	<h1>Potato Progress</h1> <p>Research &amp; Extension for the Potato Industry of Idaho, Oregon, &amp; Washington          Andrew Jensen, Editor. <a href="mailto:ajensen@potatoes.com">ajensen@potatoes.com</a>; 509-760-4859  <a href="http://www.nwpotatoresearch.com">www.nwpotatoresearch.com</a></p>
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## Field Day Notices and Programs

### University of Idaho Snake River Weed Management Tour

Please mark your calendars and plan to attend the UI Snake River Weed Management Tour at the Aberdeen R&E Center on **Tuesday June 25<sup>th</sup>**.

- Time: 8:30 to noon followed by a sponsored lunch.
- Where: Aberdeen R&E Center, Aberdeen, ID
- Credits: Three Idaho pesticide applicator recertification credits will be offered.
- No pre-registration is required.

Featured will be several weed control trials in potatoes, including tank mixtures, planned vs. rescue postemergence applications, and chemigation versus sprinkler incorporation as well as potato variety herbicide tolerance trials, herbicide mechanism of action plots, and Litchi tomato herbicide management.

(This tour was originally scheduled for June 18th but due to cold rainy conditions, our potato and weed emergence has been slowed considerably.)

There will be no Snake River Tour at the Kimberly R&E Center this year – we plan to fire it up again in 2020!

For more information, contact:

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 Potato Cropping Systems Weed Scientist  
 Aberdeen R&E Center  
 1693 S 2700 W  
 Aberdeen, ID 83210  
 Cell: 208-681-1304  
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**HAREC Potato Field Day  
June 26, 2019**



- 7:45 – 8:10 am** Registration with Coffee and Donuts
- 8:10 – 8:20 am** Introductions, Meet and Greet
- 8:20 – 8:40 am** Update on Oregon Potato Breeding and Variety Development - Sagar Sathuvalli, OSU
- 8:40 – 9:00 am** Columbia Root Knot Nematode Resistance Breeding - Sapinder Bali and Sagar Sathuvalli OSU
- 9:00 – 9:30 am** Corky Ringspot: A Review of the Disease and its Control - Russ Ingham, OSU
- 9:30 – 9:50 am** Nutrient Managements for New Potato Varieties for Columbia Basin of Oregon - Ray Qin, OSU
- 9:50 – 10:10 am** Disease Updates from the HAREC Plant Disease Diagnostics Clinic - Hannah Rivedal and Ken Frost, OSU
- 10:10 – 10:30 am** Current Status of Blackleg and Bacterial Soft Rot in the Columbia Basin - Ken Frost, Jessie Brazil and Hannah Rivedal, OSU
- 10:30 – 11:00 am** Soil Fumigation and Soil Health - Ken Frost, OSU
- 11:00 – 11:20 am** Management Practices and Potato Soil Health - Amber Moore, OSU
- 11:20 – 11:40 am** Quick Glance at Leafhoppers and Colorado Potato Beetles Research in the Columbia Basin - Silvia Rondon, Tiziana Oppedisano, Pahoua Yang and Ira Thompson, OSU
- 11:40 – 12:00 pm** Determining How Far They Can Go: Movement of Lygus Using Flight Mills and Mark Recapture Technique - Govinda Shrestha and Silvia Rondon, OSU

