



*Improving Lives. Improving Texas.*



# Wheat Update

March 13, 2012

To describe this year as unusual would be an understatement. Although, most fields were planted around the optimum planting date (November 1), plants have progressed rapidly due to one of the mildest winters on record. The earliest maturing varieties are approaching the boot stage (Feekes 10), while the latest maturing varieties are in Feekes 7 (two nodes above ground). By our estimate, wheat development is 10 days to two weeks ahead of normal.

The greatest threat to early maturing wheat is a late freeze. Our average last frost date is March 21. At this writing, the 15 day forecast does not show temperatures to dip below 40° F, so we are likely to “dodge that bullet” this year. In the 29 years I have been working with wheat, I have only seen three freezes in April, so it is an unusual event.

So what does this mean to our local wheat industry? I suspect it means a longer grain filling period, which will produce higher yields. But there are still some challenges we will have to meet. Lush green plants can be a haven for insect pests and plant diseases.

## **Bird Cherry Oat Aphids**

Bird cherry oat aphid populations have virtually exploded in many area fields. This has been a recent development, as there were very few aphids observed as late as the end of last month. These aphids are usually considered minor pests that are kept under damaging levels by beneficial insects (parasitic wasps, ladybeetles, and lacewings). But I have seen populations in excess of 1000 aphids per foot of row this week, causing visible plant stunting. The wheat plants can tolerate many of these insects at this late growth stage, but when the aphid populations expand in large numbers up the leaves, leaving a slick coating of sticky honeydew, a spray threshold has been reached. I still believe the vast majority of acreage in the region will not need to be treated. Parasites and predators will become more active in these warmer conditions. Look for evidence of parasitic wasps (aphid mummies), ladybeetles and lacewings. As these beneficials become more abundant, aphid population growth will be curbed in many fields.

Another detrimental aspect of bird cherry oat aphids is that they are vectors of Barley Yellow Dwarf Virus (BYD). However, spring infections of BYD are not as damaging as fall infections. Even if these aphids are harboring the virus, an infection at this late date will probably not cause much damage to the wheat plants. Many growers treated their seed last fall with Gaucho or Cruiser but these treatments have all played out at this point.

## **Plant Disease**

Stripe rust (*Puccinia striiformis*) has infected some experiments in our research trials. We use an old susceptible SRWW variety, Patton, to evaluate foliar fungicides, and some of the plots are heavily infected with this disease. The good news is that most area growers planted varieties last fall that are resistant to this disease. Unless there is a rust race change, we should not see stripe rust infection in most varieties. The only commonly planted variety I know of that has shown some susceptibility to this disease is Terral 8558 SRWW. Nevertheless, we did not see much stripe rust pressure last year, so some of the newer varieties should be scouted for this pest. If the disease infects early (Feekes 7-8), a split fungicide application (a half rate followed by a half rate 18-21 days later) should be considered. This program has shown to provide plant protections for 50 days. If the stripe rust shows up later (Feekes 9-10.5), a single fungicide application at the full rate is recommended. A single application of a good fungicide will provide 30-35 days of leaf protection, sufficient time to protect the leaves during the grain filling period.

Leaf rust (*Puccinia recondita*) has not yet been observed in this region, but the warmer than normal temperatures we are observing are ideal for leaf rust development. The leaf rust pathogen thrives on the warm, wet conditions that are predicted in the 7-10 day forecast.

Most of the SRWW varieties planted across the region are not susceptible to the known races of the leaf rust pathogen. However, leaf rust pressure in 2010 and 2011 was light so the most current data is from 2009. USG 3295, USG 3555, and Terral LA 841 showed excellent resistance at that time. Coker 9553 and Magnolia were shown to be moderately susceptible to leaf rust, but spraying them with an inexpensive fungicide (tebuconazole) produced only a marginal profit. Pioneer 25R30 and Pioneer 25R40 are probably resistant, but they have not been around long enough to get a good assessment on leaf rust resistance.

Jackpot HRWW is highly susceptible to the leaf rust pathogen, and we have shown an excellent return by spraying it with a fungicide. Last year, over three locations, we averaged a 14 bushel increase by spraying it with tebuconazole. The other one that should probably be sprayed is Terral 8558, as it is susceptible to both stripe and leaf rust.

## **Funginomics**

Many growers have chosen to spray a fungicide on all of their wheat acreage for leaf rust as an “insurance policy” because the cost of tebuconazole is so low (at \$6.00 wheat, the breakeven cost is around 1 bushel per acre). And they say they sleep better at night knowing their crop is protected in case of a rust race change. We suggest targeting that application for Feekes 9 to 10 (full flag leaf emergence to boot stage). This timing will provide good leaf protection throughout the grain filling period.

## **Armyworms**

It is almost a month early for armyworms but I have observed many moths in wheat fields over the past couple of days. These are likely the adults of the true armyworm, *Pseudaletia unipuncta*. They will be attracted to the lush green wheat fields, as they are the primary food source at this time of the year. The adults lay their eggs in the wheat, and larval survival can be high, particularly if it remains warm and moist. The small larvae develop by feeding on the lower leaves, but as they mature and consume the

leaves in the lower canopy; they will gradually move up the plant and feed on the uppermost leaves. We need to protect the flag leaf throughout the grain filling period.

I would suggest keeping a watchful eye on this pest, and intensify scouting efforts beginning the end of next week. As this situation progresses, I will keep you informed.

James Swart, Entomologist (IPM)  
Texas AgriLife Extension  
James\_Swart@tamu-commerce.edu