



# Current Report

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## Management of Sorghum Insects

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Sorghum pests, if not controlled when thresholds are exceeded, will reduce grain and forage yield and quality. Many sorghum pest problems can be avoided by following good cultural practices that help reduce damage and result in better yields. They include:

- (1) Choosing high-quality, vigorous seed of a greenbug-tolerant hybrid that performs well in Oklahoma growing conditions.
- (2) Growing the crop with good agronomic practices. For information on sorghum production, and variety selec-

tion, see: *F-2034 Grain Sorghum Planting Rates and Dates*, and the latest *PT- Grain Sorghum Performance Trials*

- (3) Avoid planting sorghum next to a wheat field when possible, or consider using a seed treatment if chinch bugs are a regular problem.

Chemical recommendations made within this publication were correct as of the "Modified Date". Always check the label that you possess for the most current rates and restrictions.

### Sorghum Insect Control Suggestions

<b>Pest and Treatment Thresholds</b>	<b>Insecticide Formulation</b>	<b>Rate of Product per Acre</b>	<b>Comments</b>
<b>Chinch bug</b> Adults 1/8 inches, black with white wings that seem to be shaped like an "hour glass". Nymphs are reddish to brown, with a white stripe across their "shoulders."  <u>Threshold</u> 2-3 bugs per plant on seedlings. Treat if large numbers are moving in to sorghum from grain.	<b>Planting Time</b>		Seed treatments will generally provide 3 weeks of suppression. Use seed treatment if sorghum has suffered regular losses from chinch bug infestations.
	Gaucho	8 fl oz/cwt seed	
	Cruiser 5FS	5.1 oz/cwt seed	
	<b>Post-Plant</b>		Chinch bugs often migrate from small grains to sorghum. A border spray 30-60 feet wide on the margins of the field may be of value if chinch bug numbers are high in an adjacent wheat field.
	Asana XL	5.8-9.6 fl oz	
	Baythroid 2	1.3-2.8 fl oz	
	Furadan 4F	0.5-1 pt	
	Karate/Warrior	3.84 fl oz	
	Lorsban 4E	1-2 pt	
	Mustang MAX	3.2-4.0 fl oz	Best control is obtained when insecticide is applied by ground, with nozzles directed at the base of the plants using a minimum of 20-30 gallons of water.
Sevin XLR	1-2 qt		
		Check labels for grazing restrictions.	
		Sevin may cause mite buildup.	
<b>Corn earworm</b> Up to 1 inch. Color varies from green, to brown to yellow and pink.  <u>Threshold</u> Two or more larvae per head before hard dough.	Asana XL	5.8-9.6 fl oz	Check labels for grazing restrictions.
	Baythroid 2	1.3-2.8 fl oz	
	Karate/Warrior	2.6-3.8 fl oz	
	Lorsban 4E	1-2 pt	
	Methomyl	0.75-1.5 pt	
	Mustang MAX	1.76-4.0 fl oz	Sevin may cause mite buildup.
	Sevin XLR	1-2 qt	
	Tracer	1.5-3 fl oz	
<b>Corn leaf aphid</b>  Olive green with black legs, found in whorl.  <u>Threshold</u> Control is rarely warranted	<b>Planting Time</b>		Control of corn leaf aphid rarely produces yield increases. Research indicates that yield losses occur only where corn leaf aphids cause stand loss on seedling plants.
	Gaucho	8 fl oz/cwt seed	
	Cruiser 5FS	5.1 oz/cwt seed	
	<b>Post-Plant</b>		Texas research suggests that corn leaf aphids serve as a food source for lady beetles which can help prevent greenbug outbreaks.
	Dimethoate 4E	0.5-1 pt	
	Lorsban 4E	0.5-1 pt	
	Mustang MAX	3.2-4.0 fl oz	

