

POTATO UPDATE

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Hermiston Agricultural Research and Extension Center

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Calendar of upcoming events

- May 12** 11 AM Seminar second candidate for the Agronomist position.
- May 19** OSU-HAREC Grass Seed Field Day. Hermiston, OR.
- June 8** OSU-HAREC Wheat Field Day. Hermiston, OR.
- June 8-10** Integrated pest management training. Hermiston, OR.
- June 24-26** Integrated pest management training. Colfax, WA.
- June 24** OSU HAREC Potato Field Day. Field Day starts at 8:30 AM. Hermiston, OR.
- June 25** WSU Potato Field Day. Othello, WA.

WEB MAP LINKS

Hyperlink for PDF

<https://andersongeog.maps.arcgis.com/apps/webappviewer/index.html?id=e857a721431642188fa27b04c2f7c270>

New Interactive Map

In 2015, the new interactive web map insect trap results will update automatically each week as new trap results are collected. Click on a trap to view its pest count results. Future improvements to enhance the map's usability as a pest alert system include "heat" or "hot zone" map layers that depict areas of high/low risk for each category of insect. The map was developed as a public service by Will and Sarah Anderson of Anderson Geographics & Consulting, a new firm based in Hermiston that provides mapping and spatial analysis services. Anderson Geographics develops custom technologies to aid grower operations, including custom smartphone map "apps" for navigation to/from fields, and field scouting apps that enable employees to instantaneously report crop issues in an organized way (including GPS location and photos). Scout reports are processed, visualized and compiled into meaningful online maps and tables that are accessible from any device. These customized and streamlined systems help growers manage their acreage more effectively by organizing information and flagging essential highlights, enhancing channels of communication, and reducing problem response time. For more information, visit www.anderson-geographics.com. If you need guidance about using the new interactive map, please contact Silvia Rondon silvia.rondon@oregonstate.edu. More information about new features will be provided during our upcoming workshops.*Silvia Rondon, Extension Entomologist.*



Tuber soft rot, blackleg, and Fusarium dry rot

Tuber soft rot, blackleg, and Fusarium dry rots are some of the most common problems we see in the HAREC Plant Pathology Lab. However, when you encounter these problems, how can you tell them apart?

Tuber soft rot and black leg

Tuber soft rot and black leg are caused by pectolytic bacteria (i.e. bacteria that secrete enzymes that break down pectin in plant cell walls causing tissue decline). Most commonly, the bacteria are identified as *Pectobacterium carotovorum* or *Pectobacterium atrosepticum*, both of which are sometimes referred to as *Erwinia* spp., or *Erwinia carotovora* subsp. *carotovora* and *Erwinia carotovora* subsp. *atroseptica* and frequently enter tubers through wounds, stolon attachment, or lenticels. Symptoms of tuber soft rot can be mild to severe, with the most severe infections causing complete tuber decay. Tubers frequently have a soft, cheesy, granular texture and range in color from white to tan, frequently with a dark brown border around the margin of decay (Figure 1). Symptoms are not always confined to tubers. If the symptoms extend from the tuber into the stem, the disease is commonly referred to as blackleg.

To determine which bacteria are present, and if there are other pathogens present as well (such as *Pythium* spp.), molecular tests can be performed in the lab. These tests are able to identify genes specific to each pathogen and allow us to determine which pathogens are present, and if there are more than one. With this information, management decisions can be made.

Fusarium dry rot

Fusarium dry rot is caused by several fungi species in the genus *Fusarium* which frequently enter tubers through wounds. Dry rot develops slower than soft rot, and as the name suggests, rotted material is dry and contains cavities which can have a white or pink “fuzzy” appearance. It is believed that when storage conditions are conducive (high humidity), soft rot pathogens can enter through wounds created by dry rots, making it more difficult to determine the initial cause of disease (Figure 2).

Please contact the HAREC Plant Pathology Lab at 541-567-8321 for information about sample submission..... *Robert Cating and Ken Frost, Plant Pathology*



Figure 1. Tuber soft rot. Notice the soft texture, tan color, and dark brown border. Photo courtesy of Jeremiah Dung, Central Oregon Agricultural Research



Figure 2. Fusarium dry rot. Notice the drier appearance when compared to soft rots, and the chambers containing fungal mycelia and spores.

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Insect Trap Report

Area Pest Alert, Umatilla & Morrow County. Traps are collected on Thursdays.

Please note: "-1" value means no data

TRAP	PTW	BLH	OLH	PP	OP	GPA	PA	OA
1	0	0	0	0	0	0	0	5
2	0	0	0	0	0	0	0	0
3	0	0	2	0	1	0	0	6
4	0	0	0	0	0	0	0	0
5	0	0	0	0	0	0	0	1
6	0	0	0	0	0	0	0	2
7	0	0	0	0	0	0	0	1
8	0	0	0	0	0	0	0	0
9	0	0	0	0	0	0	0	0
10	-1	-1	-1	-1	-1	-1	-1	-1
11	0	0	0	0	0	0	0	0
12	0	0	1	0	0	0	0	1
13	0	0	0	0	0	0	0	0
14	0	0	1	0	0	0	0	4
15	1	0	0	0	0	0	0	1
16	0	0	0	0	0	0	0	0
17	0	0	0	0	0	0	0	0
18	0	0	0	0	0	0	0	0
19	0	0	2	0	0	0	0	0
20	0	0	0	0	1	0	0	1
21	1	0	0	0	0	1	0	4
22	0	0	0	0	0	0	0	0
23	0	0	0	0	0	0	0	0
24	0	0	0	0	0	0	0	14
25	0	0	0	0	0	0	0	0
26	0	0	0	0	0	0	0	1
27	0	0	10	0	0	0	0	5
28	0	0	2	0	0	1	0	1
29	1	0	0	0	1	0	0	2
30	0	0	0	0	0	0	0	0
31	0	0	0	0	0	0	0	2
32	0	0	1	0	0	0	0	0
33	0	0	0	0	2	0	0	0
34	0	0	0	0	0	0	0	0

PTW: Potato Tuberworms

BLH: Beet Leafhoppers

OLH: Other Leafhoppers

PP: Potato Psyllids

GPA: Green Peach Aphids

PA: Potato Aphids

OA: Other Aphids

OP: Other Psyllids