

INSECTS AND WEEDS IN FOCUS

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GENERAL INSECT SITUATION IN ROW CROPS

The crop season is underway with cooler than normal conditions, but in general crops have emerged with good stands and growth is progressing as expected. Insect activity has generally been lower than normal especially the yellow sugarcane aphid, corn leaf aphid and even greenbug on wheat. Some trouble has been encountered with rice stink bug on wheat and white grubs in sorghum. See more below under the respective crops.

Over the next few weeks scout fields for an assortment of the usual pests such as the aphids listed above, caterpillars to include corn earworm, fall armyworm, and an assortment of other caterpillars on sorghum. It will also be time to scout cotton for thrips, aphids, spider mites, and cutworms.

SORGHUM AND CORN INSECT ACTIVITY LOW IN MOST CASES

White grubs have been found in varying numbers in sorghum in fields where the seed was not treated with Cruiser, Poncho Counter or a generic product. White grub attack is characterized by dead, dying, and wilted plants in adjacent plants in a line. The affected areas usually include a few up to a dozen or more plants exhibiting the damage characteristics. Depending upon field population, the affected areas occur in a patchwork across fields or parts of fields. Use a sharp shooter to dig down where one or more white grubs can be observed. Nothing can be done about the infestation once sorghum is planted. In a few cases replanting with insecticide treated seed has been necessary. The seed treatments do not completely eliminate the problem, but at least under moderate infestations, these

treatments have provided effective stand protection. It can be observed to the row between treated and nontreated sorghum.

We happen to have an insecticide seed treatment test at the Texas AgriLife Research Center at Corpus Christ where white grubs are relatively low in number. Even in that situation significantly more white grub damage has occurred in the nontreated plots. In my estimation white grub numbers in this test may not be great enough to affect yields as additional plant death has not been observed over the last three days.

We do expect many of the white grubs to shortly stop feeding and transform to the pupal stage. Some species entered the pupal stage earlier and are now emerging as adults. Other species will be emerging over the next month. We also have some species that require more than one year to complete the larval stage. These species will continue to feed this season.

Another insect we are concerned about is the **yellow sugarcane aphid**, but I have not observed it at all on sorghum nor on the johnsongrass along roadsides. It seems to me, at this point, that this aphid may not occur in great numbers at least in the southern end of the Texas Coastal Bend. However, continue to scout sorghum for this aphid along with **greenbug**. We do expect to find the **corn leaf aphid** in plant whorls in the near future. There is good evidence that parasitic wasp activity is heavy enough to rapidly reduce corn leaf aphid numbers. In case the yellow sugarcane aphid does appear, refer to Extension Publication B-1220 *Managing Insect and Mite Pests of Texas Sorghum* dated May 2007 for more detail. Tables 5 to 8 have been included herein for your use.

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.

We will probably begin to see various **armyworms** on the small sorghum, but these numbers will have to be sustained above one per plant to cause significant damage. Scattered damage from the caterpillars will not affect yield.

Sometimes various arthropods are found on corn feeding upon the remaining seed parts after germination or upon dead plant material that has begun to rot. Along the Gulf Coast this season **millipedes** and young **earthworms** have been observed. Some people thought they were actually damaging corn plants, being guilty by association with the plants. These critters feed upon dead organic matter. In one case we observed on corn millipedes were

very high and **if** they had been feeding on growing plants (which they were not) death and destruction would have been evident. Some people see small earthworms and do not recognize them as such (Fig. 1).



Fig. 1. Earthworms, small and nearly translucent.

RICE STINK BUGS ON WHEAT

Damaging insects in wheat from the usual pests such as the **greenbug**, **other aphids**, and **armyworms** have been very low in fields that we have observed. However, the **rice stink bug** has been observed in high enough numbers to require insecticide treatment. The rice stink bug is most damaging to wheat in the milk stage of development with less damage in the soft dough stage especially past mid-soft dough. In fact, research showed that wheat in the soft dough stage was only slightly damaged when fed on during the dough stage. Experiments in Louisiana demonstrated that infestations as low as one sexed pair of rice stink bugs per 20 spikets of a susceptible hybrid wheat cultivar would damage wheat quality and yield, and justify control measures.

Some growers have had success treating field edges to reduce the number of bugs moving into the wheat. We are using a general rule of thumb of 1 rice stink bug per 10 heads in the milk stage with some extension of that threshold into the early soft dough stage. Frankly, we have had little experience with this stink bug on wheat. Dimethoate is labeled for wheat for other insects, but we know it is effective on the rice stink bug. Check the label for the interval between treatment with any insecticide and harvest. The labels of the same insecticide may vary on the waiting period.

LOW NUMBERS OF ARTHROPODS ON COTTON

Very little insect and mite activity has been reported from cotton in the Lower Coastal Bend. **Cotton aphid** activity has been reported to be short lived with plenty of parasitic wasp activity as measured by high percentages of aphid mummies. As usual there are some **spider mites**. The number of **thrips** observed has been very low in this region. We will be looking at the cotton situation in more detail in the next few days.

INTERESTING INSECTS

Caterpillars use bacteria to produce green islands in yellowing leaves. <http://tinyurl.com/yIs35uf> In autumn, as

green hues give way to yellows and oranges, some leaves develop mysterious green islands, where life apparently holds fast against the usual seasonal decay. These defiant patches still continue the business of photosynthesis long after the rest of the leaf has withered. They aren't the tree's doing. They are the work of tiny larval insects that live inside it – leaf-miners. The larvae were laid within the leaf's delicate layers by their mother. They depend on it for shelter and sustenance, and they can't move away. If their home dies, they die, so they have a vested interest in keeping at least part of the leaf alive. These are the miniature landscape architects that create the green islands, and they don't do it alone – to manipulate the plant, they wield bacteria.

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