Lunch provided courtesy of Syngenta Crop Protection.  
Water by ADAMA



# 2019 Washington State Commercial Seed Lot Profile and Potato Field Day Preview

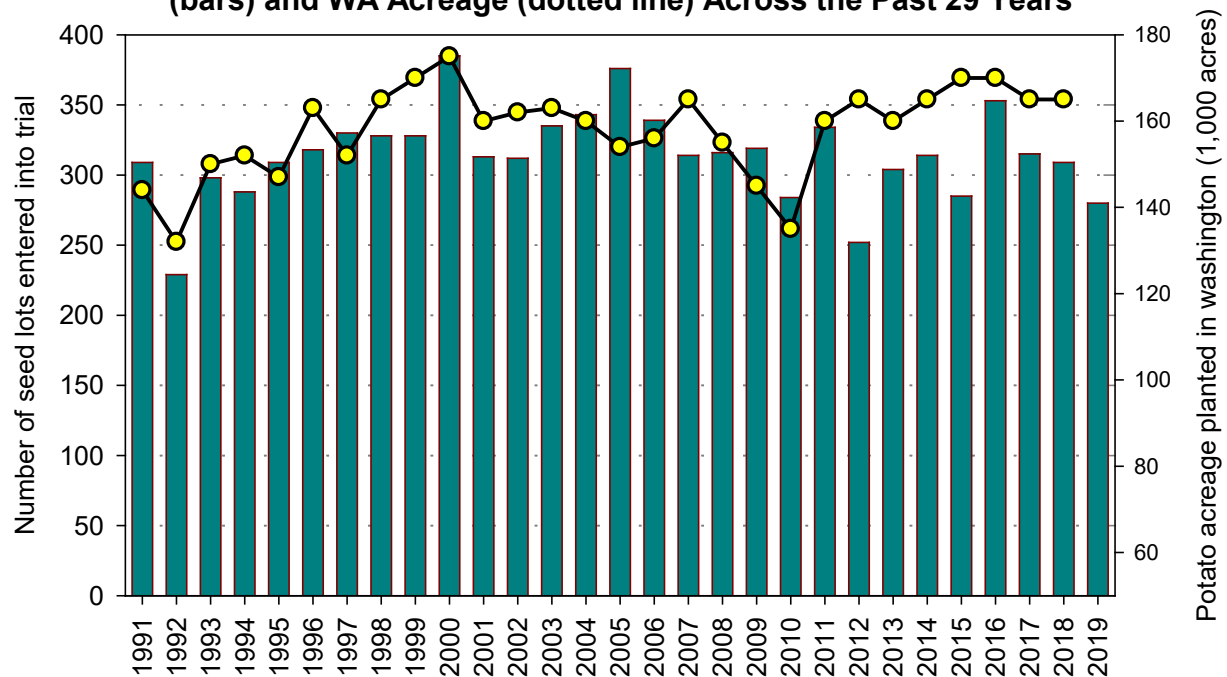
Mark Pavek, Zach Holden, Tim Waters, Carrie Wohleb  
Washington State University

Poor quality potato seed will impact commercial grower income. Major quality factors are disease, virus, herbicide damage, frost damage, and seed-piece handling. Commercial potato growers in Washington State typically purchase their seed potatoes from regions outside of Washington. For quality control, it is essential that each seed lot be grown under controlled conditions for approximately 70 days and evaluated by professionals. The Seed Lot Trial provides Washington potato growers, seed suppliers, and handlers a side-by-side comparison of seed lots utilized by Washington commercial potato producers. The associated potato field day provides potato buyers and sellers an opportunity to observe performance of seed lots of common interest and discuss result. To improve field disease diagnostic skills, WSU, USDA, and potato industry personnel from across the western U.S. exchange ideas and share expertise on field diagnosis of disease symptoms and other seed tuber quality factors.

Washington State University has conducted the Commercial Seed Lot Trial in cooperation with the Washington State Potato Commission and industry for 56 years (1961-78, 1982-2019). We incorporate a virus/disease reading training session into our program as a routine requirement prior to the first field reading. The goal of the training session is to improve our plant-reading accuracy by training the unexperienced and fine-tuning the expert. Plant disease experts from across the NW, including the Washington, Montana, and Oregon potato seed certification teams, continue to assist in the seed lot readings as well as the proof-readings. The results will be available under "2019 Washington Commercial Seed Lot Trials" at [www.potatoes.wsu.edu](http://www.potatoes.wsu.edu).

