



Potato Progress

Research and Extension for Washington's Potato Industry
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Specialty Potato Trials at Paterson in 2004

C. R. Brown, USDA/ARS, Prosser, WA

We conducted two separate trials at the Paterson site in 2004. They consisted of ten-hill plots replicated three times. Clones with pigmented skin and flesh were grown, including the clones from the Western Regional Specialty and Red Trial. A field day was held after harvest on September 23, 2004. It was attended by 25 people representing both processing and fresh market interests. Talks were given by Chuck Brown, Len Black, and Gary Pierce. Len Black is the Chair of the Business Department of Heritage University and Gary Pierce is a Business major at that school. They have studied the market structure of specialty potatoes and made presentations to potential large buyers. This has resulted in several growers in the Toppenish area taking concrete steps to purchase seed in order to supply one large buyer who has entered into a pilot project. Their project has found that the farmer's market pricing for specialty potatoes ranges from \$1.50/lb to \$3.00/lb. Also, large buyers are willing to entertain farmgate prices on the order of \$0.50 per pound. These large buyers are interested in buying 5 to 10 pound bags with innovative labeling including brief declarations of nutritional pluses associated with potato. These might include such statements as "High in Potassium, Vitamin C and antioxidants." Obviously, handling and packaging will eat into the profit picture here. There is an interest in purple and red fleshed varieties in order to tap into the segment of the public that is relatively affluent, nutrition-conscious and interested in new and interesting foods. Unusual tropical fruits imported from Latin America often fill this category. Interestingly, sweet potatoes, a low value crop, considered to be very ordinary in the South of the U.S. has been marketed in the West of the U.S. on the basis of health claims and the relative unfamiliarity, at prices that would astound sweet potato growers in North and South Carolina.

In Figure 1 we see the yield results of Trial A for total marketable yield and yield over four ounces. One thing is apparent. Most of the pigmented flesh materials P/P and R/R have relatively low percentages of over four ounce size. In some instances total yield is comparable. Whether or not this is a barrier to commercialization depends entirely on the pricing. In the past tuber size was highly restrictive for processing contracts and to some extent in fresh market. In this case there is no a priori standard. Processors are looking intensively at small size whole potato skin-on products and for these a heavy set of small sizes might be the ideal. In Figure 2 Yield Trial B is presented. This includes the Western Regional Entries and a number of named varieties with small to larger commercial acreage. Yukon Gold has become the most important specialty variety in North America.

