

TEXAS COOPERATIVE EXTENSION
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WILLIAMSON AND MILAM COUNTIES

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USEFUL WEBSITES

Remember that this and all upcoming Southern Blacklands Pest Management Newsletters can be found at our County Web site:

<http://williamson-tx.tamu.edu>

You can also find links to copies of newsletters from the previous two seasons. In addition, you can find the Crops and Livestock Newsletter, and newsletter from all the Williamson County Staff. Also, there is plenty of information on Pest Control, Horticulture, Landscape Management, Gardening, CEU Opportunities, 4-H and Family and Consumer Sciences, etc.

Other Useful Links:

Texas A&M Entomology Dept. - <http://insects.tamu.edu>

TPMA - <http://www.tpma.org>

Stephenville A&M Center – <http://stephenville.tamu.edu>

SMALL GRAINS

It's been amazing to me to see how this wheat crop was able to survive for the most part under such dry conditions this fall and early winter. There was wheat that appeared almost dead, but looks great now, after recently receiving some much-needed rainfall and being top-dressed. Don't get me wrong, there are many fields that have stand issues and should be evaluated to determine if there is enough stand to make a decent crop, but not as many as I would have guessed earlier.

Greenbug levels have decreased in most fields over the past couple of weeks. Beneficials, including parasitic wasps and lady beetles have helped in reducing their levels. Much of the wheat has already been top-dressed with fertilizer, however some has not. I would not advise adding an insecticide to help with aphids and such with your top-dress application without proper field scouting to determine the need. At this point from what I have seen, aphid pressure is light and therefore applications of insecticides at this point could do more harm than good and is probably an unnecessary expense.

Below is a general treatment guideline for greenbug in wheat.

Plant height (inches)	Number of greenbugs per linear foot
3-6	100-300
4-8	200-400
6-16	300-800

GENERAL CORN INSECT MANAGEMENT GUIDELINES

When making decisions regarding the management of soil insects and chinch bugs in corn and sorghum, there are several key factors to consider.

1. **Previous Crop** - What was on that land last year? Have you planted the same crop on the same land for several consecutive years? Was the land not planted to a crop last year?

Depending on the answers to the above question, one can begin to make decisions regarding what type of management (products) does one need. Often times, southern corn rootworm (SCR) is an insect that many growing first year corn overlook. This insect is one that undergoes multiple generations a year and often migrates into fields after planting and lays eggs, which can result in stunted plants or stand loss. This pest often results in greater loss to fields planted on cotton or wheat ground where producers did not put down enough or the right soil insecticide/seed treatment to control this pest.

Producers who have grown corn for consecutive years know that they have to exercise extra care in order to try to control Mexican Corn Rootworm (MCR). Generally light to moderate populations can be suppressed with many soil insecticides/seed treatments, however, under heavy infestations, it is very important to use products at full labeled rates or transgenic technology designed for MCR, higher seed treatment concentrations. In addition, liquid applied soil-insecticides generally do not appear to hold up as well against heavy MCR population as granular materials. So keep this in mind as you are making your decisions.

2. **History of Insect Pests** - Has that field had problems with insect pests in the past, stand problems, etc.

Some fields are more prone to pest problems because of their location. For example, fields that had previous white grub problems are more at risk to be re-infested by this pest than fields that have never had grub problems.

3. **Surrounding Habitat** - What is surrounding the field? Other fallow crop land, pasture, small grain, residential property, etc.

There may be some type of overwintering habitat or host plants growing nearby that traditionally support higher populations of specific pests than a field in a different area. Remember, as eluded to above, that not all insects stay in the field. Many, especially the ones that have multiple generations a season and ones that are not confined to the soil, can move into a field from a nearby habitat, once the crop is in the susceptible stage.

4. Field Monitoring - Monitoring is one of the key components of any type of IPM Program. There are different monitoring strategies for the various types of pests. For example, the presence of adult Mexican Corn Rootworm (MCR) beetles during and shortly following corn tasseling on the previous year will give you an indication if you may encounter this pest during the upcoming season. You can find information regarding the monitoring of corn and sorghum in the extension publications **B-1366, Managing Insect and Mite Pests of Corn and B-1220, Managing Insect and Mite Pests of Sorghum**. These publications can be found on the internet at <http://insects.tamu.edu/extension/publications/crops.html> or <http://williamson-tx.tamu.edu>.

5. Management Strategies/Products Available - Once you have reviewed the above items, you can then begin to formulate your corn soil insect pest management strategies. If you determine that insect pressure has the potential to be very severe for the given crop, you may choose to plant another crop. However, what is more likely is that you will still plant the intended crop, but will need to make proper choices on the type of insecticide/seed treatment/transgenic technology to use. For this you will need to rely on past experience, review research data from Extension trials and any other reliable source you can find. Also, the cost of these products add up, therefore it is important to utilize full label rates if you intend to have companies to back the product.

One last point that you need to remember. Now there are two types of transgenic Bt technology in corn available for producers. The original Bt technology for lepidopterous insect pest such as corn borer and earworm. 2004 is the first year for Bt technology for corn rootworm. Each technology is specific for certain pests. So if you are wanting transgenic Bt corn for corn rootworm be sure to specify “rootworm” because if you just say Bt corn you might not get what you had wanted.

