Oregon State University OSU Klamath Basin Research and Extension Center

2012

Klamath Basin Potato Variety Development Summary

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Introduction

Since its inception in 1985, the Tri-State variety development program has primarily focused on the development of processing and dual-purpose (process and fresh) russets. Recent breeding efforts have focused more on improving genetic resistance to various pests and diseases as a means of lowering production costs. Although the development of russet varieties remains the primary focus, recent efforts have included red-skinned and specialty-type selections. Many of these selections offer unique skin and/or flesh color combinations along with enhanced nutritional qualities including elevated antioxidant and Vitamin C content. In total, more than 30 new varieties have been released by the Tri-State variety development program since 1985. More recently Klamath Basin growers have identified the need for chipping potatoes suitable for export markets. Annual funding from the Oregon Potato Commission has been used to identify acceptable chipping varieties using advanced selections and recently released varieties from the Tri-State, Southwest, North-central, and Eastern breeding programs.

Screening for resistance to various species of nematodes and related diseases is being accomplished at several locations. The Klamath Basin Research and Extension Center (KBREC) routinely screens selections for resistance to root-knot nematode (*Meloidogyne chitwoodi* and *Meloidogyne hapla*) and corky ringspot disease (CRS) resulting from infection of Tobacco rattle virus which is vectored by stubby-root (*Paratrichodorus* spp.) nematodes. Other cooperating sites within the Tri-State area also work on resistant screening and other production limitations most suited to their respective location. The overall objective is that future releases will offer genetic resistance to many economically important pests and diseases which will help reduce production inputs as these costs continue to rise.

The Klamath Basin Research and Extension Center (KBREC) also serves as an initial field screening location for all first-generation selections of russet, specialty, and chipping clones (single-hills) in Oregon. Second-year evaluations of are conducted in Hermiston, Ontario, and Klamath Falls. Breeding progeny are supplied by programs at the USDA Agricultural Research Service (ARS) facility in Prosser, Washington, and Aberdeen, Idaho, as well as, Oregon State University (OSU), Colorado State University, and North Dakota State University.

The purpose of this summary booklet is to report the results of our variety trial efforts. In 2012, KBREC participated in the following research trials: Russet Preliminary Yield 1 and 2 (PYT-1 and PYT-2), Statewide Russet, Tri-state Russet, Western Regional Russet, Red/Specialty PYT- 1, Statewide Specialty, Tri-state Specialty, Western Regional Red/Specialty, and a modified Western Regional Chip Trial. A brief summary of weather during the growing season, insect trapping results and single-hill selections are also included in this research summary.

Acknowledgements

The ultimate goal of variety development at OSU-KBREC and cooperating Tri-state partners is the development and commercialization of new potato varieties to benefit the Northwest potato industry. The effect of the Tri-state Potato Variety Development Program on the Northwest potato industry has been substantial. The fresh market industry, French fry processors and chippers have incorporated many varieties developed through this program into their businesses. As expected, recently released russet varieties have found greater adoption by Northwest processors compared to fresh market usage in the Klamath Basin. However, several varieties have found fresh market niches in the Klamath Basin including GemStar Russet and Classic Russet.

Varieties recently released by the Tri-State program are now produced on over 140,000 acres in the Pacific Northwest with value to growers estimated at approximately $390 million. A recent economic analysis of the Tri-state breeding effort revealed that every dollar invested in the program results in a $39 return (Araji and Love, 2002). The current focus of Tri-state variety development efforts is to develop improved varieties that increase quality and production efficiency while decreasing fertilizer and pesticide inputs.

The success of OSU-KBREC potato variety development is made possible with funding from USDA CREES, USDA ARS, and the generous support of the Oregon Potato Commission. In addition, the Klamath Potato Growers Association annually contributes to OSU-KBREC research and Extension activities.

References

Araji, A.A. and S. Love. 2002. The economic impact of investment in the Pacific Northwest potato variety development program. **Amer. J. Potato Res.** 79:411-420.

Special Acknowledgment

OSU-KBREC plagiarized the design and layout for this publication from the WSU Potato Cultivar Yield and Postharvest Quality Evaluation publication. This is an excellent publication which provides a vast amount of data in a 'grower friendly' venue. The publication below, by the Washington State University Potato Research Group, can be found at the listed website.

