

Sugarcane Aphid Treatment Decision Tool for Grain Sorghum

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Texas A&M AgriLife Extension
Texas A&M AgriLife Research



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Extension Risk Management Education Center

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
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

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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	125	Treat	Treat	Treat	Treat	Treat	Treat	Treat
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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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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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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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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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Questions or Comments?

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