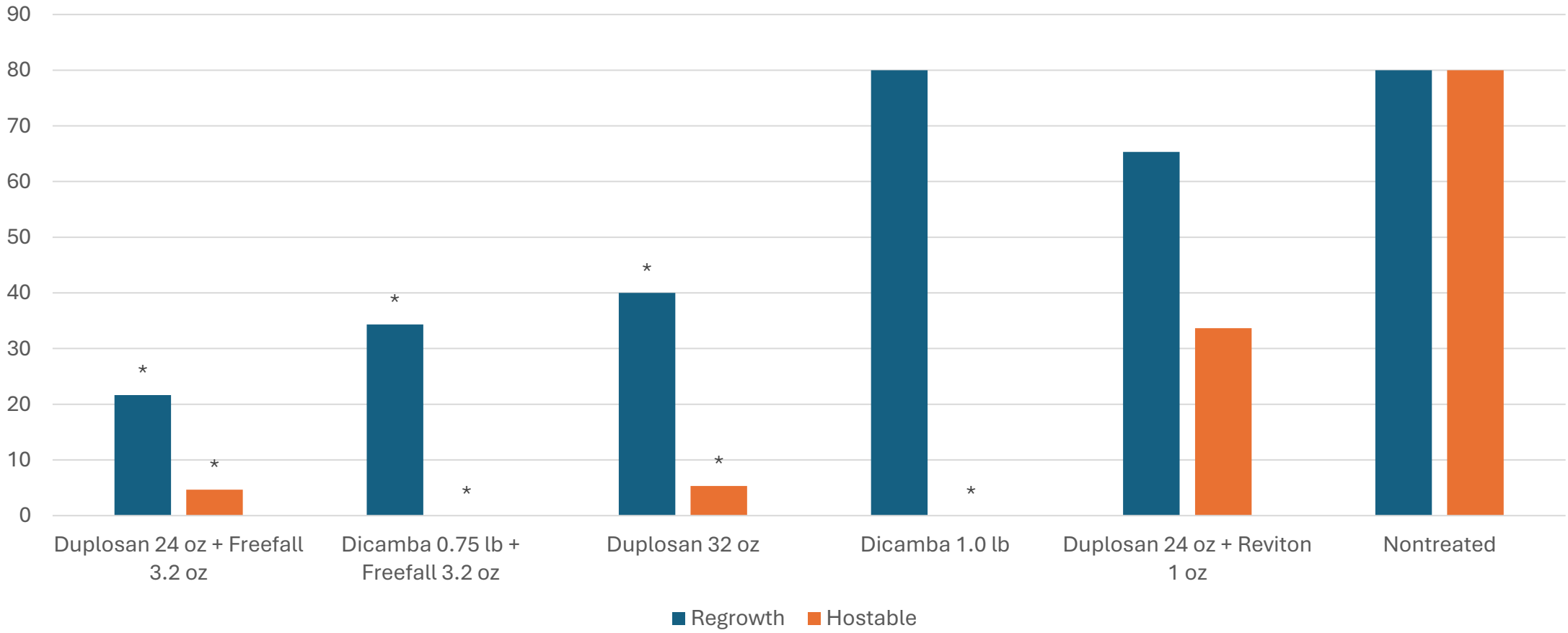
COTTON STALK DESTRUCTION & DATA IN LRGV

Danielle Sekula – Extension Agent, IPM

Texas A&M AgriLife, Weslaco

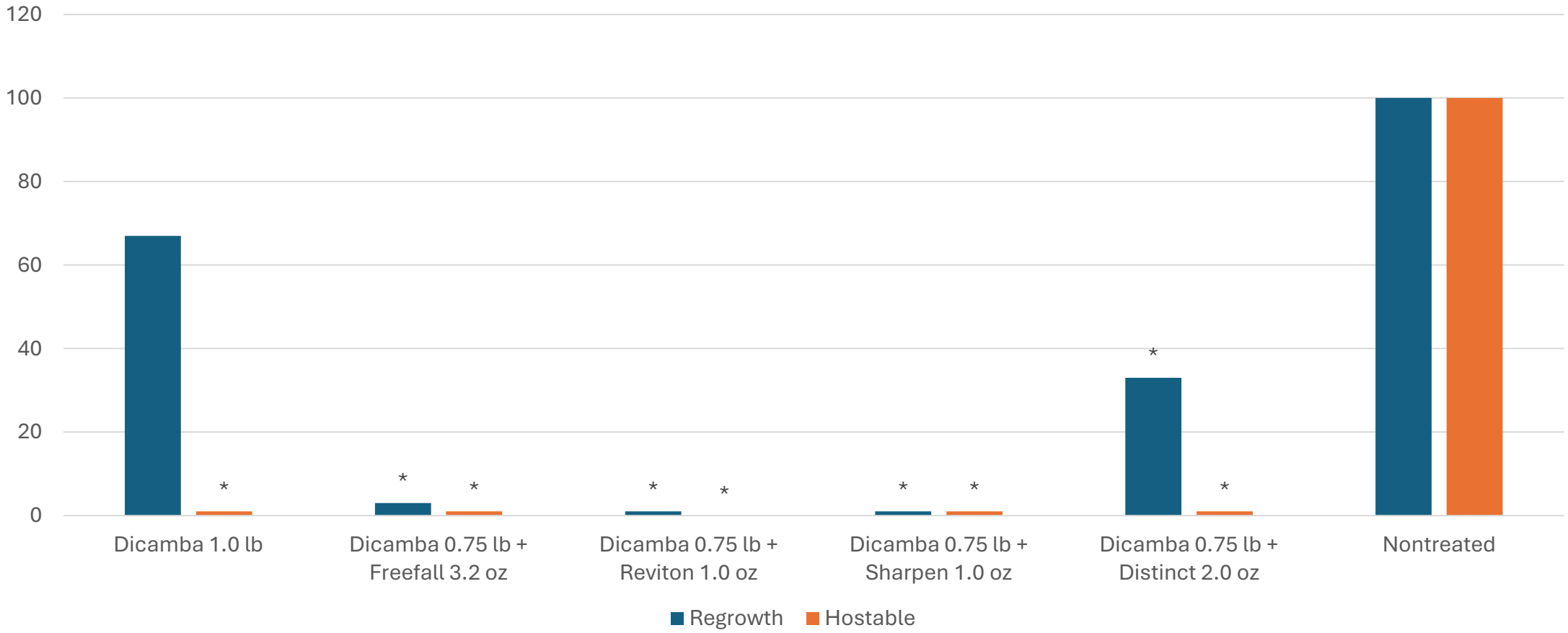

COTTON

Enlist Cotton Stalk Destruction 28 DAT



Danielle Sekula - 2023

Enlist Cotton Stalk Destruction 29 DAT



Danielle Sekula - 2024


LRGV Cotton stalks 2024 herbicide trial, stalks looked like this prior to treatment

Trt 1: Dicamba @ 1 qt/acre
+ COC @ 1%
(29 days after treatment)

Trt 2: Dicamba @ 0.75 qt/acre + Freefall @ 3.2 fl oz/a + COC @ 1% (29 days after treatment)

Trt 3: Dicamba @ 0.75 qt/acre + Reviton @ 1 fl oz/a + COC @ 1% (29 days after treatment)

Trt 4: Dicamba @ 0.75 qt/acre + Sharpen @ 1 fl oz/a + COC @ 1% (29 days after treatment)

Trt 5: Dicamba @ 0.75 qt/acre + Distinct @ 2 fl oz/a + COC @ 1% (29 days after treatment)

Trt 6: Nontreated Control
(29 days of regrowth)

