



# INSECTS AND WEEDS IN FOCUS

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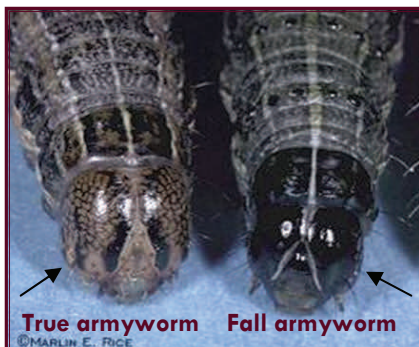
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## CROP PLANTING UNDERWAY

The region has had enough rain to get crops up, but generally the soil profile is not full at this time and is at 75% or less of capacity in nearly all areas in the Lower Coastal Bend. It is a little early to know what kind of insect pests and levels of those pests that would occur over the next few weeks. The possibilities include fall armyworm or true armyworm on grass crops such as wheat, pasture grass, corn, and sorghum. In sorghum we might see southern corn rootworm, yellow sugarcane aphid, greenbug, and/or chinch bug. Cutworms might be a player in corn, sorghum, and cotton.

## CATERPILLARS ATTACKING WHEAT



Large numbers of caterpillars identified as true armyworm, *Pseudaletia unipuncta* were found feeding on wheat that was beginning to head out in Colorado County on Monday of this week. Some of the larvae were found infested

with colonies of external feeding parasites which might cause rapid decline in the population and feeding activity. This insect is favored by cool, damp weather in early spring. Larvae feed mostly at night and may not be seen until one digs into the soil surface debris. Full grown larvae

reach 1.5 inches long. They are green to brown with light stripes on their sides and back, and the outer side of each proleg has a brown or dark band. The head has a pattern of narrow lines that looks like a net.

These caterpillars can cause extensive damage below the crop canopy before they are detected. The larger the larvae the more and quicker they consume foliage. Control measures are suggested when 4 or 5 larvae per square foot are found in combination with evidence of extensive feeding on lower leaves. It is important to protect the flag leaf as well.

There is a wide assortment of insecticides that can be used to control this armyworm including many pyrethroids. It is best to apply the insecticide in late evening just before dark. I would also suggest that hollow cone nozzles be used with a pressure at the nozzles of 40 pounds. These nozzles create small particles which are important in depositing material deep into the plant canopy. Volume of spray should be 6 or 7 gallons per acre by ground application with this type nozzle.

## WATCH FOR CATERPILLARS IN ALL GRASS CROPS

In addition to the armyworm outbreak in wheat reported above be advised that we predict more armyworm problems over the next month or two to include the fall armyworm. This insect historically has been a greater problem after



**Fall armyworm**

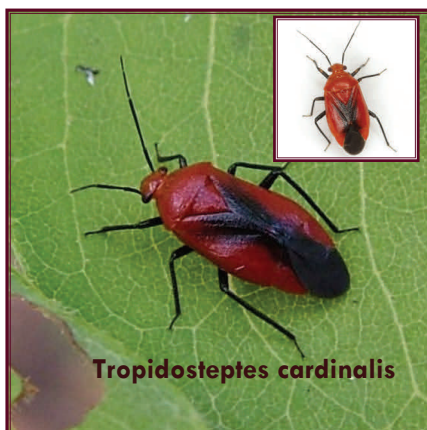


**Fall armyworm infested by a fungus**

a long drought period which is followed by rainfall and rapid growth of grasses. We may also find these caterpillars in sorghum and corn over the next few months.

In pastures I use a rule-of-thumb for treatment of 3 fall armyworm larvae per square foot that are at least 0.5 inches long. These caterpillars consume 85% of their total food supply in the last instar which lasts about 4 days during warm weather. Damage is often not noticed until the fall armyworm reaches this last stage and begins to consume grass leaves very fast. Use the same treatment methods for this insect as outlined above under the wheat discussion. Finally, we have observed in past years during the spring an fungal infection epidemic on the armyworms where the very white colored fruiting bodies of the fungus coat the outside of affected caterpillars. The appearance of the fruiting structures can occur rapidly once it is noticed. In fact, Dr. Gary Odvody once had caterpillars in which the white fruiting bodies began to appear within a few hours after holding them in the laboratory. In that case the grower did not have to treat but a small percentage of the infested fields.

## RED BUGS ON ASH TREES



One of the true bugs in the family Miridae (*Tropidosteptes cardinalis*) has been found widespread in the Coastal Bend this spring. It feeds on the leaves, twigs, flowers, and seed of ash causing heavily infested trees to appear scorched. Sometimes defoliation is complete. This

species may only have one generation per year.

## SMALL TRUE BUG BOTHERING PEOPLE

There is another small true bug in the family Miridae bothering people in the Corpus Christi area. It is about 1/16 inch long, with a light colored background with spots on the wings. The insect feeds on plants of some kind (possibly live oak pollen). They are attracted to light and tend to land on light clothing. One reason they are noticed is the large number encountered this spring. Their numbers should decline over the next month.

## TEXAS LEAF-CUTTING ANTS VERY ACTIVE

Many calls have been received in the last few weeks about cut-ants defoliating all kinds of plants in our region. The Texas leaf-cutting ant (TLCA) is found in sandy soil and

during cool spring will cause widespread defoliation of ornamental plants in yards. Effective control methods have not been available for a number of years. Amdro Ant Block is labeled for the TLCA but control success has been moderate to poor with the product. The particle size of the bait is not sufficient to attract ants to pick up the product. There are things that can be done to increase the probability of obtaining control with the Amdro Ant Block as follows: (1) Apply bait when ants are active (mid-day in the winter and early spring and late afternoon and night in the summer). (2) Do not apply when rain is expected within 24 hours, and avoid applying to wet soil. (3) Use only fresh bait that has been stored in a cool dry place, and use the bait within 3 months after opening the container. (4) Apply 12 ounces per colony or about 1 ounce per individual mound. (5) Broadcast bait uniformly over the central nest area. (5) Apply 1/3 ounce to each satellite mound and 1 ounce to each foraging mound and trail.

