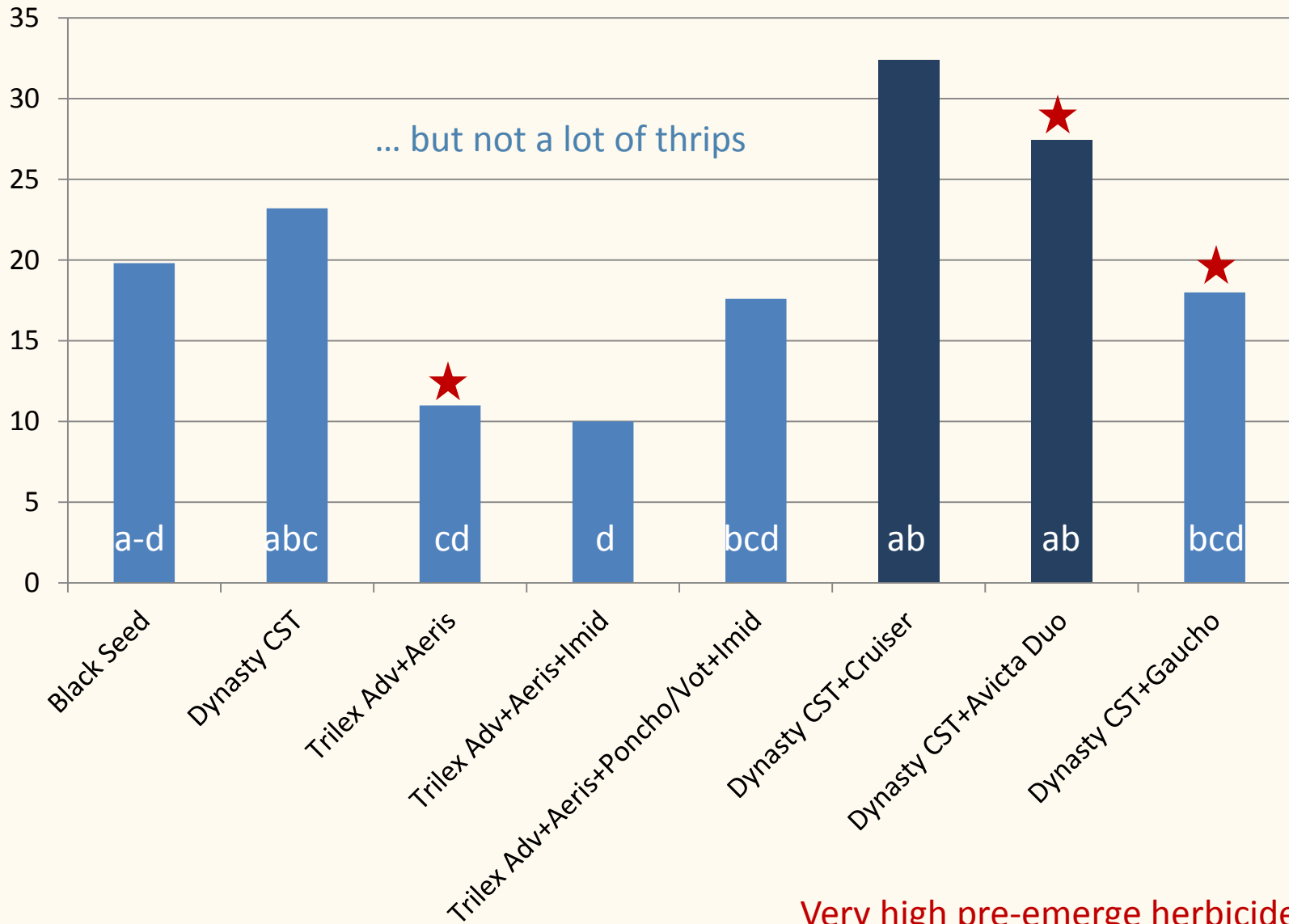


imidacloprid (Stoneville)

(thiamethoxam? (Phytogen))

Thrips per 5 Plants (22 DAP)

