Think Ahead About Controlling Wheat Pests And Diseases

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Now that corn and soybeans are beginning to dry down and harvest time is approaching, there will be a flurry of activity as we rush to get the harvest in before the weather turns bad. For many of us, our attention will turn to planting wheat. But before any seed is put into the ground, much thought should be given to preventing those pests and diseases that can plague this staple crop.

One of the oldest wheat pests is the Hessian fly, Mayetiola destructor. Originating from Asia, Hessian flies were likely transported to Europe, and later to North America, in the straw bedding of Hessian soldiers.

Fly free dates were developed to provide a reliable, non-pesticidal method to keep this insect at bay. In Illinois, these dates range from September 17 to October 12 depending on your cropland's location. Generally speaking, the further south you are, the later the fly free date will be.

Planting after the fly free date has other benefits as well. Barley yellow dwarf virus (BYDV) requires an aphid for it to spread into wheat. While other aphids can be a vector of BYDV, one of the most common culprits is the bird cherry-oat aphid, Rhopalosiphum padi. Aphids are less likely to invade your wheat field after the Hessian fly free date, and as such are less likely to transmit BYDV.

If you decide to plant wheat before the fly free date, consider treating your seed with an insecticide such as Gaucho®, Cruiser®, or other systemic insecticide.

Another disease to take note of is wheat streak mosaic virus (WSMV). This virus is capable of causing enormous yield losses and is carried by the wheat curl mite, Aceria tulipae.

Keeping WSMV out of your wheat, while not foolproof, is fairly simple: Keep mites out of the wheat. These mites prefer wheat but are able to persist in the field on a multitude of grasses, even on corn. If you have kernel red streak symptoms in your corn, then it is likely that the mite is present as well. Kernel red streak causes red streaking to nearly complete reddening of the pericarp.

Wheat curl mites require a living plant to thrive but can survive for a little while without a plant. In the laboratory, they survive only about eight hours at 75°F without food or water and even longer at lower temperatures. Because of the living plant requirement, a simple control solution is to remove food sources from the mites and allow them to die.

Keep wild grasses mowed short. Control volunteer wheat and corn, and don't plant wheat until sufficient time has passed for all the mites in the area to expire. Usually, a week or two of no green grass, wheat or corn in the field will be sufficient.

Wheat streak mosaic virus and barley yellow dwarf virus can still be transmitted to wheat in the spring. However, spring infections of both viruses are usually much less severe than fall infections and frequently need no control. Δ

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