There is a new insecticide on the market labeled for pine tip moth and Texas leaf-cutting ant control named "PTM Insecticide" available over the internet from Red River Specialties. There are label restrictions dealing with where the product can be used. Again, the ants must be active when treatment is applied. In general 1.5 ounces of spray solution mixed according to the label should be placed inside each opening with focus on the most active openings. See the label for other instructions.

## GRAIN BIN SAFETY

The number of people injured and killed each year in grain handling accidents in and around bins is surprisingly high. The following information was obtained from the "Monthly Safety Blast Newsletter" from the Southwest Ag. Center concerning grain bins.

The three most dangerous situations where people get into trouble in stored grain bins include dangers in flowing grain, the collapse of grain bridged over, and avalanche of a vertical grain wall onto workers. Another area of danger is getting caught in moving augers, belts and other equipment. Workers can become trapped in grain in 4-5 seconds, even sooner if the grain is flowing. After 20 seconds the person is completely engulfed leaving no visible evidence of an incident. Most commercial elevators now have safety plans in effect but they still need improvement. At many on-farm facilities more attention needs to be paid to safety. Consider the following practices to improve safety around grain bins: (1) Warn family, employees and visitors of the dangers. (2) Place warning stickers on all storage bins and haulers. (3) Practice "lock-out, tag-out" prior to bin entry. (4) Wear a properly fitted safety harness. (5) Install a permanent life-line.

(6) Never enter a bin without telling someone and have someone watch the work from outside. (7) Work from the outside of a bin if possible. (8) Secure grain storage areas to prevent unauthorized entry. These are just a few of the precautions that should be taken.

Refer to the following resources for more information:

OSHA Grain Handling Website  
<http://www.osha.gov/SLTC/grainhandling/index.html>

OSHA Fact Sheet-Worker Entry into Grain Storage Bins  
<http://www.osha.gov/Publications/grainstorageFACTSHEET.pdf>

OSHA Hazard Alert-Dangers of Engulfment and Suffocation in Grain Bins  
[http://www.osha.gov/SLTC/grainhandling/hazard\\_alert.html](http://www.osha.gov/SLTC/grainhandling/hazard_alert.html)

Grain Bin Safety-Stored Products Research and Educational Center-Oklahoma State University  
<http://www.youtube.com/watch?v=DQsqWbn-3X0>

Grain Bin Safety Video-National Corn Growers  
<http://www.youtube.com/watch?v=zqbUubNAVE0>

## PREPARE NOW TO SUPPRESS LIVESTOCK EXTERNAL PARASITES

The primary external parasites to which attention should be given at this time include horn flies and stable flies.

Horn flies numbering 200 to 250 per head cause weight losses. Control these flies by installing and maintaining self treating devices (ear tags on chains, dust bags, back rubs, tube treatment device, or liquid wick treatment device) or use ear tags on animals. Sprays are not as effective since pest suppression is short-lived.

Stable flies bite mostly the legs of horses and cattle. They breed in mixtures of decaying plant material (hay) around barns and can harm animals when numbers are 20/head or more. These flies do not rest on the animals as do horn flies but go the barn walls between blood meals. To reduce their numbers, manage manure and hay to prevent excessive moisture by proper drainage and fixing water leaks. Spraying of resting areas to include barn walls with labeled insecticides on a scheduled basis will help keep stable flies to a manageable level.

## SHADE TREE CATERPILLERS

The annual shade tree infesting caterpillars especially on oak trees include forest tent caterpillar, white marked tussock moth, datana caterpillar, canker worms, common

## SORGHUM AND CORN INSECTS

Scouting for early season yellow sugarcane aphid, green bug, and armyworms should be initiated on a weekly basis.

In the case of the two aphid species listed, seed that was treated with clothianidin (Poncho) or thiamethoxam (Cruiser) provides good control and is generally all that is needed for the season. However, in high outbreak years foliar treatments may be needed. The YSA has a potent toxin that can greatly reduce sorghum yield when their numbers are high enough, and on small plants they can cause significant damage when a certain percentage of the plants are "infested" regardless of their numbers. For yellow sugarcane aphid (YSA) use the following charts to help determine control needs.

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

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## INTERESTING INSECTS

**Parasitic wasps vaccinate aphids by spreading anti-wasp bacteria.** <http://goo.gl/jGAqL> Discover Blogs, March 14, 2012. A black bean aphid is about to have a rough day. It has been targeted by a parasitic wasp, which lays several eggs inside its body. When the eggs hatch, the wasp grubs will try to eat the aphid from the inside out. If they succeed, the aphid will die, and the young wasps will burst from its corpse to find aphids of their own. But the aphid isn't necessarily doomed. There's a chance that it will resist the attempt to usurp its body. If it does, the wasps will have done it a favor. When the mother wasp implanted its eggs, it also infected the aphid with bacteria that protect against parasitic wasps. It inadvertently vaccinated the aphid against its own kind. Aphids and other insects often have bacteria living inside their cells. These microbes are known as endosymbionts, and they help out their hosts. Some like *Buchnera* help aphids to create nutrients that they don't get from their food. Others like *Hamiltonella defensa* protect them against parasitic wasps, by somehow killing the wasp larvae.



**Fall armyworms in pasture grass**

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Newsletter available at [http://  
agfacts.tamu.edu/~rparker/](http://agfacts.tamu.edu/~rparker/)

Pest Management information available  
at <http://txaac.org/>

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