



Potato Progress

Research and Extension for Washington's Potato Industry

Published by Washington State Potato Commission www.potatoes.com

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Volume XI, Number 2

March 1, 2011

New Plant Diagnostic Lab in Pullman

Washington State University now operates two plant diagnostic labs: one at the Puyallup Research and Extension Center; and the other on the main campus in Pullman. Diagnosticians at these peer labs make plant disease diagnoses, and provide disease management information. Additionally, samples of insects and weeds received by these labs will either be identified or referred to appropriate experts. Diagnosticians: Jenny Glass glass@puyallup.wsu.edu (253-445-4582) and Karen Ward karen.flint.ward@wsu.edu (509-335-3292).

The potato commission strongly supported the recent creation of the Pullman lab, including partially funding the start-up costs. It is also exploring ways to support WA potato growers' use of WSU diagnostic services. There is much information about WSU's diagnostic services at the website of the Puyallup lab: <http://www.puyallup.wsu.edu/plantclinic/samples/ppd.html>. Below are some of the highlights. Watch this newsletter for more information on the Pullman lab, and support for growers offered by the commission.

Plant Problem Diagnosis

How should you collect a sample?

✓ EXAMPLES

Wilting, yellowing, or dieback: Dig up and submit whole plants (with roots). Submit multiple symptomatic plants if possible.

Potted plants: Send the whole plant, including roots and soil.

Fruit, leaves, flowers, twigs or branches: Send specimens showing diseased and healthy tissue. Submit entire plant when possible.

Vascular wilt of trees (Verticillium wilt or Dutch elm disease): Send several branch sections that are 1/2 to 1 inch in diameter and about 8 inches long from branches with wilting or yellowing leaves.

✓ Select plant material that is showing symptoms of concern and submit various stages of the problem, especially the early stages.

✓ Many problems originate belowground in and around roots-- include roots and soil for more accurate diagnosis!

✓ Please do not submit dead, dry, decayed or rotted samples as they provide insufficient material for diagnosis.

What information should you provide?

- ✓ Download appropriate form:
 - For ornamental/ home yard plant problems, use Form C1006
 - For commercial crops, use Form C0084
- ✓ Personal contact information (address, phone, fax, email)
- ✓ Detailed information about the problem:
 - When was problem first noticed?
 - Is the problem spreading, and how fast?
 - How many plants are affected?
- ✓ Detailed information about plant and its cultural care:
 - type of plant, age, condition of surrounding plants
 - site description (drainage, exposure, weather), irrigation
 - pesticide and fertilizer use (type, rate, date)

How much does this service cost?

- ✓ Information inquiries..... \$25
- ✓ Plant problem diagnosis..... ... \$40
- ✓ Note: Special tests may incur additional fees.

How should you package your specimens for shipment?

- ✓ Use a sturdy box for shipping. Wrap fleshy material (such as fruits, bulbs, or tubers) in dry paper towels or newspaper. Place roots and associated soil in a plastic bag. Include padding to prevent injury during shipping. Please send the sample via the fastest reasonable method. Include the sample form and payment in a separate plastic bag, in the box with the sample.

Where should you submit your samples?

Mail packages to:

WSU Plant Clinic
2606 West Pioneer
Puyallup, WA 98371-4998

OR

WSU Plant Pest Diagnostic Lab
Dept. of Plant Pathology
P.O. Box 646430
Pullman, WA 99164-6430
Karen Ward: (509) 335-3292

Please DO NOT mail on a Friday or before any national holiday because the specimens may deteriorate in transit or over the weekend.

Volunteer Potato Outlook - 2011

Rick Boydston and Marc Seymour, USDA-ARS, Prosser

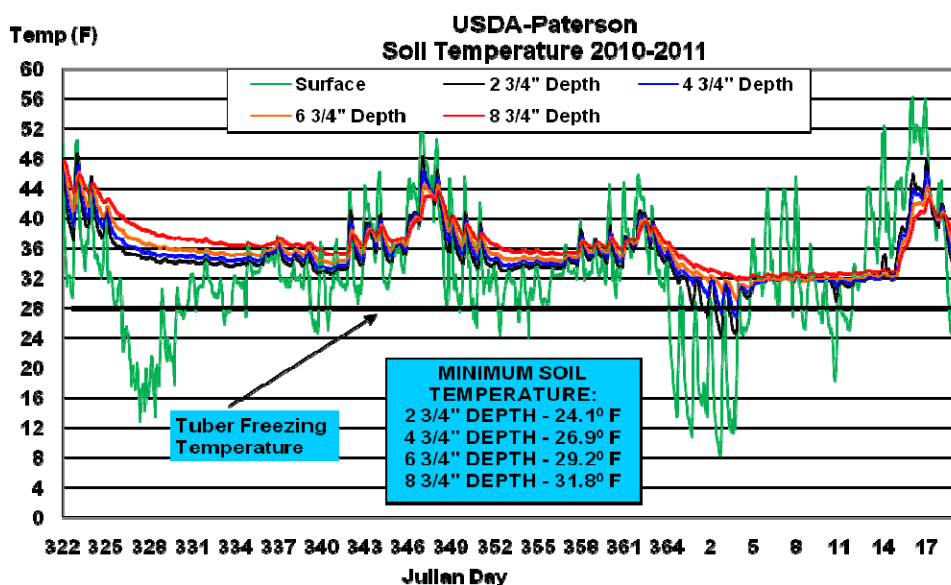
In order to provide some information on potential volunteer potato tuber survival during the winter, soil temperatures were recorded at four depths (2.75, 4.75, 6.75, and 8.75 inches) beneath bare soil (no crop residues) from mid-November 2010 through February 2011 at the USDA-ARS Paterson, WA research site. Unusually low air temperatures were recorded in late November, but soil temperatures were not sufficiently low during that period to kill potatoes.

