

**Integrated Pest
Management
Calhoun, Victoria
And
Refugio Counties**

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Corn

I have not found pest insects in corn yet. But I am expecting to see an egg lay of Fall Armyworm and/or Corn Earworm. Corn earworm and fall armyworm moths deposit eggs on leaves. Newly hatched larvae begin to feed in the whorl. Larval feeding will cause the leaves to appear ragged, but insecticide treatments are seldom recommended and economical control is seldom achieved.

Grain Sorghum

Pest insects of early season sorghum include Yellow Sugarcane Aphid and Corn Leaf Aphid. Yellow sugarcane aphids usually are lemon-yellow, but under some conditions are pale green. They are covered with small spines and have two double rows of dark spots on the back. Yellow sugarcane aphids feed on sorghum and inject toxin into leaves of seedlings and older plants.

Aphids feeding on seedling plants turn the leaves purple and stunt growth. On more mature plants, leaves turn yellow. By the time discoloration symptoms are visible, plants have been injured significantly. Damage often leads to delayed maturity and plant lodging that may be worsened by associated stalk rots. The presence of yellow sugarcane aphids must be determined soon after sorghum plants emerge. The presence of purple-colored seedling plants is an indication of a yellow sugarcane aphid infestation.

Scout sorghum by inspecting plants beginning the first week of plant emergence and twice weekly until plants have at least five true leaves. As plants grow larger, they become more tolerant of aphid feeding. Very small seedling sorghum plants (one to three true leaves) often are significantly damaged after being infested for a week or less.

Discoloration symptoms may be useful in assessing yield losses, and may be used in a decision to replant. Information in the attached tables describes plant damage and corresponding percentage yield loss associated with levels of damage. Do not consider the first two "seed leaves" when estimating damage.

Economic injury levels presented in the attached tables are based on the percentage of yellow sugarcane aphid-infested plants at the 1, 2 or 3 true-leaf stage. Do not count the two seed leaves that appear first. Many predators feed on yellow sugarcane aphids, but the aphids are rarely parasitized. Insecticides are currently the only way to manage yellow sugarcane aphids in sorghum. Seed treated with Gaucho® or Cruiser® or insecticide applied at planting (carbofuran or phorate) reduces the severity of yellow sugarcane aphid infestations.



Cotton

Cotton fields are ranging from in the bag to 1-2 true leaves. I have not yet seen any insect pressure in cotton fields but keep an eye out for thrips and aphids. Fields planted with seed treated with either Gaucho Grande or Cruiser may still have thrips or aphids, but their numbers are generally much lower than untreated fields. For the insecticide to control the insects, the insects must feed on the plant. A cotton field should be treated if thrips populations exceed one thrips per true leaf.

Soybeans

Scouting for three-cornered alfalfa hoppers should begin when plants emerge from the soil. Randomly selected row-foot sections, at several locations in the field, should be examined for fresh damage early in the season (3- to 10-inch plants). For taller plants, sample with a drop cloth or sweep net

Manage three-cornered alfalfa hoppers by manipulating seeding rates in order to obtain at least six undamaged plants per foot of row. The economic threshold for insecticidal treatment before bloom is when the infestation has reduced the number of non-girdled plants to 6 or fewer per row-ft. (19.7 per row-m) and nymphs are still present. From pod set to maturity, the threshold is when there are 3 nymphs per row-ft. (9.8 per row-m), or 1 adult per sweep.

Table 5. Estimated yield loss based on damage by yellow sugarcane aphids to three true-leaf stage sorghum plants.

Description	% Loss/plant
No discoloration	0
Localized discoloration	8
Less than one entire leaf discolored	11
One entire leaf discolored	31
More than one leaf discolored	54
More than two leaves discolored	77
Dying/dead plant	100

Table 6. Economic injury levels for yellow sugarcane aphid based on percentage of seedling plants infested at the one true-leaf stage.

Control cost (\$) per acre	Crop market value (\$) per acre							
	100	150	200	250	300	400	500	600
	Percent infested plants							
6	15	10	8	6	5	4	3	3
8	20	13	10	8	7	5	4	4
10	25	17	12	10	9	6	5	5
12	30	21	14	12	10	7	6	5

Table 7. Economic injury levels for yellow sugarcane aphid based on percentage of seedling plants infested at the two true-leaf stage.

Control cost (\$) per acre	Crop market value (\$) per acre							
	100	150	200	250	300	400	500	600
	Percent infested plants							
6	26	18	13	11	10	7	6	5
8	35	24	17	14	13	9	7	7
10	43	29	22	17	16	11	9	8
12	51	35	26	20	18	13	10	9

Table 8. Economic injury levels for yellow sugarcane aphid based on percentage of seedling plants infested at the three true-leaf stage.

Control cost (\$) per acre	Crop market value (\$) per acre							
	100	150	200	250	300	400	500	600
	Percent infested plants							
6	67	44	33	27	24	17	14	12
8	89	60	44	36	32	22	18	16
10	*	76	55	44	39	28	22	20
12	*	92	66	53	44	33	27	22

*Do not treat.

Table 9. Suggested insecticides for yellow sugarcane aphid.

Insecticide	Application rate	Days from last application to:	
		Harvest	Graze
Commercially treated seed			
Clothianidin (Poncho® 600)	5.1-6.4 fl oz/100 lbs seed	—	—
Imidacloprid (Gaucho® 480)	8 oz/cwt	—	45
Thiamethoxam (Cruiser® 5FS)	5.1 oz/cwt	—	—
Applied post-emergence			
Carbofuran (Furadan® 4F)	8-16 oz/acre	75	75
Dimethoate (4E)	8-16 oz/acre	28	28
(5E)	6.4-12.8 oz/acre	28	28