Thryvon Vs non Thryvon trial 2024

- **planted at Texas AgriScience in Lyford, TX**
- **Treatments were set in a randomized complete block (RCB) design consisting**
- **of two cultivars, one with Thryvon (DP 2317) and one without Thryvon (Ton Buster Magnum).**
- **Evaluated Fleahoppers & plantbugs (tarnished & Verdes)**
- **For each cultivar used, we had two spray treatments and an untreated control.**
    - **On May 29th two spray treatments were applied (Transform @ 1oz/acre & Acephate @ 4oz/acre) for fleahopper control. At the time of spray application fleahoppers were at about 9-13% per 90 plants, middle row of plot.**
    - **On June 14th two spray treatments were applied (Transform @ 1.5 oz/acre & Leverage @ 3.2 oz/acre) for plantbug control.**
- **Evaluated all data using SAS 9.4 (Anova, lsd of .05).**

COTTON FLEAHOPPER

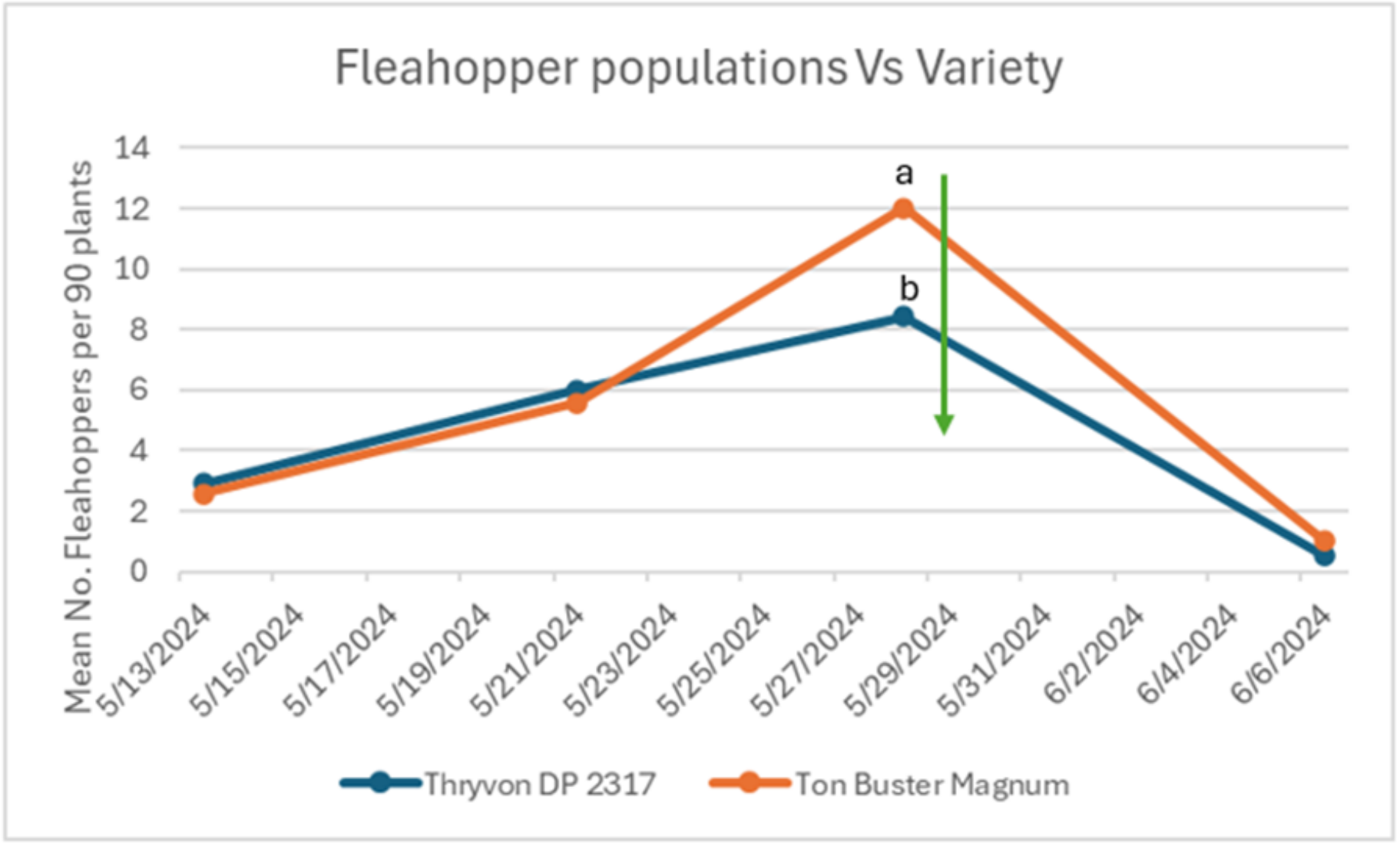
- Have piercing-sucking mouthparts – suck sap from tender portions of crop
- Many alternative hosts (weeds)
- 1st 3 weeks of squaring are most sensitive
- Scout weekly (bucket method)
- Treatment rarely justified after bloom
- Avoid broad spectrum insecticides after 2nd week of squaring