Below are two tables of some of the data from a corn soil insecticide/seed treatment trial that was conducted with Morris Zieschang in 2003. The seed treatments performed well in this study,. The two Poncho treatments and Counter 20CR yielded very well. The major pest pressure in this study was from chinch bugs. There was moderate Mexican corn rootworm pressure (MCR). The pre products with systemic activity worked well on chinch bugs, including Poncho, Cruiser, Counter 20 CR and Regent 4SC. All treatments performed better than the untreated for MCR expect Fortress 2.5G @ 6 and 9 oz/100 row ft.

Mean Mexican corn rootworm rating, mean dry root mass, and yields. Morris Zieschang, Williamson Co., TX. 2003.

Treatment and formulation	Rate	MCR root damage rating (0-3) ¹	Mean dry root mass (gram/6 plants)	Mean Yield (bu/ac) ²
Poncho 1250	1.25 mg ai/kn ³	0.4 bc	63.0	82.3 ab
Poncho 250	0.25 mg ai/kn	0.8 b	65.5 ab	85.5 a
Counter 20 CR	6 oz/1000 ft	0.3 c	55.9 bcd	81.1 abc
Aztec 2.1G	6.7 oz/1000 ft	0.4 bc	507 cd	54.9 de
Cruiser 400	1.25 mg/kn	0.3 c	71.2 a	67.5 cd
Cruiser 50 + Force 3G	0.125 mg/kn + 3oz/1000 ft	0.4 bc	59.5 abc	68.4 bcd
Cruiser 100 + Force 3G	0.25 mg/kn + 3 oz/1000 ft	0.2 c	67.6 ab	69.6 bc

Force 3G	5 oz/1000 ft	0.4 bc	55.4 bcd	45.0 ef
Empower	8 oz/1000 ft	0.6 bc	56.0 bcd	38.1 fg
Fortress 2.5 G	9 oz/1000 ft	1.4 a	50.6 cd	24.6 gh
Fortress 2.5 G	6 oz/1000 ft	1.2 a	54.3 bcd	19.3 h
Regent 4 SC	3.3 fl oz/ac	0.5 bc	60.3 abc	54.9 de
Untreated		1.6 a	43.2 d	12.7 h
LSD (P=.10)		0.43	13.92	14.55
Treatment Prob (F)		0.0001	0.11	0.0001

¹ Means within a column followed by the same letter are not significantly differ.

² Iowa State University 0-3 MCR rating scale: 0= no feeding damage, 1 = 1 node of roots eaten within 2 inches of stalk, 2 =2 nodes of roots eaten, and 3 = 3 or more nodes of roots eaten.

³ kn = kernel

Mean Stand counts, Corn vigor rating and mean number of adult chinch bugs on Apr 24 and May 2 and chinch bug nymphs on May 2. Morris Zieschang, Williamson Co., TX. 2003.

Treatment and Formulation	Rate	Stand Counts (1/1000 ac)	Plant Vigor (1-10) ²	Adult chinch bugs ³		Nymph chinch bugs ⁴ May 2
				Apr 24	May 2	
Poncho 1250	1.25 mg ai/kn ⁵	21 cde	8.67 ab	0.3 c	0.7 d	0.0 f
Poncho 250	0.25 mg ai/kn	20 de	8.83 a	1.0 c	0.0 d	4.0 ef
Counter 20 CR	6oz/1000 ft	26 a	8.00 ab	2.7 c	3.0bcd	2.3 ef
Aztec 2.1 G	6.7 oz/1000/ft	22 bcd	7.67 bc	0.0 c	0.7 d	13.7 def
Cruiser 400	1.25mg/kn	14 f	7.67 bc	0.3 c	0.0 d	0.7 d
Cruiser 50 + Force 3G	0.125 mg/kn + 3 oz/1000 ft	21 cde	8.20 ab	1.3 c	0.3 d	7.0 def
Cruiser 100 + Force 3G	0.25 mg/kn + 3 oz/1000 ft	19 e	8.00 ab	1.3 c	1.3 d	10.0 def
Force 3G	5 oz/1000 ft	24 ab	6.83 c	4.7 c	9.0 a	46.3 bc
Empower	8 oz/1000 ft	22 bcd	5.00 de	12.7 ab	5.7 abc	36.3 cd
Fortress 2.5 G	9 oz/1000 ft	24 ab	5.33 d	14.3 ab	6.7 ab	59.7 abc
Fortress 2.5 G	6 oz/1000 ft	22 bcd	4.17 e	10.7 b	7.3 a	67.7 ab
Regent 4 SC	3.3 fl oz/ac	22 bcd	6.83 c	2.3 c	1.7 cd	32.0 cde
Untreated		23 bc	4.33 de	17.0 a	9.3 a	79.3 a
LSD (P=.10)		2.3	1.09	5.74	4.23	30.83
Treatment Prob (F)		0.0001	0.0001	0.0001	0.001	0.0005

¹ Means within a column followed by the same letter are not significantly differ.

² Mean plant vigor, with 1 being least amount of vigor (plants very stressed, stunted, and yellow in color) and 10 being very healthy, vigorous plants (plants taller than other, green, healthy looking).

