



By Larry Reichenberger

Experts are pinpointing the benefits of split application

# Two-fisted fungicides

**W**heat growers have learned fungicides can pack a powerful punch—many saw dramatic yield responses last season. Now, some experts think fungicide's punch might pack more wallop when delivered as a one-two combination.

Typically, fungicides are applied after flag leaf or head emergence, but some research is showing an advantage to applying a reduced rate (half the label rate) much earlier—prior to the jointing stage. This treatment is generally made in combination with a topdress nitrogen or herbicide application. Depending on disease pressure and label restrictions, the remaining product, or a full rate, is applied later.

**Split fits.** "We're finding that split application benefits yields of some varieties and in some situations," says Jon Rich, agronomist at AgriPro Seed's Junction City, Kan., research center. "With increased use of no-till, growers are planting more wheat into

wheat residue. Tan spot and Septoria can be problems in those situations and the early fungicide application delays the onset of these diseases. It can do the same with powdery mildew on varieties with poor resistance."

**Yield results.** Researchers at North Dakota State University have studied split fungicide use for several years. "We've seen it have an additive affect—we get 2 to 3 bushels per acre more when a half rate is applied early and a full rate applied later," says plant pathologist Marcia McMullen.

In an NDSU study with winter wheat last season, yields were increased 11 bushels per acre with the standard late application of fungicide compared to no treatment. Applying a half-rate early increased yields 4 bushels per acre compared to no treatment, while combining the half-rate early and full-rate later applications netted a 14 bushel increase in yield.

"We see this type of response when conditions are wet, the variety be-

ing grown is susceptible to leaf spot diseases and wheat residue is present," according to McMullen.

Wheat consultant Phil Needham, with Needham Ag Technologies, Calhoun, Ky., says he's seen an early application of fungicide reduce yield losses to powdery mildew. "In Kansas, if a susceptible variety like Overley, Jager, or Jagalene is planted early with high fertility and it develops a dense canopy, then growers need to watch closely for the onset of the disease. A half rate of Tilt or Quilt fungicide applied between the 5-leaf stage and jointing has shown good response."

Split-applied fungicide worked well last season on the Haskins Farm near Fort Pierce, S.D., according to farm agronomist Clair Stymiest. "We applied 2 ounces of Tilt per acre in late April with our grass herbicide, then applied Folicur or Stratego later on. The early application controlled tan spot in no-till winter wheat planted in spring wheat stubble. We saw a 5 to 7 bushel per acre yield increase from the combination," he says.

**More research.** AgriPro's Rich says research plots being put out this year will help fine-tune recommendations on split fungicide use. "We still have questions about the size of the yield increase growers can expect, and how to maximize it," he says.

Plant pathologists at Oklahoma State University are also doing more research. "In a study last year we saw a reduction in powdery mildew from an early application of a reduced rate of Quilt, but leaf rust was heavier because of the reduced rate in the late application," says Robert Hunger.

"I can see that in some years powdery mildew will be a problem and with more no-till, tan spot and Septoria will increase. However, I've still got mixed feelings about the role split application can play," adds Hunger. ■

► **Far left:** Jon Rich says split-applied foliar fungicides can boost yields in some situations.

► **Chart:** In one study last season, Rich found dramatic benefits to standard applications on varieties susceptible to leaf diseases. Split application will likely benefit these varieties.

## Fungicide protects wheat