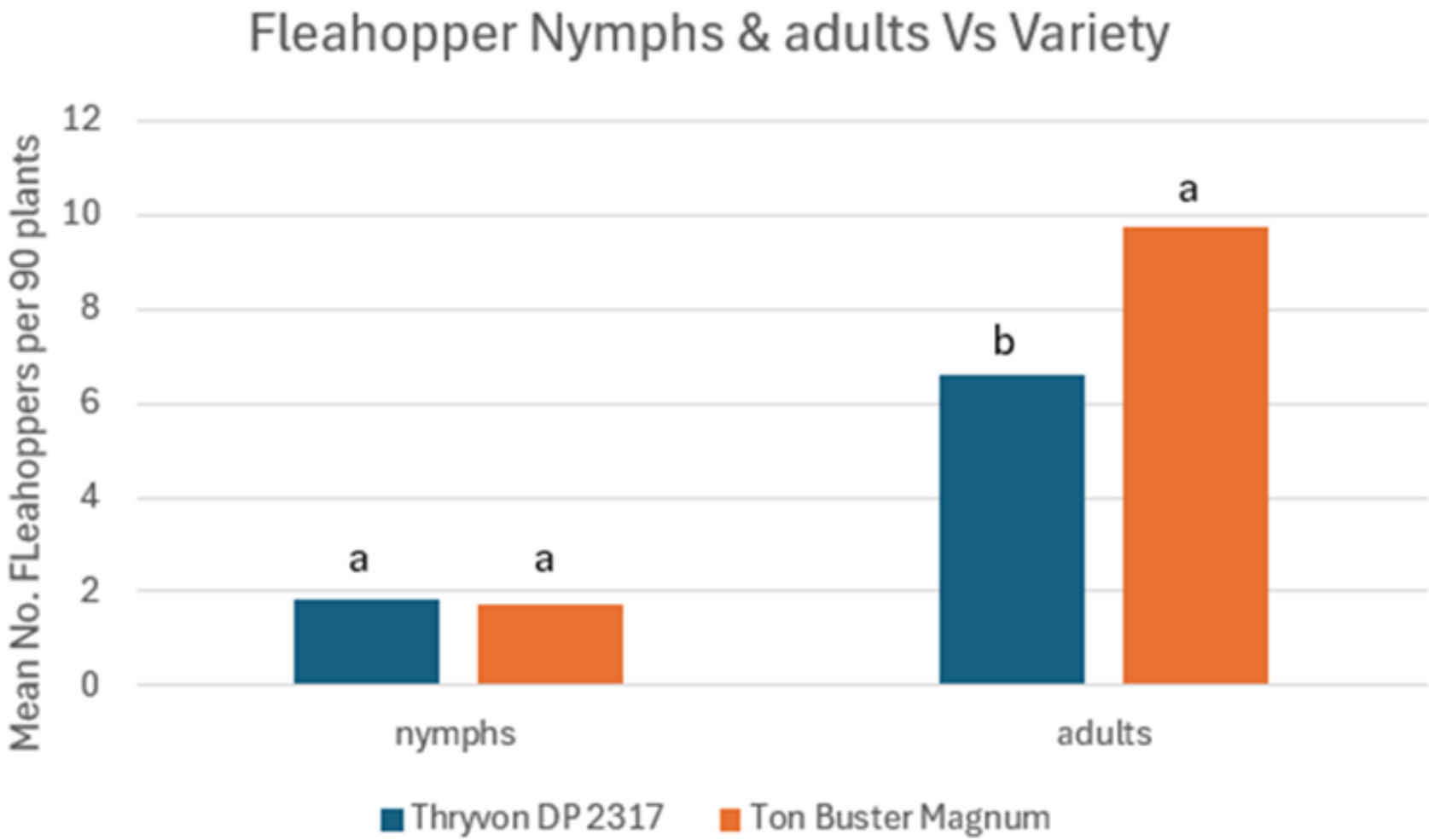

Fleahopper adult

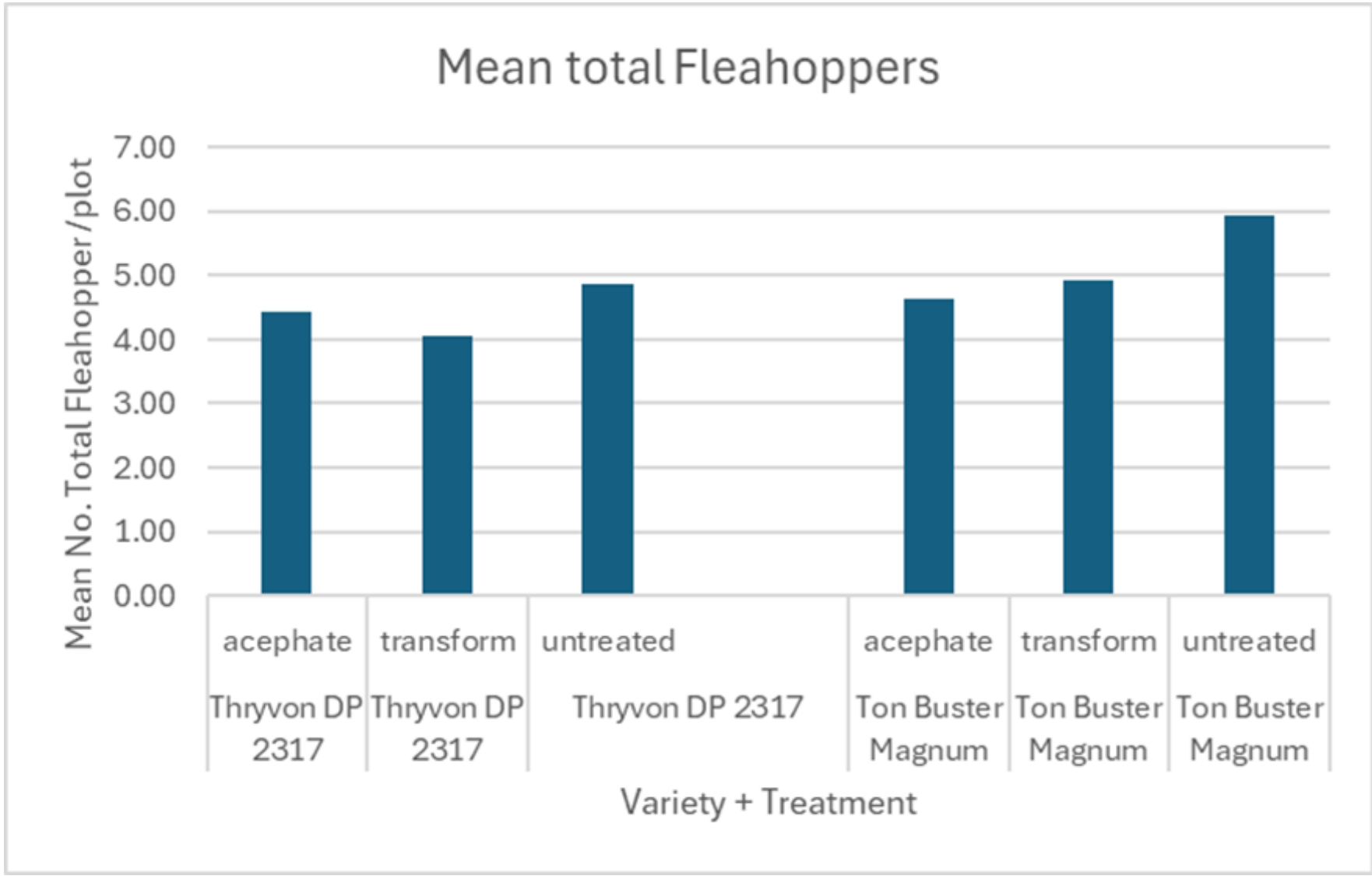

Fleahopper nymph

Photos by Danielle Sekula

Fleahopper Data in Thryvon Vs Non Thryvon:




Fleahopper Nymphs & adults Vs Variety
Mean No. FLeahoppers per 90 plants
12
10
8
6
4
2
0
a
a
b
a
nymphs
adults
Thryvon DP 2317
Ton Buster Magnum


Mean total Fleahoppers
Mean No. Total Fleahopper/plot
7.00
6.00
5.00
4.00
3.00
2.00
1.00
0.00
acephate
transform
untreated
acephate
transform
untreated
Thryvon DP 2317
Thryvon DP 2317
Thryvon DP 2317
Ton Buster Magnum
Ton Buster Magnum
Ton Buster Magnum
Variety + Treatment

