

# Vigorous Wheat Stripe Fungus Accelerates In Arkansas

FAYETTEVILLE, ARK.

**A**vigorous strain of the stripe rust fungus with variants that can dodge the natural resistance in winter wheat is accelerating through Arkansas wheat fields and may mean a complicated spring for Arkansas producers.

Arkansas farmers planted 520,000 acres of winter wheat this year that will be harvested in June. Some surprising early pockets of rust were spotted in Cross County in late January, and as of Thursday, rust is being reported in nine counties. They are: Arkansas, Crittenden, Cross, Jefferson, Lee, Lonoke, Prairie, St. Francis and Woodruff counties.

“Reports of wheat stripe rust have really jumped this week with confirmed cases of stripe rust now being reported in nine counties in East-Central Arkansas,” Jason Kelley, extension wheat and feed grains agronomist for the University of Arkansas System Division of Agriculture, said Friday. “The levels of stripe rust being found ranges from individual infected leaves to large ‘hot spots.’”

Kelley said the large hot spots are “alarming since much of the wheat in the area where stripe rust is being reported is just now beginning to joint. The hot spots that I have seen have stripe rust all the way to the top of the plant and much of the lower leaves have already died from stripe rust.”

Scouting all fields is critical now – “not just the fields you suspect may be planted to a variety that was susceptible to stripe rust last year,” Kelley said.

The rainy spring has likely played a role in the rapid spread of the fungus. It likes moist conditions, Kelley said.

“We know that we have had a new strain of the stripe rust fungus since 2000 and that this strain causes more disease more quickly and is better adapted to warmer temperatures than the old strain,” said Gene Milus, professor of plant pathology for the University of Arkansas System Division of Agriculture. “We also know that the most common type of stripe rust resistance among contemporary soft red winter wheat varieties is adult-plant resistance.

“While seedlings and young plants are susceptible to fungal infection, the plants become more resistant as they mature,” he said. “This type of resistance also may be more effective at warmer temperatures. This type of resistance has worked well here in the past when stripe

rust first shows up in late March.”

However, this adult resistance is not effective against all stripe rust.

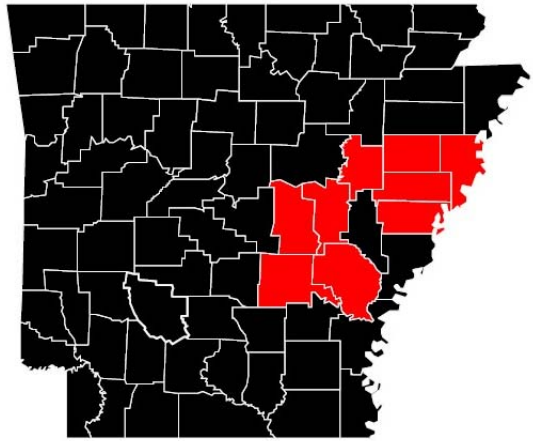
“At this time, it is impossible to know whether or not the stripe rust in our wheat fields will overcome the adult-plant resistance in particular varieties,” Milus said. “We also do not know how favorable the rest of the growing season will be for stripe rust.”

Milus said there are several scenarios for wheat producers this spring:

- If particular varieties have no adult-plant resistance, three fungicide applications likely will be needed to prevent significant yield and test weight losses.

- Varieties with moderate levels of resistance likely will need one or two fungicide applica-

## Locations in Red with Confirmed Stripe Rust as of March 1, 2012



tions.

- Varieties with a high level of resistance likely could get by without any fungicide.

“Given the knowns and unknowns, if there are hot spots of stripe rust in a field, it may be prudent to tank mix a fungicide with the broadleaf herbicide application,” Milus said. The objective of the early application is to stop rust development for about three weeks and allow time for adult-plant resistance to go to work.

He said that after three weeks, the disease situation can be reassessed.

“This early fungicide application also would stop leaf blotch and leaf rust that are ahead of normal in several fields,” Milus said. “Any of the fungicides registered on wheat would work, but it may be more cost-effective to use an inexpensive fungicide now and use a more expensive fungicide later if needed.”

Flour made from winter wheat is usually used in cookies and pastries. Δ