SOUTHERN STATES®
A Farmer Owned Cooperative Since 1923.

WHEAT DISEASE MANAGEMENT DESERVES ATTENTION

Year-round, holistic approach offers best results

The old adage "an ounce of prevention is worth a pound of cure" is certainly true when managing wheat diseases. While the exact impact is hard to measure, let's look at Kansas, where wheat diseases are closely tracked. The estimated cumulative disease loss – excluding nematodes – for the 2019 Kansas wheat crop was 13.2% or 46.2 million bushels. According to researchers at Kansas State University, 2019 was an average year for wheat disease; the most important diseases throughout the state were stripe rust (4.6% loss), leaf rust (3.0% loss), and Fusarium head blight (2.1% loss). Cool temperatures and frequent rainfall throughout the spring and summer in 2019 likely contributed to disease prevalence.

Although wheat growers can't control the weather, they can take a holistic, integrated pest management approach to minimize yield loss to disease. Many disease-prevention strategies can be implemented before the seed is even in the ground.

Wheat disease prevention practices

Growers who take an integrated approach:

- Know the diseases prevalent in their area and on their farm
- Select resistant varieties
- Plant at the right time
- Burn down nearby plants that can vector disease
- Rotate crops
- Minimize exposure to old crop residue
- Use fungicide/insecticide seed treatments
- Sequence crops (time since last wheat crop)
- Ensure balanced crop nutrition
- Plant multiple varieties to spread risk
- Scout fields, particularly when weather is ideal for disease
- Apply fungicide as preventative, if appropriate

Be wary of ideal environmental conditions

In many cases, these management practices will successfully prevent or minimize disease. However, when environmental conditions are favorable, diseases can still occur. That's why strategic, frequent scouting and timely application of a fungicide with the activity to control the specific disease is essential.

Always read and follow all label directions and precautions when applying a fungicide.

Wheat diseases to be aware of early in the season are leaf rust, powdery mildew, Pythium (cottony blight or grease spot), septoria leaf spot and stripe rust. Your Southern States agronomist can help with disease identification and offer suggestions for the most appropriate product and application timing.

Be prepared for Fusarium head scab/ head blight at flowering

Across the wheat-growing regions in the United States, Fusarium head scab (head blight) is the most predominant disease impacting wheat production. Head scab is caused by the fungus Fusarium graminearum, which attacks the grain to produce mycotoxins, the most common of which is deoxynivalenol (DON) or vomitoxin, that can cause serious yield losses and grain damage. Mycotoxin presence in grain often results in price reductions because excessive levels of DON or vomitoxin limit the grain's use in feed and food.

Major outbreaks of Fusarium head blight are associated with specific weather patterns prior to the flowering of the wheat crop.

As with all crop diseases, head scab is best managed with an integrated approach, beginning with the selection of the best available genetically resistant variety, supplemented by the application of a fungicide (either Prosaro®, Miravis® Ace or Caramba®) at the beginning of flowering (Feekes growth stage 10.5.1).

When a fungicide can't be applied on the day when most of the field is flowering, an application two to six days after that will still help suppress the disease.

Tool predicts potential for disease

In addition to scouting, growers can take advantage of an online tool that is available to help assess the risk of Fusarium head scab. During the growing season, the Fusarium Head Blight Prediction Center (*http://www.wheatscab.psu.edu/*) uses models based on observed weather patterns to predict the risk of a major epidemic (greater than 10% field severity).

Contact your nearest Southern States agronomy expert at *www.southernstates.com/agronomy/meet-our-team/*.

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