Collecting and submiting wheat samples

Instructions and diagnostic form

Diagnostic Services

MICHIGAN WHEAT PROGRAM

The Michigan Wheat Program has provided funds for the diagnostic evaluation of wheat samples by MSU's diagnostic laboratory during the 2014 growing season. Funds provided will cover general health analysis, 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 in order 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. Sending a "good" set of plants as well as a "poor" set can be helpful as well.

- Send entire plants, including roots. Plants should be carefully dug from the field (not pulled).
- Excess soil can be gently shaken off the root zone and put in a separate bag. This is a good way to collect soil for nematode analysis when a nematode problem is suspected and for determining soil pH.
- Send a minimum of 5-10 plants to ensure there is enough tissue for analysis. A single plant is not sufficient.
- 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. 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 or printed and included with the physical sample.

Paperwork

- Complete a copy of the MSU Diagnostic Submittal form (page 2). Copies are available online at: http://tinyurl.com/czcgyy3 or 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.

DIAGNOSTIC SERVICES

578 Wilson Rd., Room 107
East Lansing, MI 48824-6469
Office:517-355-4536 FAX:517-432-0899
www.pestid.msu.edu

Case No.: _____
Date Received: _____
Amount Paid: _____
Check/Receipt No.: _____
MSU Account #: _____
Diagnostic Fee: _____

Name: _____
Business Name: _____
Address: _____
City/State/Zip: _____
Work: _____ FAX: _____ Home: _____
Email: _____ Cell: _____
Sample Reference: _____

Plant Disease Diagnosis Fees

Plant health analysis:	$20
Bacterial ID (BIOLOG!"):	$25

Insect Identification Fees

Common ID:	N/C
Keyout ID:	$10

Plant Identification Fee $10

Nematode Sample Fees (see below)

Out of State Fees Triple / Fees subject to change

SEND RESULTS TO: CLIENT COUNTY AGENT Fax: _____
MSU Extension Agent: _____ County: _____ Email: _____

SAMPLE (ex. Tomato, Insect, Pine, etc.): _____

GENERAL INFORMATION (indicate all that apply)

PLANT PARTS AFFECTED

Entire Plant	Stems
Leaves/Needles	Trunk
Roots	Twigs/Limbs
Fruit	Flowers

NATURE OF THE INJURY

Poor or Abnormal Growth

Spots	Yellowing
Wilting	Boring
Plant Death	Cupping
Chewing	Dieback
Galls/Cankers	Rot
Leaf/Needle Drop	

SOIL TYPE

Sandy	Clay
Muck	Silt Loam

TYPE OF PLANTING

Field	Garden
Nursery	House Plant
Greenhouse	Pasture
Orchard	Natural Area
Turf/Lawn	City/Recreation

PREVALENCE

Entire Planting
Single Localized Area
Several Localized Areas
Few Scattered Plants

EXTENT OF THE DAMAGE

Light Moderate Severe

DRAINAGE

Good Fair Poor

PROBLEM DISTRIBUTION

Upland	Near Drive/Road
Slopes	Edge of Field
Low Areas	Near a Residence

OTHER BACKGROUND

How long at site?

Height of plant?

How many plants affected?

How often watered?

How fertilized?

Sunny or Shaded?

HERBICIDE HISTORY

This year: _____
_____
Last year: _____
_____

INSECTICIDE HISTORY

This year: _____
_____

FUNGICIDE HISTORY

This year: _____
_____

CROP HISTORY

Last year: _____
This year: _____
Next year: _____

INSECT / ARTHROPOD ID SAMPLES ONLY (indicate all that apply)

Where was the insect found? _____ What was the insect doing there? _____
How many insects are there? One Few Several Hundreds Do you have small children living with you? _____

PLANT / WEED ID SAMPLES ONLY (indicate all that apply)

PLANT TYPE

Tree	Groundcover
Shrub	Herbaceous
Vine	Aquatic

PLANT SIZE

Height: _____
Width: _____
Few Leaves Many Leaves

GROWTH HABIT

Upright/Erect
Prostrate/Low-Growing
Climbing

FLOWERS

Color: _____
Size: _____
List any unique features: _____

PLANT AGE

Annual: _____
Perennial: _____

NEMATODE SAMPLES ONLY (indicate type of analysis requested)

Soil and root analysis ($25/sample) Foliar nematode analysis ($25/sample)
Total nematode community structure analysis ($50/sample)
Hg Type test ($75/sample)
Verticillium dahliae analysis (potato soil / stem only) Dilution ($20/sample) Wet-sieving ($25/sample) Both ($40/sample)

No. of samples: _____
Sample/Field ID: _____

USE REVERSE SIDE FOR ADDITIONAL INFORMATION