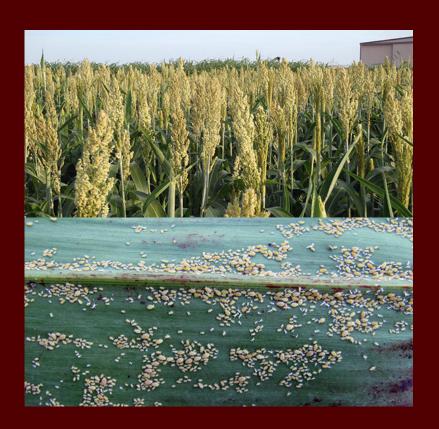
Texas A&M AgriLife Research & ExtensionCorpus Christi Research & Extension Center

Sugarcane Aphid Treatment Decision Tool for Grain Sorghum

Levi Russell, Mac Young, Robert Bowling, Mike Brewer, and Josh McGinty Texas A&M AgriLife Extension Texas A&M AgriLife Research



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Chemical Cost (\$/ac)	\$9.00
Application Cost (\$/ac)	\$6.00
Sorghum Price (\$/bu)	\$3.75
Harvest Cost (\$/bu)	\$0.28
Transportation Cost (\$/bu)	\$0.20
Yield Loss per 100 Aphids (bu/ac)	3.325
Expected Yield without Sugarcane Aphid Damage (bu/ac)	70

\$ 15.00 Treatment Cost (\$/Ac)

Treatment cost includes cost of chemical, application, and repairs.

Treatment Decision Based on Yield Potential and Sugarcane Aphid Count per Leaf Expected Grain Sorghum Yield (bu/ac) without Sugarcane Aphid Damage									
		55	60	65	70	75	80	85 85	
eaf	25	Don't Treat							
per Leaf	50	Don't Treat							
onut	75	Don't Treat	Treat						
hid O	100	Treat							
ne Ap	125	Treat							
Sugarcane Aphid Count	150	Treat							
Suç	175	Treat							

Overview

- The Sugarcane Aphid Treatment Decision Tool for Sorghum is designed to assist producers with a cost-benefit analysis of treating the sugarcane aphid on sorghum.
- The tool requires minimal data input.
- The optimal decision is displayed in the table at the bottom and covers a range of yields and aphid counts.





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		55	60	65	70	75	80	85
eaf	25	Don't Treat	Don't Treat	Don't Treat	Don't Treat	Don't Treat	Don't Treat	Don't Treat
Sugarcane Aphid Count per Leaf	50	Don't Treat	Don't Treat	Don't Treat	Don't Treat	Don't Treat	Don't Treat	Don't Treat
onut	75	Don't Treat	Don't Treat	Don't Treat	Don't Treat	Don't Treat	Don't Treat	Treat
9	100	Treat	Treat	Treat	Treat	Treat	Treat	Treat
He Ap	125	Treat	Treat	Treat	Treat	Treat	Treat	Treat
garcal	150	Treat	Treat	Treat	Treat	Treat	Treat	Treat
šne	175	Treat	Treat	Treat	Treat	Treat	Treat	Treat

Treatment Cost

- Treatment cost is calculated using the cost of the chemical (in lbs.), the intended application rate (in oz./acre), and any application cost.
- If you're using a custom applicator, enter the per-acre cost in the appropriate box.
- If you're applying the chemical yourself, enter
 0 in the box. In this case, an application cost of
 \$2 is used to account for the cost of time and
 repairs.





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A CONTRACTOR OF THE PARTY OF TH	Treatment Decision Based on Yield Potential and Sugarcane Aphid Count per Leaf									
200	Ехр	ected Grain	Sorghum Yield	(bu/ac) with	out Sugarcan	e Aphid Dam	age			
A CONTRACTOR OF THE PROPERTY O	55	60	65	70	75	80	85			
25	Don't Treat	Don't Treat	Don't Treat	Don't Treat	Don't Treat	Don't Treat	Don't Treat			
50	Don't Treat	Don't Treat	Don't Treat	Don't Treat	Don't Treat	Don't Treat	Don't Treat			
75	Don't Treat	Don't Treat	Don't Treat	Don't Treat	Don't Treat	Don't Treat	Treat			
100	Treat	Treat	Treat	Treat	Treat	Treat	Treat			
125	Treat	Treat	Treat	Treat	Treat	Treat	Treat			
150	Treat	Treat	Treat	Treat	Treat	Treat	Treat			
175	Treat	Treat	Treat	Treat	Treat	Treat	Treat			
	50 75 100 125 150	25 Don't Treat 50 Don't Treat 75 Don't Treat 100 Treat 125 Treat 150 Treat	25 Don't Treat Don't Treat 50 Don't Treat Don't Treat 75 Don't Treat Don't Treat 100 Treat Treat 125 Treat Treat 150 Treat Treat	25 Don't Treat Don't Treat Don't Treat 50 Don't Treat Don't Treat Don't Treat 75 Don't Treat Don't Treat Don't Treat 100 Treat Treat Treat 125 Treat Treat Treat 150 Treat Treat Treat	25 Don't Treat Don't Treat Don't Treat 50 Don't Treat Don't Treat Don't Treat 75 Don't Treat Don't Treat Don't Treat 100 Treat Treat Treat Treat Treat 125 Treat Treat Treat Treat Treat 150 Treat Treat Treat Treat Treat	25 Don't Treat Don't Treat Don't Treat Don't Treat Don't Treat 50 Don't Treat Don't Treat Don't Treat Don't Treat Don't Treat Treat Don't Treat Don't Treat Don't Treat Don't Treat	25 Don't Treat Don't Treat Don't Treat Don't Treat Don't Treat Don't Treat 50 Don't Treat			

Sorghum Price and Other Costs

- Enter the expected average gross sorghum price in the appropriate box.
- Enter the typical harvest and transportation costs in the appropriate boxes. This information is available from AgriLife Extension budgets.





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Sugarcane	150	Treat							
Sug	175	Treat							

Expected Loss and Yield

- Enter the expected yield loss per 100 aphids in the appropriate box. This information is available from research conducted by AgriLife entomologists.
- Enter the yield you would expect without sugarcane aphid infestation in the appropriate box.





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Count	75	Don't Treat	Don't Treat	Don't Treat	Don't Treat	Don't Treat	Don't Treat	Treat
Aphid C	100	Treat	Treat	Treat	Treat	Treat	Treat	Treat
	125	Treat	Treat	Treat	Treat	Treat	Treat	Treat
Sugarcane	150	Treat	Treat	Treat	Treat	Treat	Treat	Treat
Sng	175	Treat	Treat	Treat	Treat	Treat	Treat	Treat

Optimal Treatment Decision

- The optimal decision, based on the information inputted above, is displayed in the table.
- At lower treatment costs, it's optimal to treat at a lower aphid count.
- At higher sorghum prices or yields, it's optimal to treat at a lower aphid count.
- At a higher yield loss per 100 aphids, it's optimal to treat at a lower aphid count.





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pid C	100	Treat	Treat	Treat	Treat	Treat	Treat	Treat
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garca	150	Treat	Treat	Treat	Treat	Treat	Treat	Treat
ň	175	Treat	Treat	Treat	Treat	Treat	Treat	Treat

Questions or Comments?

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