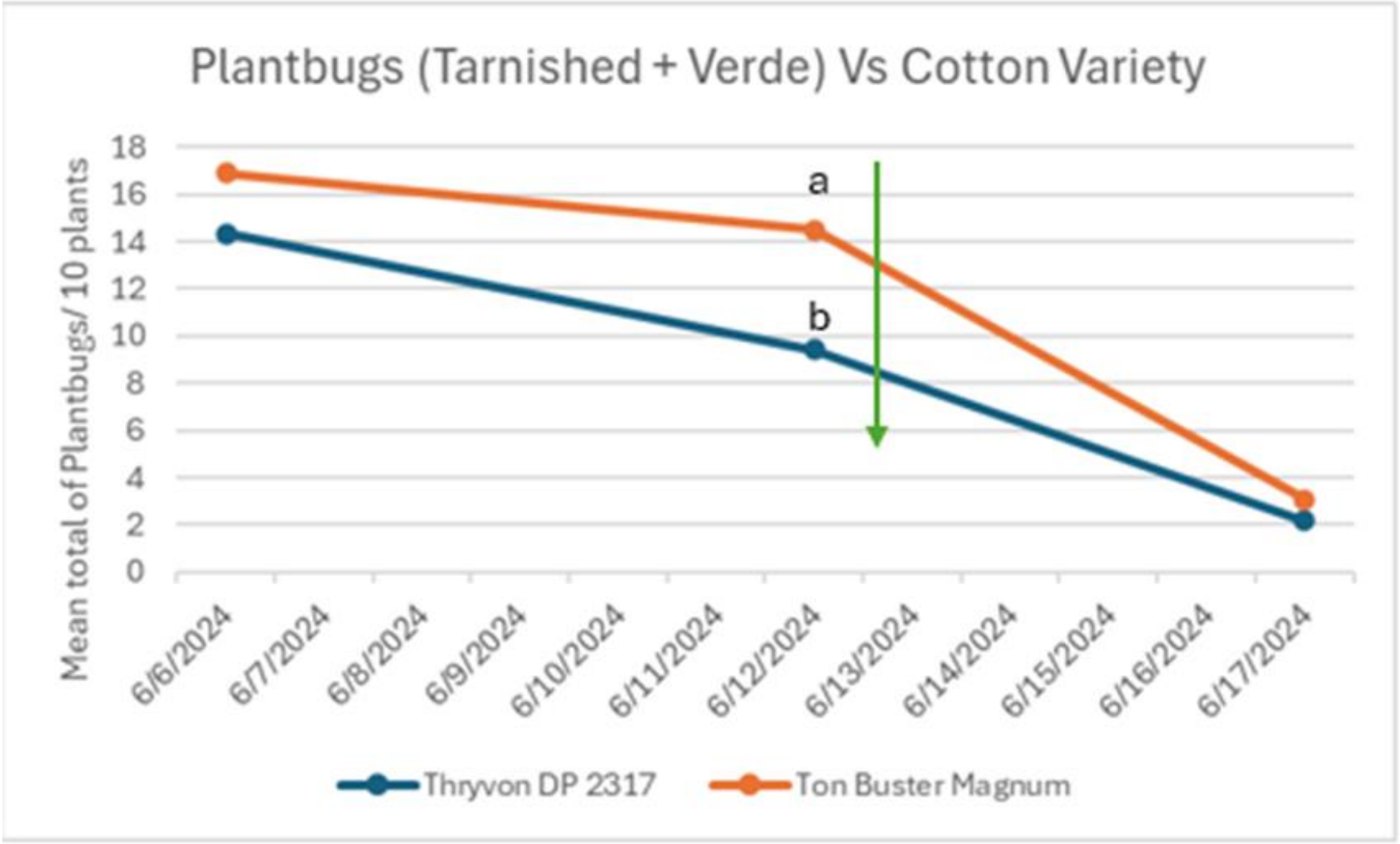
Tarnished Plant Bug (Lygus Bugs)

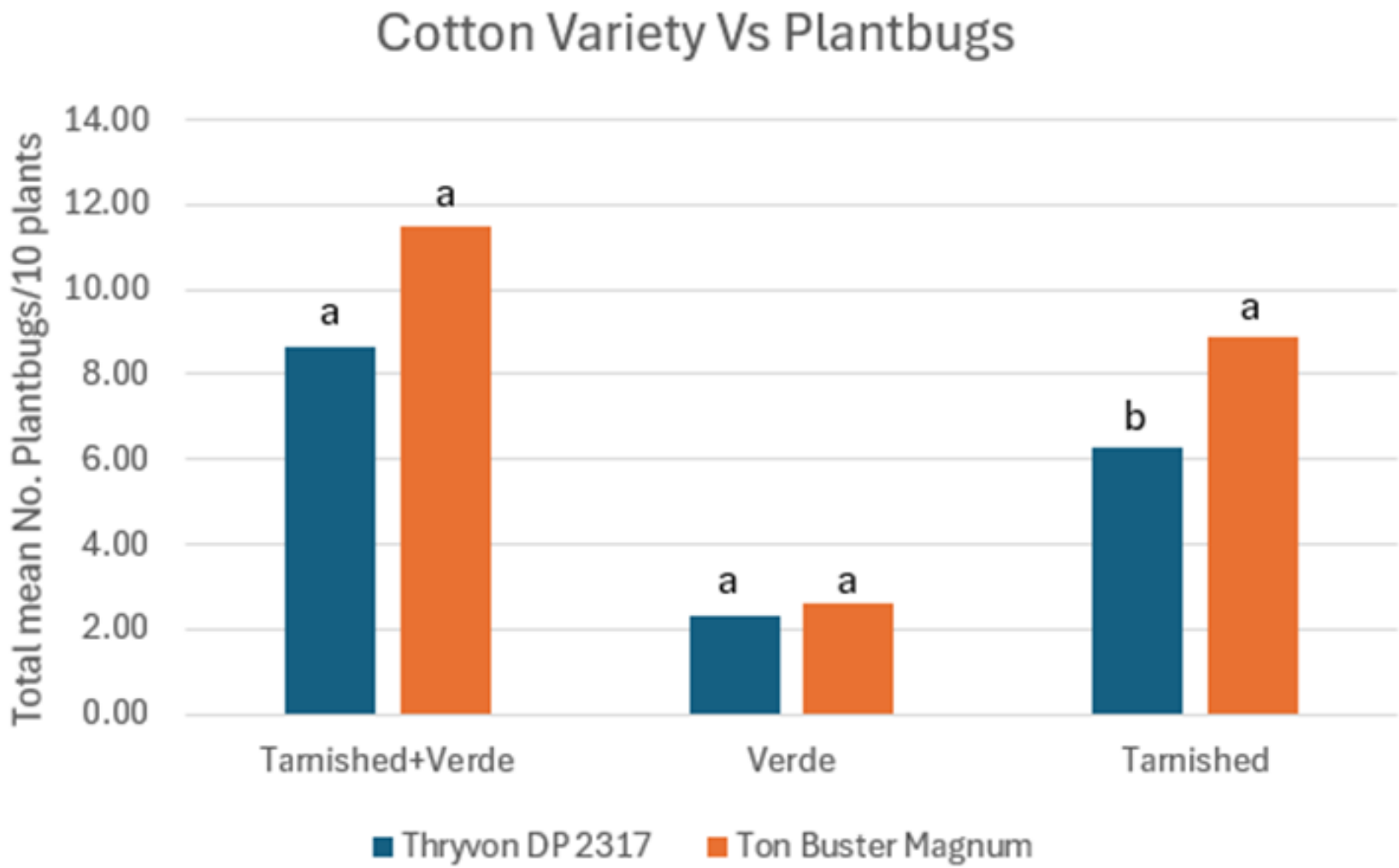
- Prefer Legumes
- Feed on cotton terminals, squares, flowers, and small bolls
- Feeding may cause:
  - Deformed bolls
  - Dirty bloom (damaged anthers) and puckered petals
  - Shedding of squares and small bolls
  - Stunted growth
  - Sunken lesions on outer surface of bolls
  - Damaged developing seeds or lint