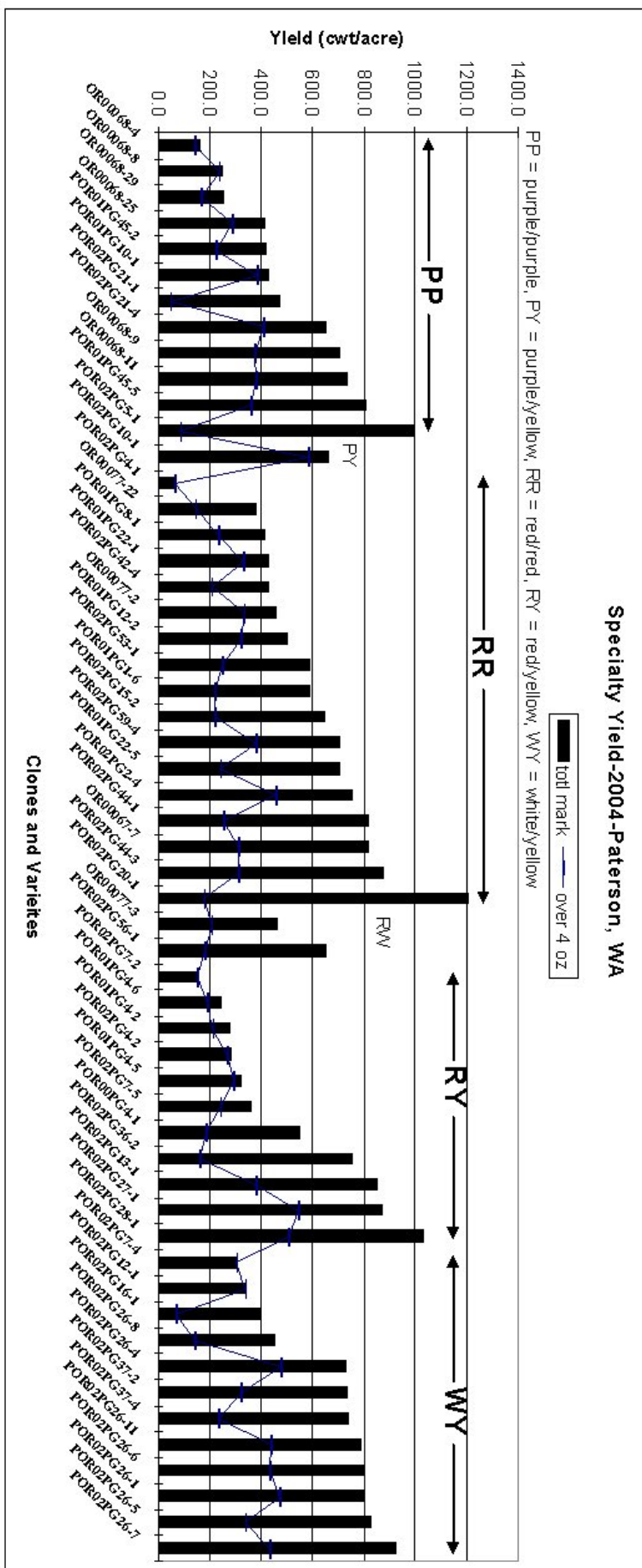


Figure 1. Yield Trial A. The height of the bar indicates total marketable yield (cwt/A), while the line traces the yield “over four ounce” size. Breeding lines and varieties are ordered in by ascending yield left to right.

