

## Controlling Chilli Thrips in Cotton Efficacy trial July 2022 PI: Danielle Sekula – Texas A&M AgriLife Extension Hidalgo County, TX Texas AgriScience, LLC. In Lyford, TX

Crop:	Cotton	

Target Pest: Chilli Thrips

Location: Lyford, TX

Plot Size: 25 ft. x 4 rows

Experimental Design: Randomized Complete Block; 4 Replications.

Information:

- Detected high populations of Chilli thrips in cotton in late July 2022. We marked plots at 25 ft by 4 rows, spraying and conducting sampling from the middle two rows.
- We had 6 insecticide treatments and 1 untreated control, replicated 4 times giving us 28 plots to evaluate for chilli thrips populations.
- The samples consisted of grabbing 10 random upper leaves from each plot and putting the samples in a jar of ethanol where the chilli thrips were then filtered out and counted for both adults and larva.
- Pre-counts were taken July 21<sup>st</sup> where samples were gathered from each plot for adult and larva counts. The trial was then sprayed the next day July 22<sup>nd</sup> with a handheld boom, putting out 15 gallons water/acre at 3mph walking speed, and the wind was at 7 mph speed that morning. All Insecticide treatments included 0.25 % v/v Dyne-amic. Controls were Not sprayed.
- Additional counts were then taken and conducted July 28<sup>th</sup> (7 DAT), August 4<sup>th</sup> (14 DAT) and August 11<sup>th</sup> (21 DAT).
- Evaluation: Evaluated treatments by using SAS 9.4 to evaluate the means of total chilli thrips, means of adults and means of larva. 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])

Results: Insecticide treatments used:

Insecticide Treatments
untreated control
Agrimek @ 3 oz/A
(abemectin)
Acephate @ 1 lb/A
Excirel @ 16 oz/A
(Cyantraniliprole)
Leverage @ 3oz/A
(imidacloprid and β-cyfluthrin)
Radiant @ 6oz/A
(spinetoram)
PQZ @ 3.2 oz/A
(Pyrifluquinazon)

- Treatment Radiant @ 6oz/A (spinetoram) gave the overall best control.
- However Radiant (spinetoram) only gave about 89% control at 7 DAT and at 21 DAT it was only giving 83% control. Still better than the other treatments but it is very poor control overall and allows for populations of Chilli thrips to rebuild again fast.
- See chart below.

## Controlling Chilli Thrips in Cotton Efficacy trial July 2022 PI: Danielle Sekula – Texas A&M AgriLife Extension, IPM agent Conducted in Hidalgo County, TX at Texas AgriScience, LLC. In Lyford, TX

## Controlling Chilli Thrips in Cotton Efficacy trial July 2022

	Mean No. Chilli Thrips in Cotton Efficacy Spray Trial July 2022													
	Mean # of chilli thrips larvae/ 10 leaves				Mean # of chilli thrips adults/ 10 leaves				Mean # of total chilli thrips / 10 leaves					
	21-Jul	28-Jul	4-Aug	11-Aug	21-Jul	28-Jul	4-Aug	11-Aug	21-Jul	28-Jul	4-Aug	11-Aug		
Insecticide Treatments	Precounts	<u>7 DAT</u>	<u>14 DAT</u>	<u>21 DAT</u>	Precounts	<u>7 DAT</u>	<u>14 DAT</u>	<u>21 DAT</u>	Precounts	<u>7 DAT</u>	<u>14 DAT</u>	<u>21 DAT</u>		
untreated control	315.25 b	145.75 a	213.50 a	154.50 a	55.75 a	47.75 a	30.00 a	51.25 ab	371.00 b	193.50 a	243.50 a	205.75 a		
Agrimek @ 3 oz/A (abemectin)	292.5 b	89.50 abc	64.50 b	112.50 ab	53.25 a	37.50 ab	18.00 ab	64.75 ab	345.75 b	127.00 ab	82.50 b	177.25 a		
Acephate @ 1 lb/A	357.25 ab	52.75 bc	71.50 b	94.00 ab	70.00 a	24.50 ab	26.00 ab	77.75 a	427.25 ab	77.25 bc	97.50 b	171.75 a		
Excirel @ 16 oz/A (Cyantraniliprole)	421.00 ab	58.00 bc	61.50 b	91.00 b	49.25 a	26.25 ab	17.00 ab	48.00 ab	470.25 ab	84.25 bc	78.50 b	139.00 ab		
Leverage @ 3oz/A (imidacloprid and β-cyfluthrin)	454.25 ab	106.75 ab	168.25 a	153.50 ab	53.25 a	38.00 ab	26.75 ab	44.00 b	507.50 ab	144.75 ab	195.00 a	197.50 a		
Radiant @ 6oz/A (spinetoram)	345.25 b	25.75 c	51.25 b	27.00 c	46.00 a	17.25 b	11.75 b	36.50 b	391.25 ab	43.00 c	63.00 b	63.50 b		
PQZ @ 3.2 oz/A (Pyrifluquinazon)	576.25 a	104.00 ab	204.75 a	153.00 ab	58.00 a	37.25 ab	31.00 a	60.00 ab	634.25 a	141.25 ab	235.75 a	213.00 a		

\*All Insecticide treatments included 0.25 % v/v Dyne-amic. Controls were Not sprayed. 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]). Reference to specific products is provided for informational purposes. Experiments with pesticides on non-labeled crops or pests is part of the insecticide registration process, it does not imply endorsement or recommendation of non-labeled uses of pesticides by Texas A&M University. All pesticide use must be consistent with current labels