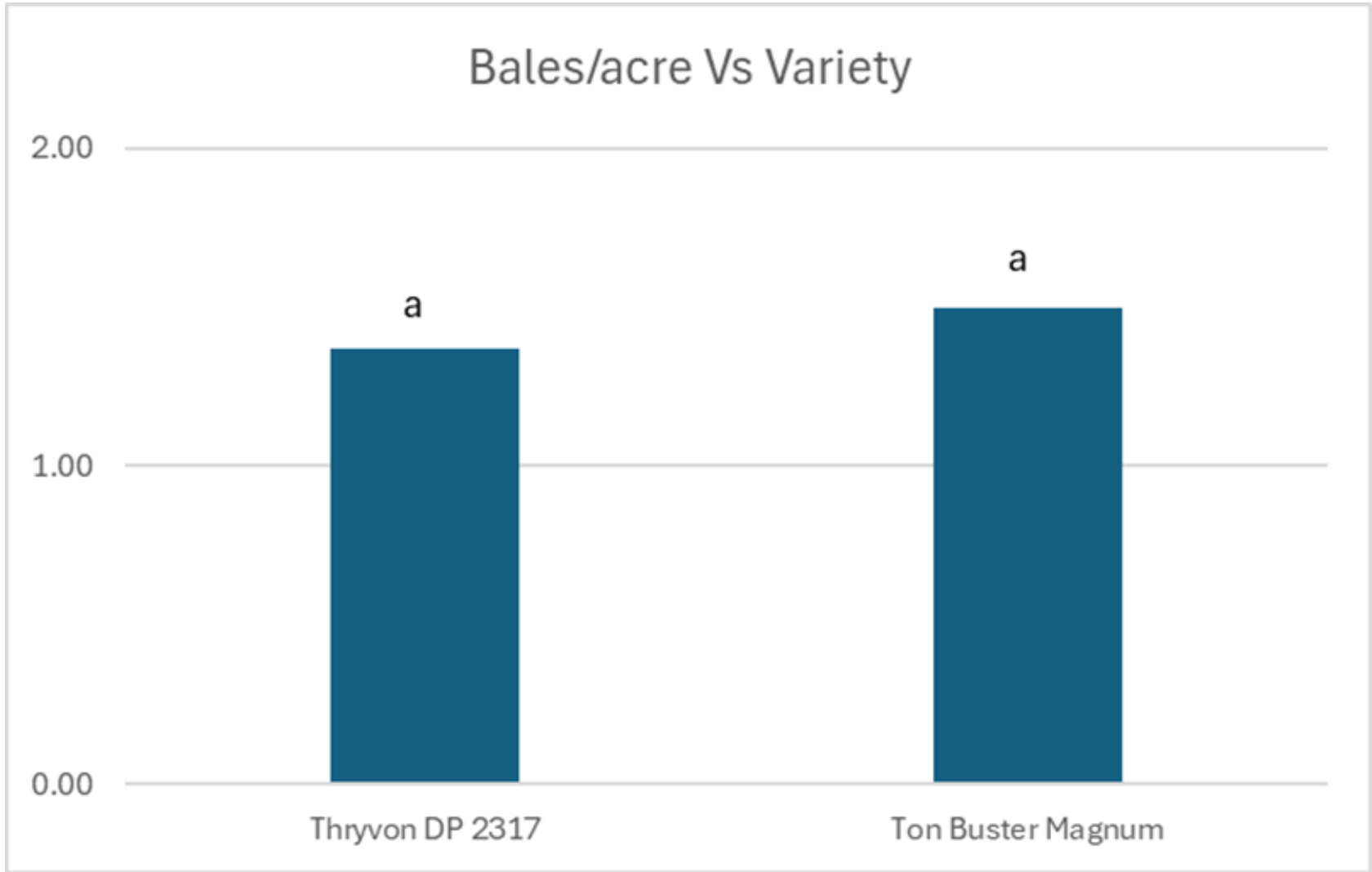
Verde Plant Bug

- Many alternative hosts: seepweed, pigweed, and sorghum
- Piercing-sucking mouthparts used to feed on large squares and bolls up to 1 inch in diameter
- Causes dropped mature squares and young bolls and boll rot
- Treat when 20-25 bugs/100 plants, or
- (1-2 bugs per 10 sweeps) (4-5 per 20 sweeps)
- Beat bucket is 1 per plant
- Access your cotton field to see if you have more immature bolls than mature as once bolls are larger than 1 inch diameter and cannot be squeezed open they are generally safe from plant bug damage.

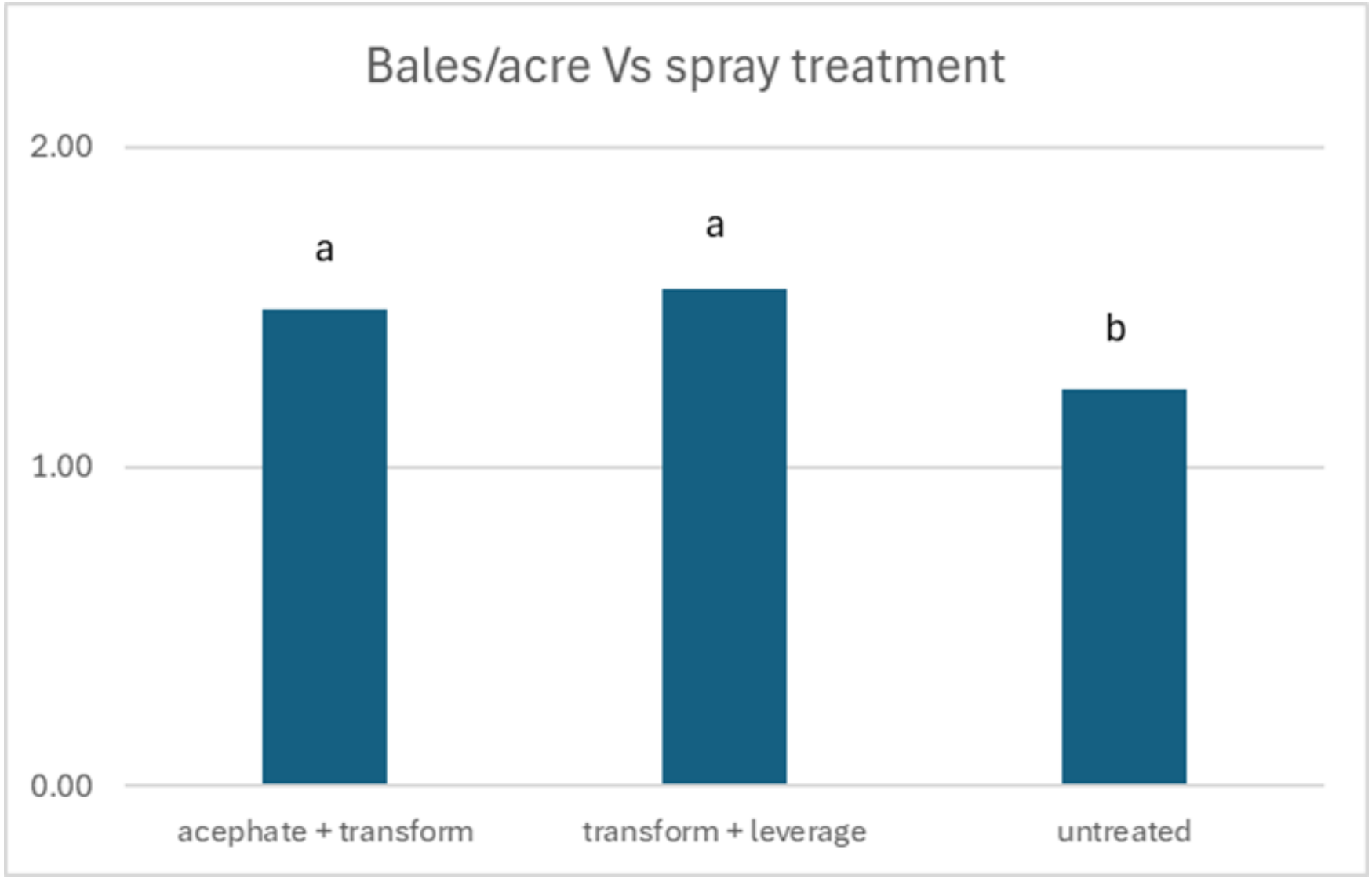
Plantbug Data in Thryvon Vs Non Thryvon:




Cotton Variety Vs Plantbugs
Total mean No. Plantbugs/10 plants
14.00
12.00
10.00
8.00
6.00
4.00
2.00
0.00
a
a
a
a
b
a
Tarnished+Verde
Verde
Tarnished
Thryvon DP 2317
Ton Buster Magnum


Bales/acre Vs Variety
2.00
1.00
0.00
a
a
Thryvon DP 2317
Ton Buster Magnum

Yield in Thryvon Vs Non Thryvon:



Observations for Chilli thrips, whiteflies & Plantbugs (tarnished + Verde) at:

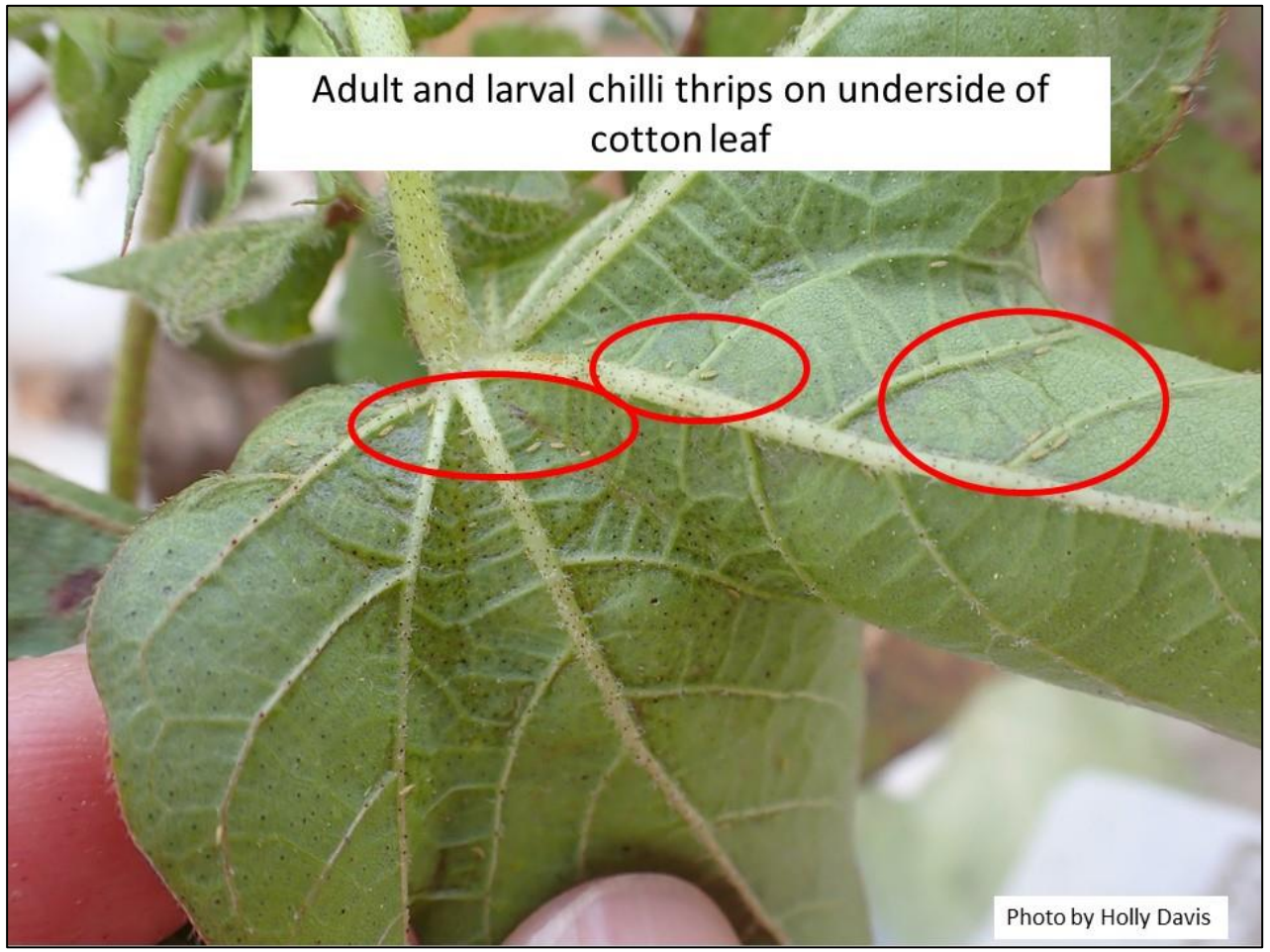
Hidalgo County RACE Trial, 2024

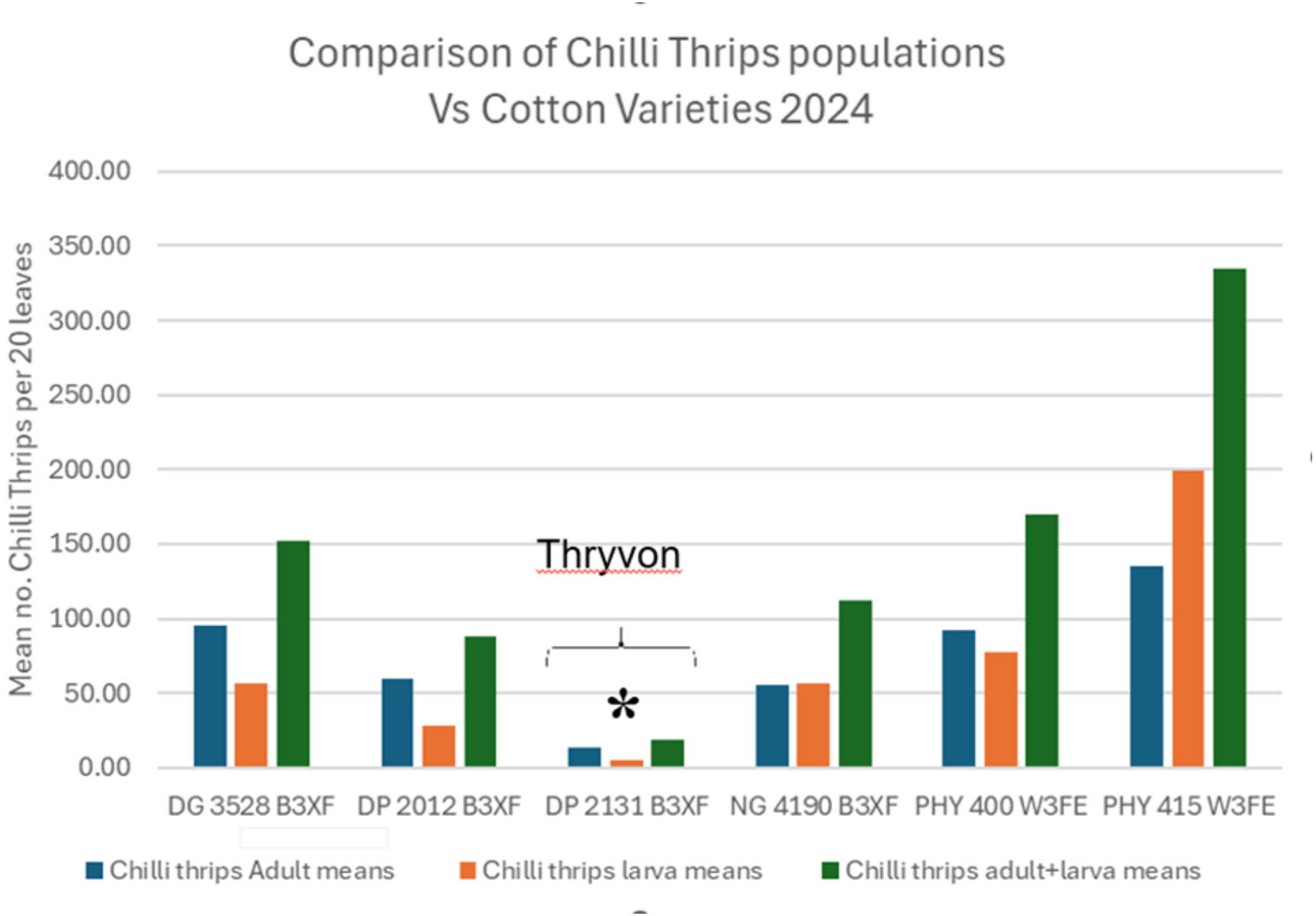
Cooperator: Balde Gonzalez

Chilli thrips, *Scirtothrips dorsalis*

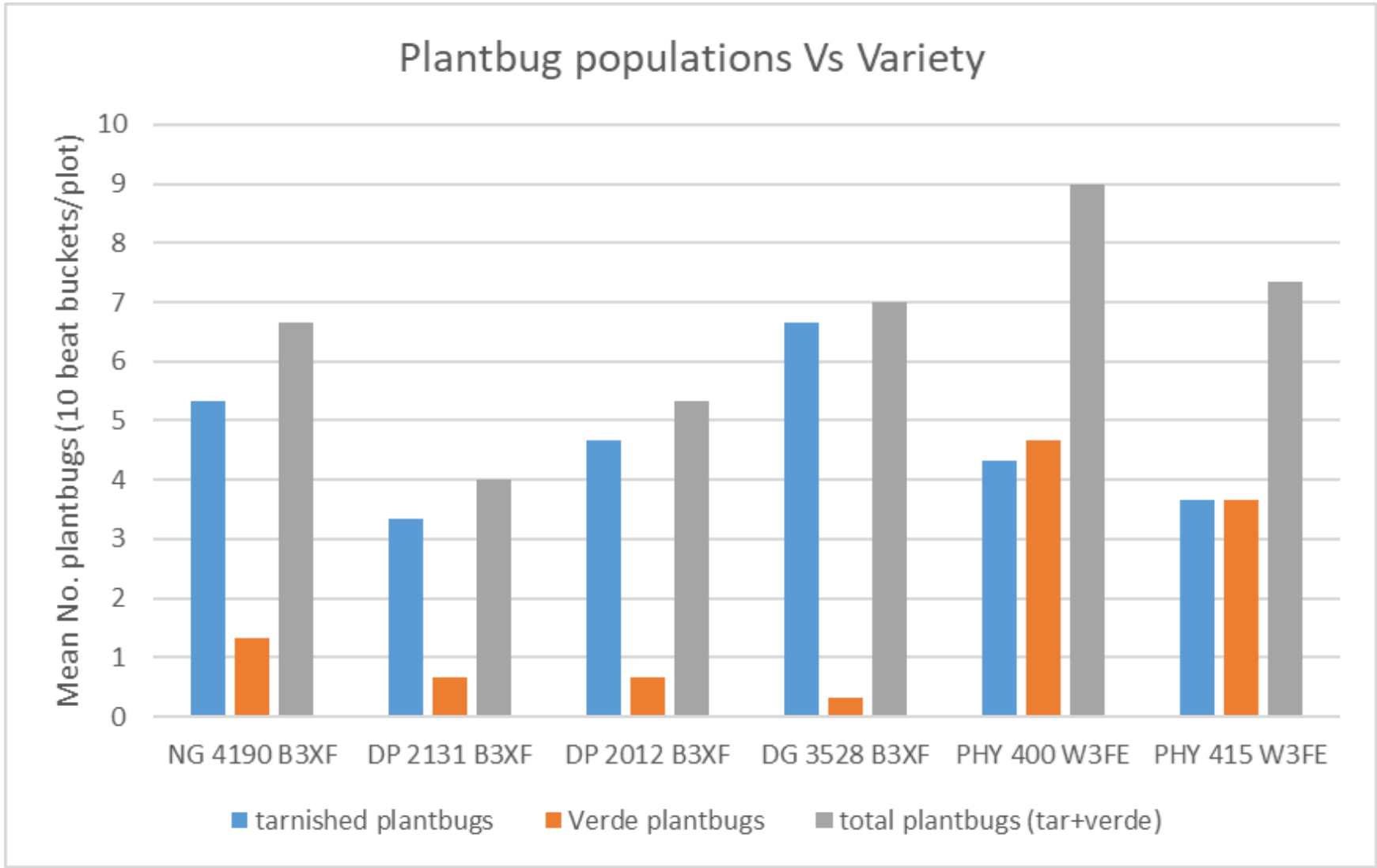
- From Southeast Asia
- First detected in Florida in 1991, considered established by 2005
- Found in Southeast TX in 2005
- Detected in grapefruit by Dr. Mamoudou Sétamou in 2018, and every year since
- Late season bronzing lead to discovery in cotton throughout the Valley in 2020

Damage: Cotton




Comparison of Chilli Thrips populations
Vs Cotton Varieties 2024
Mean no. Chilli Thrips per 20 leaves
400.00
350.00
300.00
250.00
