

Wisconsin Pest Survey Report

2011 WINTER WHEAT SURVEY FOR FOLIAR DISEASES

<http://pestsurvey.wi.gov/>

Between May 6th and June 28th, 42 wheat fields in 10 central and north-central Wisconsin counties were surveyed for disease presence. Wheat fields ranged in maturity from Feekes Stage 5 (leaf sheath strongly erected) to Feekes 10.5.3 (flowering complete to base of spike). Powdery mildew (*Blumeria graminis*) was the most commonly observed disease, detected in 22 fields. Symptoms of tan spot (caused by *Pyrenophora tritici-repentis*) were found in six fields; Fusarium head blight was detected in one field and loose smut (*Ustilago tritici*) was observed in one field. Trace levels of leaf rust (*Puccinia triticina*) were found in five fields. Stem rust (*P. graminis*) or stripe rust (*P. striiformis*) were not detected in wheat fields this survey period but both leaf and stem rust were found in a barley field in Ozaukee and Columbia Cos.

One significant find in the survey was the first confirmed case of Cephalosporium stripe disease (causal agent *Cephalosporium gramineum*) on wheat in Wisconsin. See *First Record of Cephalosporium Stripe Disease of Wheat in Wisconsin*, Special Report 2011 at: <http://pestsurvey.wi.gov/plantdisease/wheat.html>



Stripe rust was identified from two barberry cultivars offered for sale in Wisconsin nurseries. Barberry cultivars must be tested and determined to be resistant to stem rust (*Puccinia graminis*) to be legal for trade in the Midwest. The two cultivars which showed signs of infection, 'Emerald Carousel' and 'Golden Carousel', had been tested by the USDA Cereal Disease Laboratory and were on the approved list.

Through DNA sequencing the Plant Industry Laboratory determined that the aecia observed were *P. striiformis*, the causal agent of stripe rust, not the regulated *P. graminis*, the causal agent of stem rust. While stripe rust is not a regulated organism, the presence of *P. striiformis* susceptible barberry in the state may pose some of the same concerns as with *P. graminis*. More information on cereal rusts can be found on the USDA ARS Cereal Disease Laboratory website: <http://www.ars.usda.gov/mwa/cdl>

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