<b>Pest and Treatment Thresholds</b>	<b>Insecticide Formulation</b>	<b>Rate of Product per Acre</b>	<b>Comments</b>
<b>Cutworms</b>			
Robust caterpillars that "roll" up when disturbed, and prefer to live under ground.	Asana XL Baythroid 2EC Karate/Warrior Lorsban 4E Mustang MAX	5.8-9.6 fl oz 1.0-1.3 fl oz 1.9-2.6 fl oz 1-2 pt 1.3-4.0 fl oz	Cutworms generally feed at night, and live under the soil during the day. Plants will be cut at or slightly above the soil level.  Check labels for grazing restrictions.
<u>Threshold</u> Scout fields at seedling emergence. Treat when worms are less than 1/2 inch long, and skips are noticed.			
<b>Fall armyworm</b>			
Large, striped, non-bristled worm up to 1.5 inches. Has a light colored, inverted "Y" on head.	Karate/Warrior Lorsban 4E Methomyl Mustang MAX Sevin XLR Tracer	2.6-3.8 fl oz 1 pt 0.75-1.5 pt 1.8-4.0 fl oz 1-2 qt 1.5-3.0 fl oz	Fall armyworms will cause negligible damage to yield if attacking the whorl. If the head is emerging, they can cause yield loss by damaging the emerging head. Check labels for grazing restrictions.  Sevin may cause mite build up.
<u>Threshold</u> Two or more larvae per head before hard dough.			
<b>False chinch bug</b>			
	Baythroid 2 Karate/Warrior Mustang MAX	1.3-2.8 fl oz 2.6-3.8 fl oz 3.2-4.0 fl oz	False chinch bugs are rarely a problem. Control only when large numbers are found on heads.
<u>Threshold</u> 140 or more per head.			
<b>Greenbug</b>			
Lime-green aphid with a darker green stripe down the back. Tip of legs and antennae are black. Feeding causes red spots on leaves.	<b>Seed Treatment</b>		Greenbug resistant varieties are available. Need to treat is dependent upon greenbug numbers, plant size, variety, growing conditions, and the presence of predators and parasites.
<u>Threshold:</u> See Thresholds listed at end of publication.	Gaucha Cruiser	8 fl oz/cwt seed 5.1 oz/cwt seed	
	<b>Planting Time</b>		
	Counter CR	"Lock 'n Load" applic.	Must have "Lock 'n Load" applicator
	<b>Post-Plant</b>		
	Dimethoate 4E Furadan 4F Lorsban 4E	1 pt 1 pt 0.5-2.0 pt	
<b>Grasshopper</b>			
	Baythroid 2 Dimethoate 4E Karate/Warrior Lorsban 4E Mustang MAX Sevin XLR	2.0-2.8 fl oz 1 pt 2.6-3.8 fl oz 0.5-1 pt 3.2-4.0 fl oz 0.5-1.5 qt	Scout early in summer. If nymph populations exceed threshold field borders, treat before they move into sorghum.  Sevin may cause mite build up.
<u>Threshold:</u> 15-20 per square yard.			
<b>Lesser cornstalk borer</b>			
	Karate/Warrior Lorsban 4E Mustang MAX	2.6-3.8 fl oz 1-2 pt 3.2-4.0 fl oz	
<u>Threshold</u> No threshold established. Treat if majority of plants are infested with large, expanding mite infestations.			
<b>Mites</b>			
Small, less than 1/100 inches. Cause brown stippling of leaves.	Comite Dimethoate 4E	1.5-2.25 pt 1 pt	Two or more treatments may be necessary. Two gallons or more, total spray per acre will increase control. Control may not be justified after head reaches hard dough stage.
<u>Threshold</u> No threshold established. Treat if majority of plants are infested with large, expanding mite infestations.			