200.00
150.00
100.00
50.00
0.00
Thryvon
*
DG 3528 B3XF
DP 2012 B3XF
DP 2131 B3XF
NG 4190 B3XF
PHY 400 W3FE
PHY 415 W3FE
Chilli thrips Adult means
Chilli thrips larva means
Chilli thrips adult+larva means

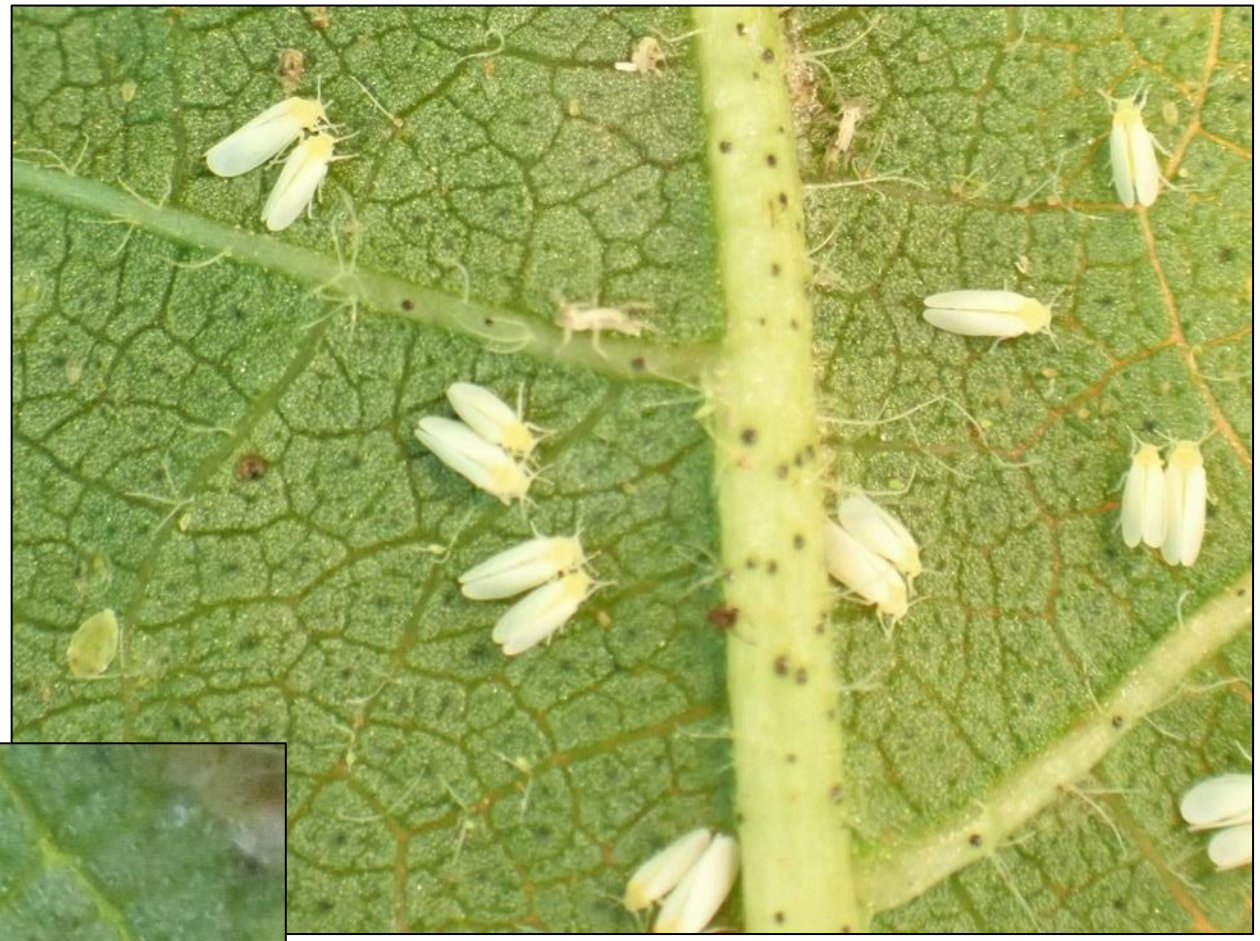
	Chilli thrips means/ 20 cotton leaves					
Varieties	Adult means		larva means		adult+larva means	
DG 3528 B3XF	95.33	ab	56.67	bc	152.00	b
DP 2012 B3XF	59.83	bc	27.83	bc	87.67	bc
DP 2131 B3XF	13.00	c	5.50	c	18.50	c
NG 4190 B3XF	55.83	bc	56.17	bc	112.00	b
PHY 400 W3FE	92.33	ab	77.17	b	169.50	b
PHY 415 W3FE	135.33	a	199.17	a	334.50	a
Means within a column followed by the same letter are not significantly different						
(P>0.05; PROC ANOVA; Mean comparison by LSD [SAS 9.4])						