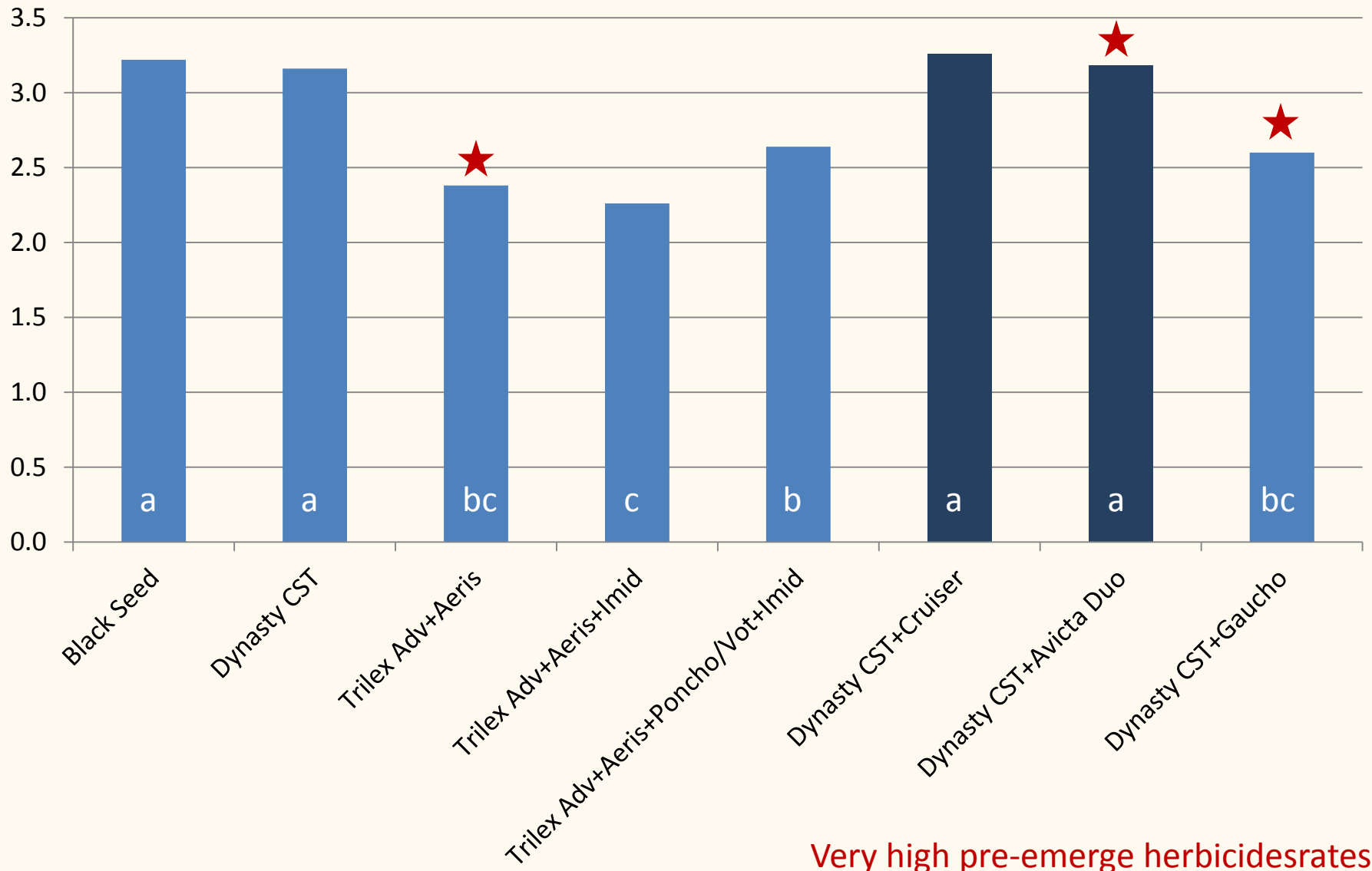
Midsouth Regional Cotton IST (Tennessee, 2012)



Very high pre-emerge herbicide rates

Thrips Injury (27 DAP)

Midsouth Regional Cotton IST (Tennessee, 2012)



Thrips Management Summary

- Use an at-planting systemic insecticide
- Consider aggravating factors
 - Planting date, tillage practices, thrips pressure and plant stress (weather, herbicide risks)
 - Early planting, conventional tillage, and cool and dry weather is a high risk scenario
- Scout and treat
 - Most data shows that the any maximum benefit of a foliar application occurs when it is made before the 2nd true leaf
 - Pay close attention to injury on the emerging 1st true leaf
 - Presence of immatures is a warning sign
 - Use Radiant if predominant species is western flower thrips
 - Two foliar applications over at-planting seed treatment is RARELY justified unless