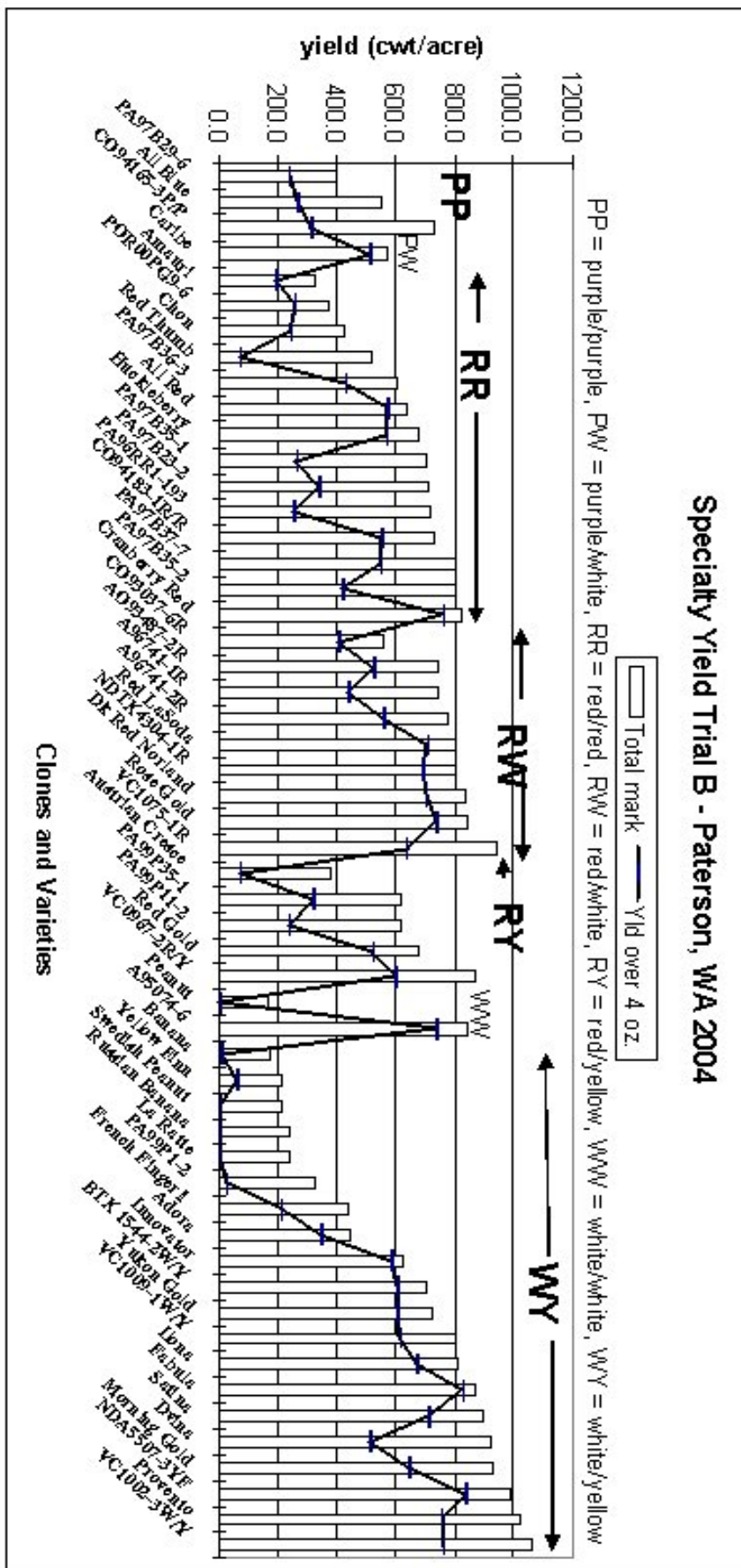


Figure 2. Yield trial B of specialty potatoes including Western Regional Entries, Fingerlings, and Proprietary European Varieties being grown in the US.

Nematode Workshops to be Held at WSU Prosser

On July 7th there will be two short workshops at WSU-IAREC, Prosser regarding nematodes. Invited guest speaker is Dr. Roy Neilson, Nematologist, from the Scottish Crop Research Institute, Invergowrie, Dundee, Scotland. The workshops are open to everyone.

The topics of the two workshops are:

- 1) "Nematodes, here, there and everywhere" with emphasis on the general biology of free living nematodes.
- 2) "Virus-vector nematodes" with emphasis on *Paratrichodorus allius*, *P. teres* and *P. minor*.

Location: Main Conference Room, Washington State University, 24106 N. Bunn Rd., Prosser

Date and Time: July 7th, 9:30 am to 12:00 noon with 30 minutes coffee break.

Please, confirm attendance by sending an e-mail to Katerina Riga at riga@wsu.edu or phoning her at 509-786-9256.

Leafhopper Numbers Still Sky High in Washington

Beet leafhopper counts in the Washington Columbia Basin are still very high – much higher than in 2004. See Table 1. Leafhoppers are not only abundant, but are being trapped in all areas we cover. Beet leafhoppers transmit the BLTVA phytoplasma, which causes potato purple top.

Table 1. Average beet leafhopper counts on yellow sticky traps in the Washington Columbia Basin, 2004 and 2005. Week 1 represents the 3rd week of May, Week 2 the 4th week of May, etc. North traps are north of Othello and include the Royal Slope. Mid traps are Othello south toward Pasco and include the Mattawa area. Numbers are average number of beet leafhoppers per trap.