Plantbug populations Vs Variety
Mean No. plantbugs (10 beat buckets/plot)
10
9
8
7
6
5
4
3
2
1
0
NG 4190 B3XF
DP 2131 B3XF
DP 2012 B3XF
DG 3528 B3XF
PHY 400 W3FE
PHY 415 W3FE
tarnished plantbugs
Verde plantbugs
total plantbugs (tar+verde)

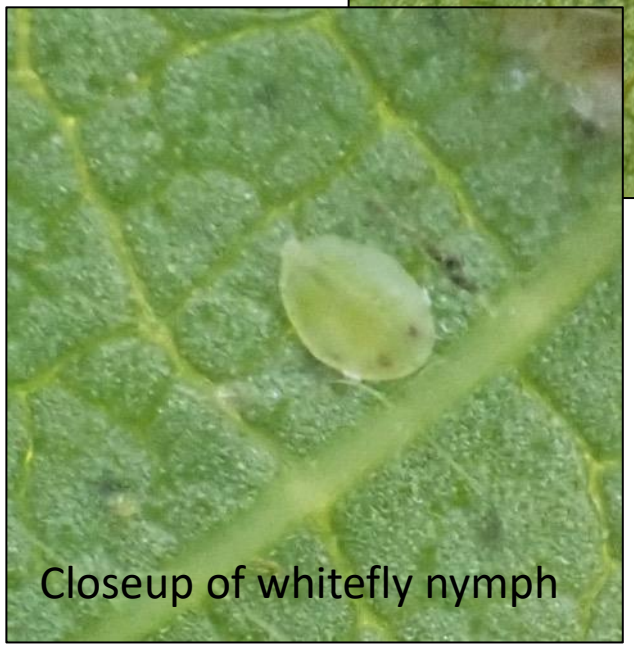
	Plantbug populations Vs Variety					
Variety	tarnished plantbugs		Verde plantbugs		total plantbugs (tar+verde)	
NG 4190 B3XF	5	a	1	ab	7	a
DP 2131 B3XF	3	a	1	c	4	a
DP 2012 B3XF	5	a	1	c	5	a
DG 3528 B3XF	7	a	0	c	7	a
PHY 400 W3FE	4	a	5	a	9	a
PHY 415 W3FE	4	a	4	ab	7	a
Means within a column followed by the same letter are not significantly different						
(P>0.05; PROC ANOVA; Mean comparison by LSD [SAS 9.4])						

Whiteflies in Cotton

- Piercing-sucking mouthparts
  - Stunts growth
  - Reduces plant vigor
- Produce honeydew
  - Premature defoliation
  - Sticky cotton
  - Stain lint and reduce fiber quality



Whitefly adults



Closeup of whitefly nymph

Photos by Danielle Sekula

Mean Whitefly populations per 10 cotton leaves Vs variety						
Variety	whiteflies					
NG 4190 B3XF	12	b				
DP 2131 B3XF	8	b				
DP 2012 B3XF	8	b				
DG 3528 B3XF	24	b				
PHY 400 W3FE	27	a				
PHY 415 W3FE	24	a				
leans within a column followed by the same letter are not significantly differer						
(P>0.05; PROC ANOVA; Mean comparison by LSD [SAS 9.4])						

Table xx. Hidalgo County RACE Trial, 2024

Cooperator: Balde Gonzalez

Vidal Saenz - Hidalgo County Extension Agent, Agriculture and Natural Resources

Danielle Sekula - Hidalgo, Cameron, and Willacy County IPM Agent - Weslaco, TX

Dr. Josh McGinty, Jonathan, Ramirez, Clinton Livingston, and Rudy Alaniz - Texas A&M AgriLife Extension, Corpus Christi

Variety	Yield (lbs/acre)		Turnout %		Micronaire		Length (inches)		Strength (g/tex)		Uniformity		Loan Value (¢/lbs)		Lint Value ($/Ac)	
NG 4190 B3XF	1429	a	46.1	b	5.1	abc	1.12	ef	27.9	b	81.7	-	51.47	c	735	a
DG 3503 B3XF	1349	ab	45.7	bc	4.7	e	1.20	a	31.6	a	82.4	-	54.00	a	728	a
DP 2131 B3TXF	1341	ab	45.5	bcd	4.8	de	1.17	abc	28.7	b	81.5	-	53.62	ab	719	ab
DP 2012 B3XF	1288	bc	44.2	de	5.0	bc	1.15	cde	28.6	b	82.7	-	51.83	c	668	bc
ST 6000 AXTP	1286	bc	47.8	a	5.2	a	1.18	ab	31.4	a	82.8	-	50.92	c	654	cd
DG 3528 B3XF	1245	cd	44.8	b-e	5.0	abc	1.16	bcd	29.0	b	82.4	-	51.92	c	647	cde
PHY 400 W3FE	1217	cd	45.4	bcd	5.0	bc	1.11	f	29.1	b	81.8	-	52.28	bc	638	cde
PHY 415 W3FE	1178	de	44.6	cde	4.9	cd	1.14	def	29.1	b	81.7	-	51.77	c	610	def
FM 868 AXTP	1170	de	43.5	e	5.0	abc	1.13	def	29.3	b	81.7	-	50.90	c	596	ef
NG 3457 B3XF	1123	e	45.4	bcd	5.1	ab	1.14	de	28.4	b	82.2	-	51.07	c	573	f
Mean	1263		45.3		5.0		1.15		29.3		82.1		51.98		657	
P>F	0.0004		0.0074		0.0029		0.0018		0.0043		0.6555		0.0409		0.0003	
LSD (P=.10)	90.6		1.47		0.18		0.03		1.45		1.27		1.63		52.3	
STD DEV	63.98		1.04		0.12		0.02		1.02		0.90		1.15		36.97	
CV%	5.07		2.30		2.51		1.96		3.48		1.09		2.22		5.63	