

BLACKLANDS IPM UPDATE

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GENERAL:

The area's wheat crop is progressing nicely and most of the wheat I have looked at will be headed out or in the boot stage by the end of this week. The recent weather conditions have been great for both our wheat and corn crops, but also for the development of some common wheat pests. Both leaf rust and stripe rust are starting to show up in some area fields, and powdery mildew is continuing to be found in area fields. True armyworm moths are still floating around the area, but last week was probably the peak flight for those that would impact wheat, and I still have not found or heard of armyworm issues in the immediate area. Bird cherry oat aphids are still present in some area fields that were not sprayed, and thankfully these numbers are starting to decline. It also appears at this time that most of the Blacklands avoided significant crops damaged from the frost and freezing temperatures on the 19th and 20th of this month.

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WHEAT DISEASE:

Leaf rust, stripe rust, and powdery mildew are all present in the area, and fields should be checked for their occurrence to avoid significant crop loss. All three diseases can greatly impact yields, and they can be easily managed with fungicide applications. Fungicide applications can be economical when they are applied to prevent disease infections on the top three leaves, as these are the leaves that produce over 95% of the energy the plant needs to fill out the developing kernels.

Leaf rust produces pustules that are round to oval in shape, and reddish orange in color ([Figure 1](#)), and stripe rust pustules are oblong and yellowish orange in color ([Figure 2](#)). Both of these diseases can be managed with resistance genes, and fungicides. Planting resistant varieties is an very economical way of managing leaf rust or stripe rust, however there are very few commercial varieties that have a high degree of resistance to both leaf rust and stripe rust. Due to the lack of varieties with good resistance to both pathogens, fungicides are commonly needed around the time the head emerges to avoid the top three leaves becoming infected with either disease



Figure 1. Wheat leaf rust. Photo credit: Donald Groth, Louisiana State University AgCenter, Bugwood.org

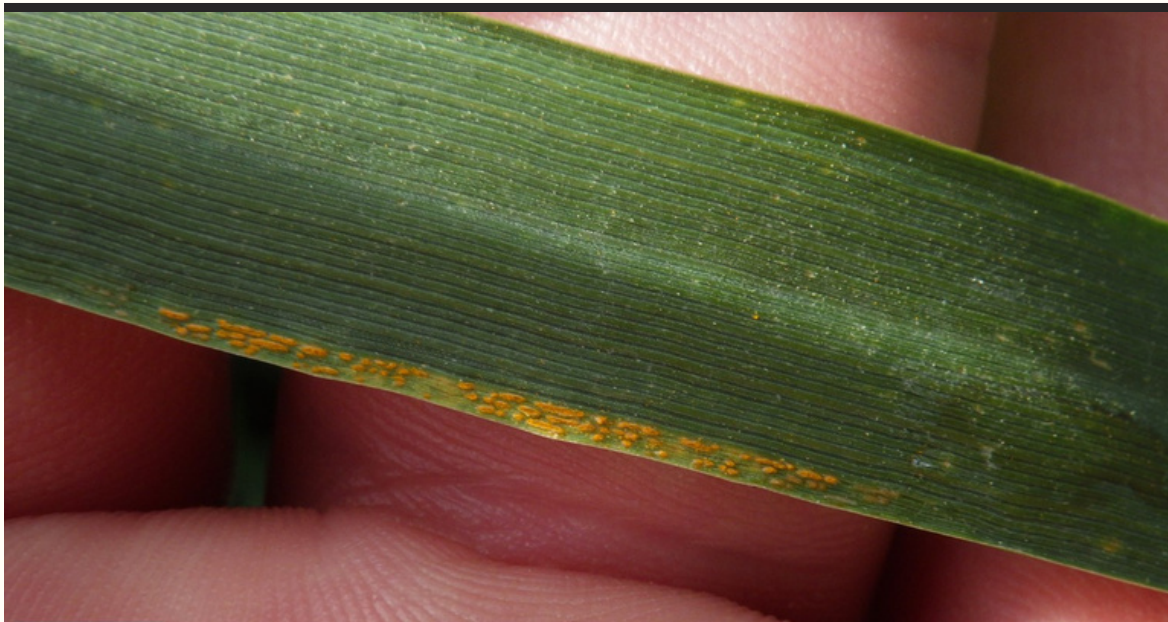


Figure 2. Stripe rust of wheat.

Powdery mildew (**Figure 3**) is a common wheat disease, but typically does not affect widespread acreage of wheat in our area, and nor does it usually progress to the point where it is possibly reducing wheat yields. This disease is caused by high humidity and temperatures between 59-71°F, and growth of the fungus slows as temperatures exceed 77°F. Much like leaf rust and stripe rust, there are some varieties that are more resistant to powdery mildew than others, and your seed representative should be able to provide that information if you ask. Other management options for powdery mildew include avoiding dense canopies, applying proper rates of Nitrogen fertilizer, and fungicide applications. Fungicides can be used to manage powdery mildew, but the cheaper products like propiconazole or tebuconazole are not as effective as some of the other fungicides like cyproconazole (Alto) and those with multiple modes of action



Figure 3. Up close photo of the white mycelial mass produced by the powdery mildew pathogen.

ARMYWORMS

It is not news that moth activity has increased over the last couple of weeks as we have moved into spring. Some of these moths were True armyworm moths which can be a devastating pest of wheat. I have not found an armyworm in area wheat fields yet but have heard reports of them hitting wheat hard in East Texas and Louisiana over the last couple of weeks.

The armyworm larvae are green to brown in color with lighter stripes running the length of the body, and can reach lengths up to 1-1/2 inches when fully grown ([Figure 4](#)). This pest tends to be higher in areas of the fields with dense canopies, as they try and avoid the sunlight. During the day the larvae will hide around the base of the plants, and under debris that remains on the soil surface. It is important to treat armyworms in a timely manner, and before they get too big, as small worms are easier to control and the armyworm consumes more plant matter as it grows. The recommended economic threshold for true armyworm in wheat and other small grain in Texas is four to five per 1 square foot. There are several insecticides that are labeled for control of true armyworm in small grains including multiple pyrethroids and malathion, both of which are reasonably priced for a wheat crop, but product with the active ingredient of chlorantraniliprole are also labeled for true armyworm management.



Figure 4. True armyworm larva. Photo credit: Roger Schmidt, University of Wisconsin-Madison, Bugwood.org