



**Diagnostic Services**

## **Collecting and Submitting Wheat Samples**

*The Michigan Wheat Program is providing funds for the diagnostic evaluation of wheat samples. Funds provided will cover general health analysis, where appropriate additional testing may include culturing for fungal and bacterial pathogens, virus testing, nematode analysis, and detection and identification of insect pests. Below are instructions for sampling and submitting wheat samples to take advantage of this opportunity.*

### **Sample Collection**

- Select plants that are symptomatic but not dead. Try to pick from the edge of the symptomatic areas in the field. Submitting plants that show a range or progression of symptoms is helpful.
- Send entire plants, including roots. Plants should be carefully dug from the field, do not pull them out of the ground.
- Excess soil can be gently shaken off the root zone of the plants and put in a separate bag. This is a good way to collect soil for nematode analysis when a nematode problem is suspected.
- Send a minimum of 5-10 plants to ensure there is enough tissue for analysis. A single plant is not enough and often doesn't represent an entire field.
- Wrap the plants in dry newspaper before putting them in a plastic bag; do not add moisture to the samples.
- Include samples of soil from both the "good" and "bad" areas of the field. Soil samples should contain approximately 4-5 cups of soil. Soil should be put in sealable plastic bags; please do not use paper bags.
- Keep the collected materials cool prior to shipping.

### **Insect Samples**

- Kill and ship specimens in a small, leak proof container filled with white vinegar.
- Whenever possible, soft-bodied larvae should be lightly boiled for a few minutes before placing them in vinegar. This prevents the specimens from shriveling and becoming discolored, however this only works if the larvae are alive when placed in the boiling water.

### **Images**

- If possible take pictures of the distribution of the symptoms in the field. These are very helpful to show stunting, poor stand issues, differences in color, etc.
- Images can be emailed to [pestid@msu.edu](mailto:pestid@msu.edu) or printed and included with the physical sample.

### **Paperwork**

- Complete a copy of the MSU Diagnostic Submittal form. Copies are available online at [www.pestid.msu.edu](http://www.pestid.msu.edu).
- Please be sure to include your email address or fax number, this will be used to communicate diagnostic results and related information.

### **Shipping**

- Package the sample in a box; do not send samples in an envelope.
- Overnight or priority delivery is recommended. Do not ship samples on a Friday. Samples can also be delivered in person to the diagnostic lab. Ship samples to: Diagnostic Services, Michigan State University, 578 Wilson Road, East Lansing, MI 48824-6469.

### **Questions**

- Contact the lab at 517-355-4536 or [pestid@msu.edu](mailto:pestid@msu.edu).
- Dennis Pennington, Wheat Systems Specialist, 269-838-8265 or [pennin34@msu.edu](mailto:pennin34@msu.edu)