	Week 1	Week 2	Week 3	Week 4	Week 5	Week 6
2004 North	0.40	0.74	4.17	1.90	6.87	9.71
2004 Mid	4.27	4.96	7.96	7.50	9.42	22.31
2005 North	3.04	19.86	10.41	12.21	25.90	40.24
2005 Mid	18.78	32.89	50.11	20.19	26.22	42.63



Potato Cropping Systems Field Day at

Paterson

2005

USDA-ARS and WSU-IAREC, Prosser Scientists and Staff would like to invite you to visit the Paterson Research Field Site and join us for tours of the fields and a luncheon. This is a great time to learn about the current research on all aspects of Potato Cropping Systems and Crop Improvement.

Bring your family and friends with you to enjoy this day. We look forward to seeing you!



July 15, 2005



8:30 am Welcome and Introductions

Research Presentations:

The effect of synthetic nematicides on plant parasitic and free-living nematodes
(Ekaterini Riga)

Switch grass trials for ethanol production (Steve Fransen, Hal Collins, Rick Boydston)

Weed management in switch grass (Rick Boydston and Steve Fransen)

Bio-fuel variety trials (Hal Collins and An Hang)

Beet leafhopper population dynamics in Potatoes (Joe Munyaneza, Andy Jensen, Phil Hamm)

Impact of planting density on white mold severity and yield in lima beans (Lyndon Porter, Nick David and Phil Hamm)

Volunteer potato and nightshade control in snap beans (Rick Boydston)

Reduced tillage in a three year potato rotation. (Hal Collins, Rick Boydston, Ashok Alva, Fran Pierce and Phil Hamm)

N rate trials in potatoes under reduced tillage (Ashok Alva)

Volunteer potato control in sweet corn (Rick Boydston)

Weed densities in potatoes following fall-planted cover crops (Rick Boydston, Hal Collins, and Ashok Alva)

Multi-state specialty potato yield trials (Dan Hane and Chuck Brown)

Advanced breeding lines of specialty potatoes (Chuck Brown)

Tuber worm control tactics (Alan Schrieber, Sandy Debano, George Clough and Andrew Jensen)

Pre-emergence herbicide evaluations in potatoes (Rick Boydston)

12:30 Lunch sponsored by AgriNorthwest

Potato Varieties with Improved Health Benefits



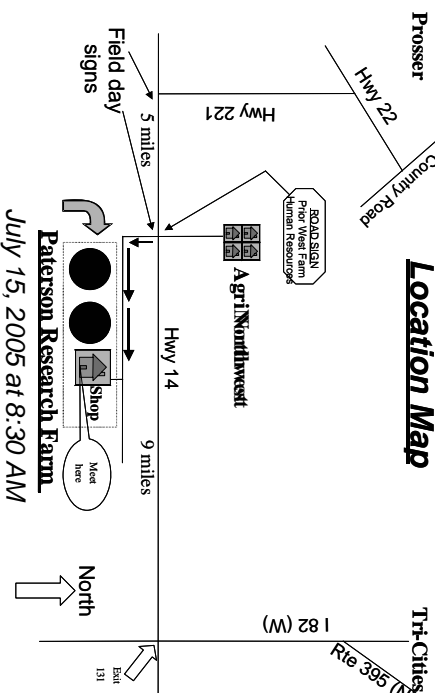
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- Sentek Company
- Simplet
- Syngenta
- Valent USA
- Washington State Commission on Pesticide Registration
- Washington State Potato Commission
- Washington State Potato Foundation
- Washington State University – Center for Precision Agricultural Systems (CPAS)
- WSU – Cooperative Extension
- Watts Brothers

USDA-ARS/WSU-IAREC : Potato Cropping Systems

Field Day at Paterson

Location Map



July 15, 2005 at 8:30 AM

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Jointly Sponsored by:

- USDA-ARS
- AgriNorthwest
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- Washington State Potato Commission

WSDA Pesticide Credits Available



USDA-ARS & WSU-IAREC
 In Cooperation with
 AgriNorthwest

Potato Cropping
 Systems

Field Day at
 Paterson
 July 15, 2005

Vegetable & Forage Crops
 Research Unit, Prosser, WA

Reduced Tillage