Lowest air and soil temperatures this winter occurred Jan. 3 with air temperatures reaching about 8° F, and soil temperatures reaching 26.9° F at 6 ¾ inches on Jan. 3, which would kill potatoes to that depth. Potatoes are normally killed when they reach temperatures ≤28° F.

The vast majority of potatoes left in the field are in the upper 6 inches of the soil profile unless deep post-harvest tillage, such as mold board plowing was done. Based on previous research on tuber depth (Newberry and Thornton, 2004), we estimate that 20% or more of the tubers left in the field last fall in the lower Columbia Basin were deep enough to escape killing temperatures. Therefore, volunteer potatoes will likely be common in the Columbia Basin this spring. Emergence will be delayed because plants are emerging from deeper in the soil, although volunteer plants should emerge over a fairly short period of time. Volunteer potatoes will be more prevalent this crop year than last year when soil temperatures at 9" deep reached 27° F during the 2nd week of December.

Agrimet weather station data at Hermiston, OR also recorded air temperature of 8.8° F and soil temperature at the 2 inch depth of 25.7° F on January 3, but temperature at the 4 inch depth only reached 29.6° F. Ground cover at the Agrimet weather station site consists of nonirrigated weeds and natural vegetation, which could affect the depth to which cold air temperatures penetrate the soil.

Data from the Agrimet weather station in Odessa, WA indicated that although air temperatures reached 3.3° F on January 3, soil temperatures did not fall below 29° F at any depth. There may have been snow cover at the Odessa site which prevented soil temperatures from dropping low enough to kill potatoes. For more information on volunteer potato control visit the Prosser USDA-ARS website at; <http://www.ars.usda.gov/pwa/prosser>.



2011 Commercial Seed Lot Trial Information

Mark Pavek 509-335-6861, Zach Holden 509-335-3452

Tim Waters 509-545-3511 (Benton/Franklin County WSU Extension)

Carrie Huffman Wohleb 509-754-2011 (Grant/Adams County WSU Extension)

2011 Potato Field Day - Thursday June 23

Commercial potato seed samples are requested for the 2011 Washington Seed Lot Trial. **Two to three hundred whole (single drop) seed is an acceptable sample size, or 50 lbs of 4 oz single drop seed.**

Requested: 50 lbs of 2-4 oz whole seed, no seed treatments
(Seed over 6 oz is not acceptable)

A sample that represents the entire seed lot received is most desirable. Sampling the first (or last) 300 seed from the truck is not likely to provide a representative sample of the lot. Sample tags may be obtained by calling (or stopping by) the Potato Commission at 509-765-8845.

Your assistance with collection and drop off of seed samples is needed. Seed samples may be taken to the WSU Othello Research Unit (509-488-3191); located on Booker Road ¼ mile south from State Highway 26 and about five miles east of Othello. For sample pickup and any questions regarding the seed lot trials please call:

South Basin: Tim Waters (509-545-3511), Mark Pavek (509-335-6861), or Zach Holden (509-335-3452).

North Basin: Carrie Huffman Wohleb (509-754-2011), Mark Pavek (509-335-6861), or Zach Holden (509-335-3452).

In the North Basin, one seed "drop-off" has been established. It is located at Qualls Ag Labs (Mick Qualls, 509-787-4210 ext 16) on the corner of Dodson Road and Road 4; come to front office between 8 am and 5 pm. Please call the numbers below to arrange additional pickup sites. Samples will be picked up at 2:00 pm the day before each planting date (below) to be included. Growers planting in early March should drop their samples off at the Othello Research Center or store the samples and call the numbers below for pickup. For all alternative pickup locations or questions please call Mark Pavek at 509-335-6861 or Zach Holden at 509-335-3452.

The planned seed lot planting dates for 2011 are:

1st (Early)	March 22
2 nd	April 5
3 rd	April 19
4th (Late)	May 3

PICKUP DATES ARE ONE DAY PRIOR TO THE PLANTING DATES ABOVE

This year's virus reading of the seed lots will take place on June 7 and 21.