<b>Pest and Treatment Thresholds</b>	<b>Insecticide Formulation</b>	<b>Rate of Product per Acre</b>	<b>Comments</b>
<b>Panicle feeding bugs</b> Include stink bugs and leaffooted bugs.  <u>Thresholds</u> Milk stage: 5/head. Soft Dough: 9/head.	Baythroid 2 Karate/Warrior Mustang MAX Sevin XLR	1.3-2.8 fl oz 2.6-3.8 fl oz 1.8-4.0 fl oz 1-2 qt	Panicle-feeding bugs include the brown, Conchuela, green, and rice stink bug. Feeding damage from leaffooted bugs is similar to stink bugs.
<b>Sorghum midge</b> Tiny, fragile orange-bodied fly.  <u>Threshold</u> Treat when 25-30% of heads have begun bloom and adults average one or more per head. May need to apply a second treatment 3-5 days after first application.	Asana XL Baythroid 2 Di-Syston 8 Karate/Warrior Lorsban 4E Methomyl Mustang MAX	2.9-5.8 fl oz 0.9-1.3 fl oz 4-8 fl oz 1.9-2.6 fl oz 0.5 pt 0.75-1.5 pt 1.28-4.0 fl oz	Check fields before 11 am, when flies are most active. Damage from sorghum midge generally restricted to sorghum that blooms after August 15.  Damaged heads appear to be "blasted" or "blighted" from high temperatures, infertility, or drought.  Check labels for grazing restrictions.
<b>Sorghum webworm</b> Fuzzy, reddish to brown worms in head.  <u>Threshold</u> 5 or more larvae per head before hard dough stage.	Baythroid 2 Karate/Warrior Lorsban 4E Mustang MAX Sevin XLR Tracer	1.3-2.8 fl oz 2.6-3.8 fl oz 1 pt 1.8-4.0 fl oz 1-2 pt 1.5-3.0 fl oz	Caterpillars feed on the seed, and hollow it out. Open-headed varieties are less susceptible than tight-headed varieties to attack.  Sevin may cause mite buildup
<b>Southwestern corn borer</b>  <u>Threshold</u> Chemical control usually not warranted.	Lorsban 4E Mustang MAX Tracer	1-2 pt 1.8-4.0 fl oz 1.5-3.0 fl oz	
<b>White grub</b> Large, "C" shaped grub with a white body and a brown head.  <u>Threshold</u> No treatment is available.	NA	NA	Re-planting may be the best option. Damage potential is dependent on planting date, and speed of growth of the plant.
<b>Wireworm and seed corn beetle</b>	Seed treat with lindane, Poncho or Cruiser.		Do not feed leftover seed to livestock. Do not store lindane-treated seed as decreased germination may result.

### Pre-harvest Intervals and Grazing Restrictions

Asana XL	21 day PHI for harvest or grazing
Baythroid 2	14 day PHI for harvest or grazing
Comite II	30 day PHI for silage, 60 days for grain harvest.
Counter CR	100 day PHI for grain, 50 days for grazing
Cruiser 5FS	no grazing restriction
Dimethoate	28 day PHI for harvest or grazing
Di-Syston 8	check label for various restrictions
Ethyl parathion 8E	Use of parathion was discontinued as of October 31, 2003
Furadan 4F	75 day PHI for harvest or grazing
Gaucho	45 day PHI for harvest or grazing
Karate/Warrior	30 day PHI for harvest or grazing
Lorsban 4E	30-60 day PHI for harvest or grazing, depending on rate applied.
Methomyl	14 day PHI for harvest or grazing
Mustang MAX	14 day PHI for harvest, 45 days for grazing
Sevin XLR	21 day PHI for harvest, 0 days for grazing
Tracer	7 day PHI for harvest, 14 days for grazing
Thimet G	28 day PHI for harvest or grazing

## Treatment Thresholds for Greenbugs on Sorghum.

<i>Plant Size</i>	<i>When to Treat</i>	
	<i>Texas thresholds</i>	<i>Kansas thresholds</i>
0 to 1 leaf stage	20% of plants visibly damaged	25-50 greenbugs per plant
3 leaf stage	20% of plants visibly damaged	50-100 greenbugs per plant
5 leaf stage	Visible damage on leaves, (red spots, yellow leaves) but before any entire leaves are killed on 20% of plants	150-300 greenbugs per plant
Mid-whorl stage	Visible damage on leaves (red spots, yellow leaves), but before any entire leaves are killed on 20% of plants	300-600 greenbugs per plant
Boot to heading	Death of one functional leaf	700-1000 greenbugs per plant
Heading through soft dough	Death of two functional leaves	700-1000 greenbugs per plant

If you do not fully understand directions on the label, ask your OSU County Extension Director, OSU Area Extension Entomologist, or contact the OSU Extension Entomologist at Stillwater to assist you in a correct interpretation.

All pesticides are poisonous and should be used with extreme caution. **BE SURE TO FOLLOW THE MANUFACTURER'S INSTRUCTIONS.**

The pesticide information presented in this publication was current with federal and state regulations at the time of printing. The user is responsible for determining that the intended use is consistent with the label of the product being used. Use pesticides safely. Read and follow label directions. The information given herein is for educational purposes only. Reference to commercial products or trade names is made with the understanding that no discrimination is intended and no endorsement by the Cooperative Extension Service is implied.

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