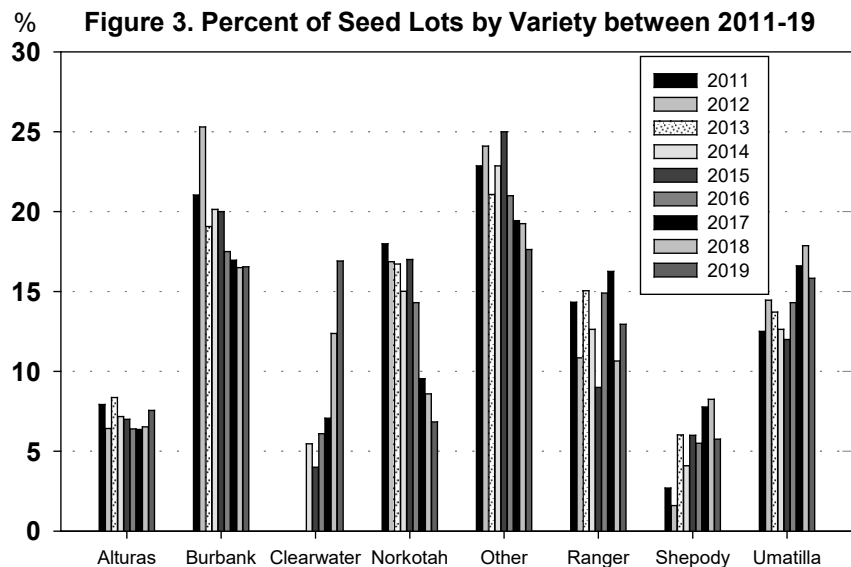
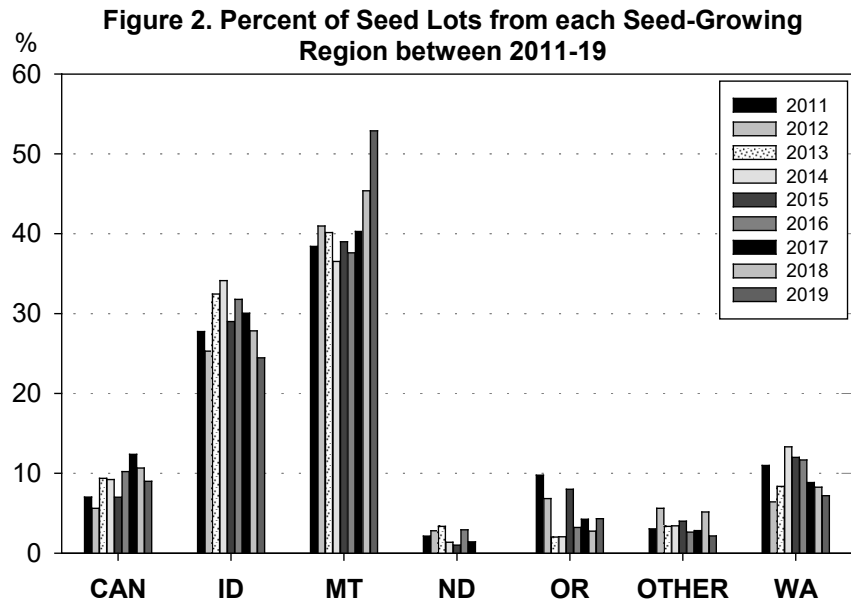
Although planting was delayed due to abundant snow, WA growers managed to submit 280 seed lots into the 2019 WA Commercial Seed Lot Trial, compared with 309 in 2018 (Figure bars). WA acreage for 2019 has yet to be published, but it typically fluctuates between 155,000 and 170,000 (Figure 1, dotted line).

**Figure 1. Number of Potato Seed Lots Entered into the WSU Seed Lot Trial (bars) and WA Acreage (dotted line) Across the Past 29 Years**

