

Pest Management News

*News About integrated pest management for
producers in Runnels-Tom Green Counties*

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GENERAL SITUATION

I hope everyone had a Happy Holiday Season and, on behalf of the Texas AgriLife Extension Service staff, we wish you a Prosperous 2008. Notice the name change. Enough said.

Most producers have finished up the 2007 cotton crop and are looking forward to another growing season just like the one we had last year. Most cotton gins are still running hard and will not finish until sometime around the first of February.

WHEAT

Well over 100,000 acres of wheat was planted in December and the temperatures have remained low through most of the time since planting. This will have a negative impact on the developing wheat plant. These plants have a small root system and will require timely rain in the spring in order to develop a grain crop with desirable test weight. Freeze damage can occur in young plants (2-3 leaf stage) when air temperatures drop to the 10-15 degree range, especially if the soil is dry. If the top two inches of soil is wet, it will serve as insulation to the young wheat plants.

There is no magical “cut-off” date beyond which winter wheat cannot be planted with an expectation of a harvestable yield. As we pass the optimum planting window, the potential for a good yield is reduced for several reasons. These include:

1. **Late maturity:** Late planted wheat will mature later than early planted wheat. Late maturity will frequently expose the crop to higher temperatures and more drought stress during grain fill. Disease

organisms will usually be present at higher levels during the latter part of the growing season, causing more risk to the maturing crop from wheat leaf rust or stem rust.

2. **Winterkill:** Seedlings which emerge in December and January are at much greater risk of winterkill. Wheat survives better if there is time to establish a secondary root system and some tillers prior to the onset of extremely cold weather.
3. **Tiller numbers:** Tiller numbers are reduced by late planting. Wheat grows very slowly at low temperatures and is essentially dormant below 40 degrees. Later planting dates allow for the growth of very few tillers prior to winter dormancy.
4. **Phosphorus inefficiency:** Phosphorus availability is low in cold soils. P moves by diffusion from the soil solution to the root surface, and diffusion rates are inversely related to soil temperature. Root systems also expand much more slowly in cold soils, so that plants intercept less phosphorus.
5. **Vernalization:** Winter wheat require a number of chilling hours to stimulate the formation of reproductive growth. These chilling hours are usually considered those above freezing but below the temperature at which wheat growth goes dormant from the cold or between 40 and 32 degrees. Wheat varieties vary somewhat with respect to vernalization requirements. Late planting reduces vernalization on wheats, which may be significant. How severely yields will be affected by planting beyond optimum planting dates will certainly vary with the weather during the remaining growing season

Some producers are asking about fertilizing wheat. Warm temperatures are needed to convert the fertilizer into a form used by the growing plant and it has to be in soil water in order to be absorbed. Half of the nitrogen in ammonium nitrate is in the form used by the plant and no conversion is necessary. It still needs to be in the soil water where the roots are actively absorbing moisture and nutrients. The availability of ammonium nitrate is very limited. The point of this is: 1) dry fertilizer is applied to a dry surface and needs to be moved into the soil by rain; 2) other types of fertilizer are available but they won't be converted into a useful form for the plant until temperatures warm up and 3) plants may stress and tillers may die before nutrient deficiencies can be corrected. A good rain would fix this problem.

Nutrient Requirements for Wheat

<u>Pounds per Bushel of Grain</u>					
N	P ₂ O ₅	K ₂ O	CA	MG	S
1.25	0.63	0.38	0.025	0.15	0.08
<u>Pounds per Bushel Straw</u>					
0.50	0.125	0.88	0.15	0.08	0.125
<u>Total Pounds per 50 Bushel Crop</u>					
88	38	63	8	11	10

The best time to put out P₂O₂ (phosphorus) is pre-plant or at-planting. P₂O₂ placed on the soil surface will not move into current years root zone. Nitrogen is the main nutrient needed now and it has the compatibility of moving in soil water to the root zone of the wheat plant.

COTTON VARIETY TEST RESULTS are almost completed and will be published in the next newsletter.



PEST MANAGEMENT NEWS
NEWSLETTER RENEWAL

“Pest Management News” is a newsletter which provides timely, accurate and pertinent information in the areas of crop production within the Southern Rolling Plains. Newsletters are written weekly during the growing season and a total of nineteen were issued in 2007. This newsletter will keep you abreast of current insect pest populations, natural enemies, biological and cultural control tactics and chemical control options. It will also provide the user with economic thresholds and other management tools to assist the farm operator in making management decisions. Currently, there is a \$10 subscription fee to cover the cost of postage. If you are interested in receiving this newsletter during 2008, please fill out subscription form and return along with \$10.00 to **“Pest Management News,” 613 Hutchins Ave., Room 302, Ballinger, Tx 76821, payable to “Pest Management News” by April 19, 2008.**



MARK YOUR CALENDARS!!!

AgriPlex Ag Day is not too far in the future. On Thursday, March 20, 2008 we will have Ag Day at the Ballinger High School. Tentative topics to be presented are Weed Management in Cotton, Farm Bill Update, Pasture Management, Drought Tolerant Cotton, Economics of Grain and Biodiesel Alternatives and the Southern Rolling Plains Cotton Growers Association will conduct their Annual meeting. Also featuring during Ag Day is a Health Fair, Ladies Program (tell your wives), Youth Program for your kids while you are at your meeting, Booth Visitation and the Presentation of the Farm Family of the Year, Agribusiness of the Year and Scholarship Awards.