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Wheat Crop Update:

With excellent fall and winter conditions the current wheat crop yield outlook is very promising. Stands are excellent across the county with very good subsoil moisture in most fields.

With the days getting warmer and longer, the wheat is beginning to grow rapidly. With the prospects of making favorable yields, many producers have recently top dressed additional nitrogen and have treated for weeds-primarily tansy mustard.

There are still several issues that could arise in the coming weeks. One of those is rust diseases. In recent years, when growing conditions are wet, the primary rust disease has been "stripe rust." I encourage everyone to be on the lookout for this disease as the wheat is beginning to head out. Depending on the stage in which it flairs up, it may affect yields negatively.

Following is a bulletin on stripe rust. As always, if you have questions about your wheat crop contact me at my office at 806-435-4501 or my cell 806-886-5584

Wheat Field Day:

Go ahead and mark your calendars for **Tuesday, May 21, 2019** for the Wheatheart Wheat Field Day. Time and location will be announced later. This will be a great opportunity to see how different varieties have performed under dryland conditions in the county.



A handwritten signature in black ink that reads "Scott Strawn".

Scott Strawn-CEA-AG
Ochiltree County

APRIL 2019
OCHILTREE COUNTY AG NEWSLETTER

Stripe Rust (Yellow Rust) of Wheat

Dr. Ron French Former Pathologist Texas A&M Agrilife

Symptoms

Stripe rust develops in early spring favored by cool temperatures and high humidity. Primary symptoms consist of narrow orange-yellow stripes on leaves, sheaths, awns and glumes (Fig. 1 and Fig.2). Severe infections affect yield by reducing kernel numbers, weight and overall quality.



Fig. 1. Stripe (Yellow) rust on wheat. Photo: Tom Isakeit.



Fig. 2. The stripe pattern runs along the vascular bundles and resembles powdery stitches. Photo: Ronald French.

Causal Agent

The fungus *Puccinia striiformis* (syn. *P. glumarum*) causes stripe rust. There are several pathogenic races of this fungus. This fungus requires living host plants and survives between seasons on volunteer plants. Wheat is the main host, but barley, triticale, rye and related grasses are also affected.

Inoculum Source and Conditions

Infections are initiated from wind-borne spores carried either from long distances or from nearby alive hosts. Spores germinate at temperatures between 37°F (3°C) and 59°F (15°C), and infection is favored by free moisture (rain or dew) and temperatures between 50°F (10°C) and 59°F (15°C). Pathogen may be found in “hot spots” in a field so good monitoring is essential. For infection to occur, leaves need prolonged wetness, especially overnight, and temperatures conducive for spore germination and fungal activity.

Disease Management/Control

- Use of resistant varieties can potentially halt disease development and secondary inoculum production.
- Destruction of volunteer wheat and other hosts could reduce the primary inoculum.
- Application of seed dressings and foliar fungicides to protect the foliage. Foliar fungicides such as strobilurins (QoI inhibitors; good preventative activity) and triazoles (Ergosterol inhibitors; good post-infection activity) are labeled for management of stripe rust.
- Protecting the flag-leaf during grain-fill is critical.
- Early spray may require a second spray; late spray may be too late if infection is rampant.

When to Spray

- One scenario is when rust level in crop gets to 1% leaf coverage but before it covers 5% of leaf area. Yet another scenario is when 10% of crop is infected.
- If losses may top 10%, spraying may be warranted.
- Yield potential, price, weather, variety resistance, and fungicide costs need to also be taken into account.

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