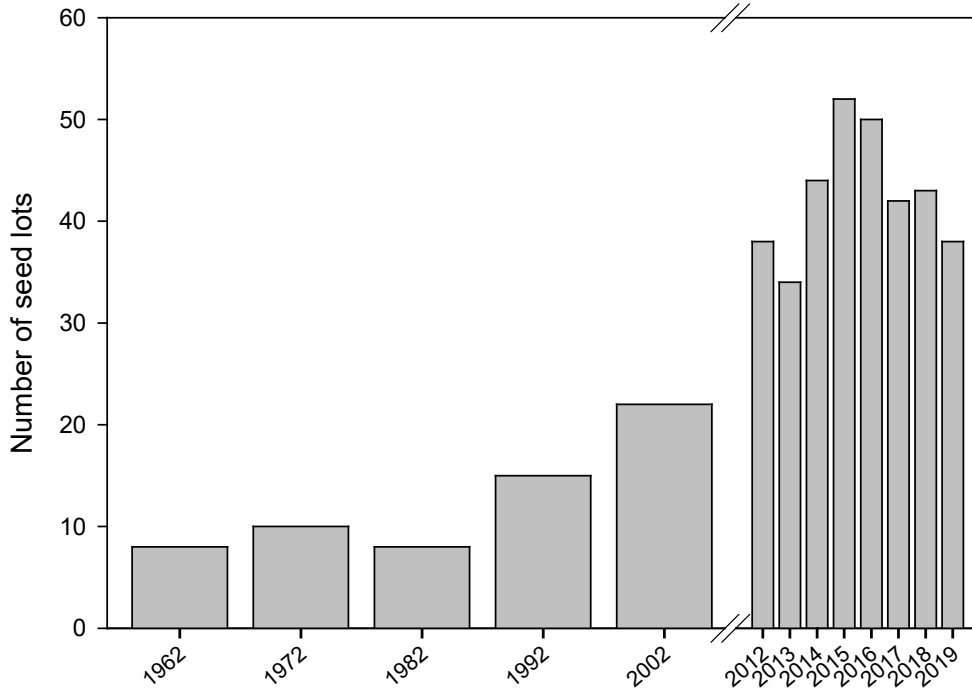


Montana and Idaho provide WA growers with the majority of seed potatoes, followed by CAN, WA, “Other” locations, and OR (Figure 2). The composition of the 2019 Seed Lot Trial included 18% “Other” (newer and/or non-mainstream varieties) 17% Clearwater, 16% Russet Burbank, 16% Umatilla, 13% Ranger Russet, 8% Alturas, 7% Russet Norkotah and RN strains, and 5% Shepody (Figure 3). The 2019 “Other” category was composed of 31 (compared with 33 in 2018 and 31 in 2017) new, non-mainstream varieties, or specialty varieties, ranging from newly-released varieties like Payette Russet to older specialty varieties like Chieftain. Clearwater Russet seed lots continue to increase as McDonalds® has accepted this variety for its French fries. Clearwater surpassed Russet Burbank this year and accounted for 17% of seed lots in 2019, 12% in 2018, 7% of the seed lots in 2017, 6% in 2016, and 4% in 2015 (Figure 3). Russet Burbank seed lot numbers have declined for 6 straight years (Figure 3). Tri-State developed varieties like Clearwater Russet, Umatilla Russet, and Ranger Russet are slowly replacing Russet Burbank for French-fry processing.

Between 2013-18, the number of non-U.S. developed potato variety seed lots entered in the trial increased steadily; however, in 2019 that number declined 72% over the previous year. Only 11 non-U.S. developed potato varieties were entered in the 2019 seed lot trial, accounting for 4% of all seed lots (data not shown). Varieties developed by the Northwest Potato Variety Development Program/PVMI accounted for 56% (51% in 2018) of the seed lots entered in the 2019 trial and included: Alturas, Castle Russet, Clearwater Russet, Highland Russet, Mountain Gem Russet, Modoc, Payette Russet, Ranger Russet, Umatilla Russet, and Yukon Gem. The most significant change in the WA seed lot profile in the past 50 plus years has been the increase in the number varieties WA growers are planting. In 1962, 8 varieties were entered in the trial; in 2019, there were 38 (Figure 4).



**Figure 4. Number of Potato Varieties and Variety Strains entered into the WSU Seed Lot Trial Since 1962**



The potato field day will begin at 8:30 am on THURSDAY, June 27 at the WSU Othello Research Farm (see program below). In addition to viewing the seed lots, you will be able to participate in one of two concurrent sessions. Sessions I and II will allow you to view a sample of this year’s in-field research. Both sessions will offer CCA recertification credits; however, only session II (pest management tour) will offer WA, OR, and ID pesticide recertification credits. A hosted lunch, offered between 12:00 and 1:00 pm, will complete the field day. The agenda, seed lot information, and a map to the research center can be found on our website: [www.potatoes.wsu.edu](http://www.potatoes.wsu.edu).

