

Summary of Wheat Diagnostic Analysis, 2014

Funded by Michigan Wheat Program

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Twenty-eight samples, from ten counties, were submitted to the lab for diagnostic evaluation. These samples were submitted by MSUE educators, agribusiness professionals, and growers. Each sample was examined for signs of disease and abiotic issues. Eight samples were tested with ELISA tests for four specific pathogens.

Four of the twenty-eight samples submitted had symptoms that were attributed to nutritional deficiencies and/or high or low soil pH levels. Three of these were forwarded to the MSU Soil and Plant Nutrient lab for further testing; results indicated manganese deficiency in those samples. Barley yellow dwarf (species PAV) was confirmed in one sample from Ingham County. Wheat streak mosaic was confirmed in two samples from Ingham and Tuscola Counties. Bacterial mosaic (*Clavibacter michiganensis* subsp. *tessellarius*) was confirmed in just one sample from Ingham County. Tan spot (*Drechslera tritici-repentis*) was detected in one sample; this potentially serious disease of wheat was detected through this program in 2013 as well. A list of diagnoses, and their incidence, is included below; note that some samples had multiple diagnoses. The distribution of the sample origins are also shown below.

Incidence of Diagnosis

Diagnosis	Number of Samples
Nutrient deficiency	4
No pathogens detected	4
No nematodes detected	1
Rhizoctonia root rot	1
Pythium root rot	1
Stagnospora blotch	5
Tan spot	1
Leaf rust	4
Powdery mildew	1
Head scab	1
Cephalosporium stripe	1
Black mold	1
Bacterial mosaic	1
Barley yellow dwarf – PAV	1
Wheat streak mosaic	2

Geographic Distribution of Samples

