

Spring Pests of Winter Wheat

There are several pests that can affect wheat early in the spring. Two of the most common that farmers need to be scouting for right now are aphids and diseases.

The two most common varieties of aphids seen in wheat are greenbugs and bird cherry-oat aphids. Greenbugs are pale green to greenish-yellow in color with a darker green internal stripe running the length of its back. They may cause injury to wheat by the sucking of plant sap, injection of toxic saliva, or by transmission of barley yellow dwarf virus. Greenbug outbreaks begin in states south of Missouri and move north on prevailing winds in the spring. Populations increase during extended periods of cool weather when development of natural enemies is slowed. Farmers can control greenbugs with insecticides if populations exceed economic thresholds. Treatment is generally recommended when 100 or more greenbugs are present per linear foot of row.

Bird cherry-oat aphids are the second most common insect seen in wheat but, unlike greenbugs, they rarely require control. Bird cherry-oat aphids can be distinguished from greenbugs by their olive green to olive gray body color with a reddish-orange area surrounding the cornicles. Although they do not damage wheat plants to the degree that greenbugs do, they are still a vector of barley yellow dwarf virus. As temperatures begin to warm in mid- to late-April, populations of beneficial insects increase and begin to control aphid infestations.

Diseases may be caused by viruses, bacteria, or fungi. The most common viral diseases include wheat spindle streak mosaic, wheat soilborne mosaic, barley yellow dwarf, and wheat streak mosaic. Unlike bacteria or fungi, viruses cannot be controlled with fungicides. Fortunately most of these viruses begin to fade as temperatures warm. If a particular field has had a problem with viruses, it may be beneficial to rotate crops or plant resistant varieties of wheat the following year.

There are many different fungi and bacteria that cause diseases in wheat. Foliage diseases that cause significant damage to Missouri wheat include Septoria leaf blotch, Stagonospora glume blotch, tan spot, leaf rust, stem rust, stripe rust, powdery mildew, and bacterial stripe. Left unchecked, these diseases can cause significant yield loss in wheat. There are several fungicides labeled for use in wheat. Farmers should scout fields to determine type of disease present and level of severity. The greatest benefits to spraying are obtained when fungicides are applied at the early boot to head emergence growth stage. The goal is to protect the flag leaf from severe infection.

For more information about these or other spring pests of winter wheat, contact your local county extension office or Travis Harper by phone (660)885-5556 or e-mail harpertw@missouri.edu.