**Pesticide License Recertification Credits Applied For:**

**Commercial Seed Lot Trial Disease Results and Viewing**

WA, ID, MT: 1 credit  
 CCA: 1 Integrated Pest Management credit

**Concurrent Session I: Potato Cultural Practices Field Tour**

WA, ID, OR, MT: 0 credit  
 CCA: 2.0 Crop Management credits

**Concurrent Session II: Potato Pest Management Field Tour**

WA, OR, ID, MT: 2 credits  
 CCA: 2.0 Integrated Pest Management credits

# WSU Potato Field Day – Thursday June 27, 2019

Located at WSU Othello Research Unit – 1471 W Cox Rd, Othello  
(4.5 miles east of Hwy. 26/17 Junction, On Booker Rd, ¼ Mile South of Hwy. 26)

8:30–8:50 am Coffee and donuts

8:50–8:55 am Welcome from CAHNRS Dean, André Wright

8:55–9:00 am Sponsors recognition

9:00–10:00 am **Commercial Seed Lot Trial Disease Results and Field Viewing**, *Mark Pavek* – WSU Pullman

## Concurrent Session I: Potato Cultural Practices Field Tour

10:00 **Planting date affects tuber maturity & storability**

*Lisa Knowles and Rick Knowles*– WSU, Pullman

10:15 **Update on ProGibb & Rejuvenate trials**

*Rick Knowles and Lisa Knowles*– WSU, Pullman

10:30 **Screening for tolerance to heat stress**

*Graham Ellis, Lisa Knowles and Rick Knowles*– WSU, Pullman

10:45 **New promising fresh market and chip selections from the Tri-State Variety Development Program** *Vidyasagar “Sagar” Sathuvalli Rajakalyan* – OSU, Hermiston

11:00 **Effects of MH30 and non-traditional products on potato yield & economic value**

*Colton Thurgood, Z Holden, R Garza, J Rodriguez, F Atilano, M Pavek* – WSU, Pullman & Othello

11:15 **Research to reduce tuber greening**

*Joe Townsend, Z Holden, R Garza, J Rodriguez, F Atilano, M Pavek* – WSU, Pullman & Othello

11:30 **Potato seed size demo and discussion**

*Mark Pavek, Z Holden, R Garza, J Rodriguez, F Atilano* – WSU, Pullman & Othello

11:45 **Water use patterns of six varieties and their response to late-season deficit irrigation**

*Francisco Gonzalez, M Pavek, Z Holden* – WSU, Pullman

12:00 pm – 1:00 pm

HOSTED LUNCH

## Concurrent Session II: Potato Pest Management Field Tour

10:00 **Field demo and presentation: The impact of Lygus feeding on potato yield and quality**

*Tim Waters* – WSU, Benton/Franklin Counties

10:15 **From the field and in the lab: A genetics approach to conquer soil-borne potato pathogens**

*Max Feldman* – USDA-ARS, Prosser

10:30 **Potato glycoalkaloids, greening and environment**

*Roy Navarre* – USDA-ARS, Prosser

10:45 **Thoughts, suggestions, and reminders about insect monitoring**

*Andrew Jensen* – NW Potato Consortium, Lakeview, OR

11:00 **Planting a problem – examining the spread of seed-borne Potato virus Y**

*Chris McIntosh* – Univ. of Idaho, Moscow

11:15 **Demo and presentation: High-throughput sensing of pathogens in potato storage facilities**

*Sindhuja Sankaran, W Sangjan, L Khot* – WSU, Pullman, *B Schroeder* – UI, Moscow

11:30 **The effects of early Quadris application on potato black dot**

*Lydia Tymon and Babette Gundersen* – WSU, Mt Vernon

11:45 pm – 1:00 pm

HOSTED LUNCH

*CCA and pesticide recertification credits have been applied for (WA, OR, MT & ID)*