Mark Pavek, Rick Knowles, Zach Holden, Nora Fuller. 2012. Washington State University Potato Research Group, Pullman, WA. **2012 Potato Cultivar Yield and Postharvest Quality Evaluations.** http://www.potatoes.wsu.edu

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Commissions and Associations

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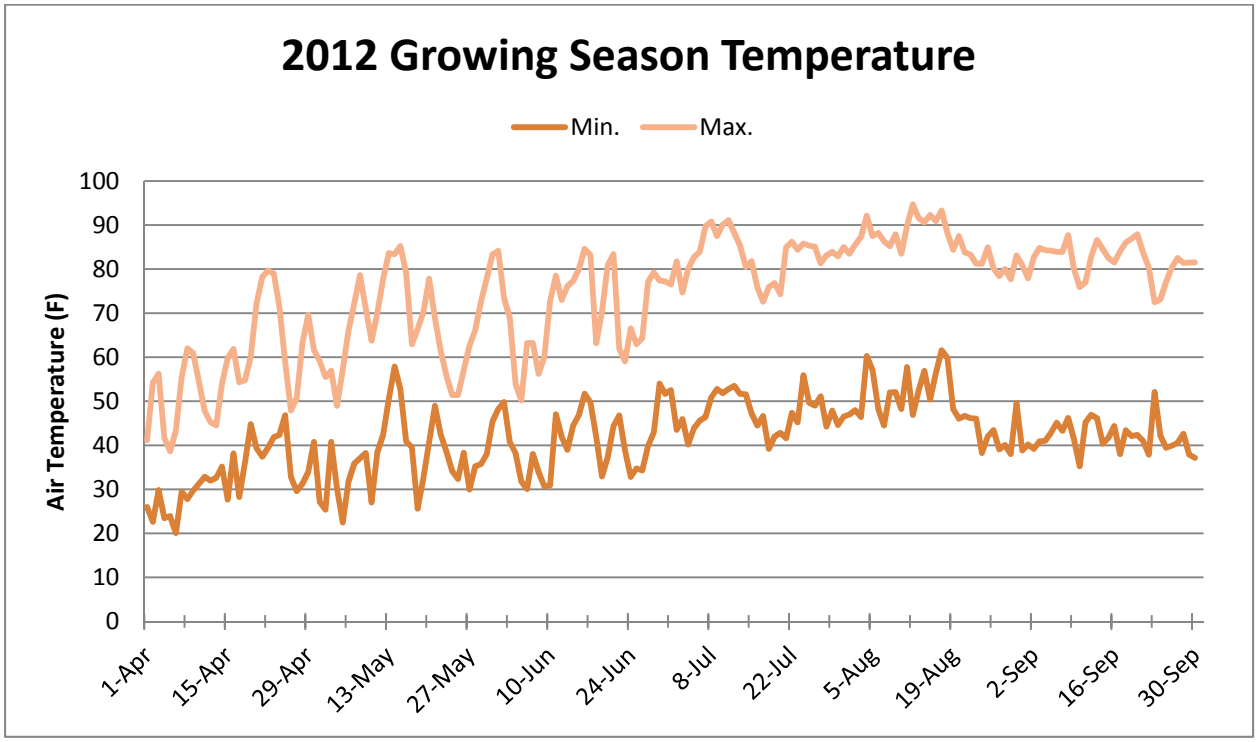
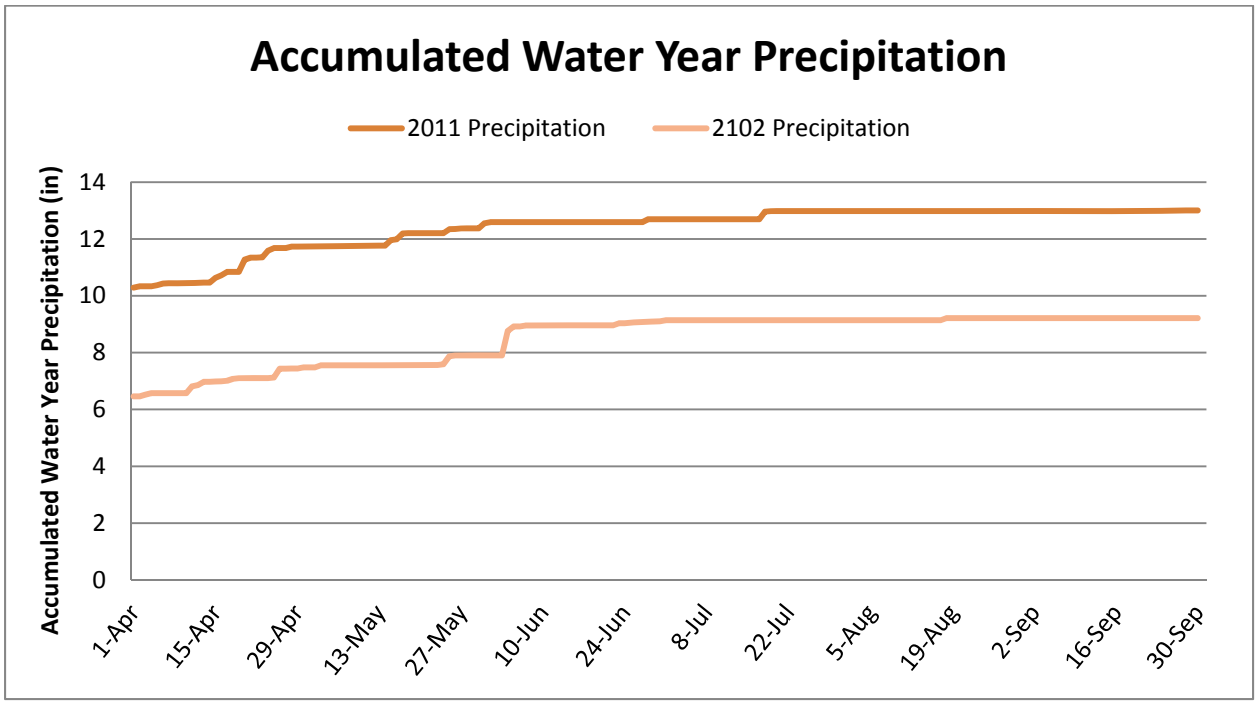
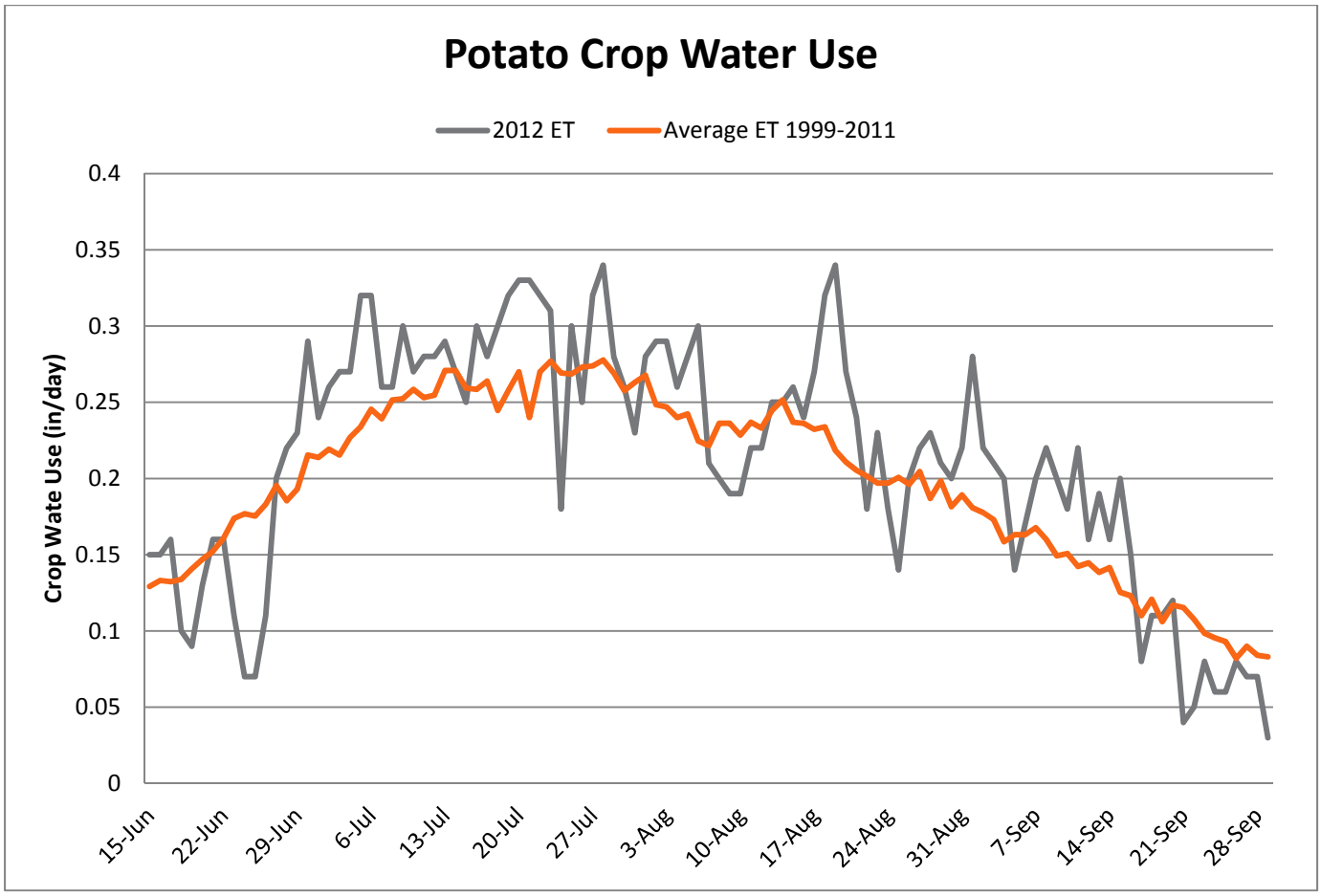
Klamath Potato Growers Association, Klamath Falls, OR

Weather Data

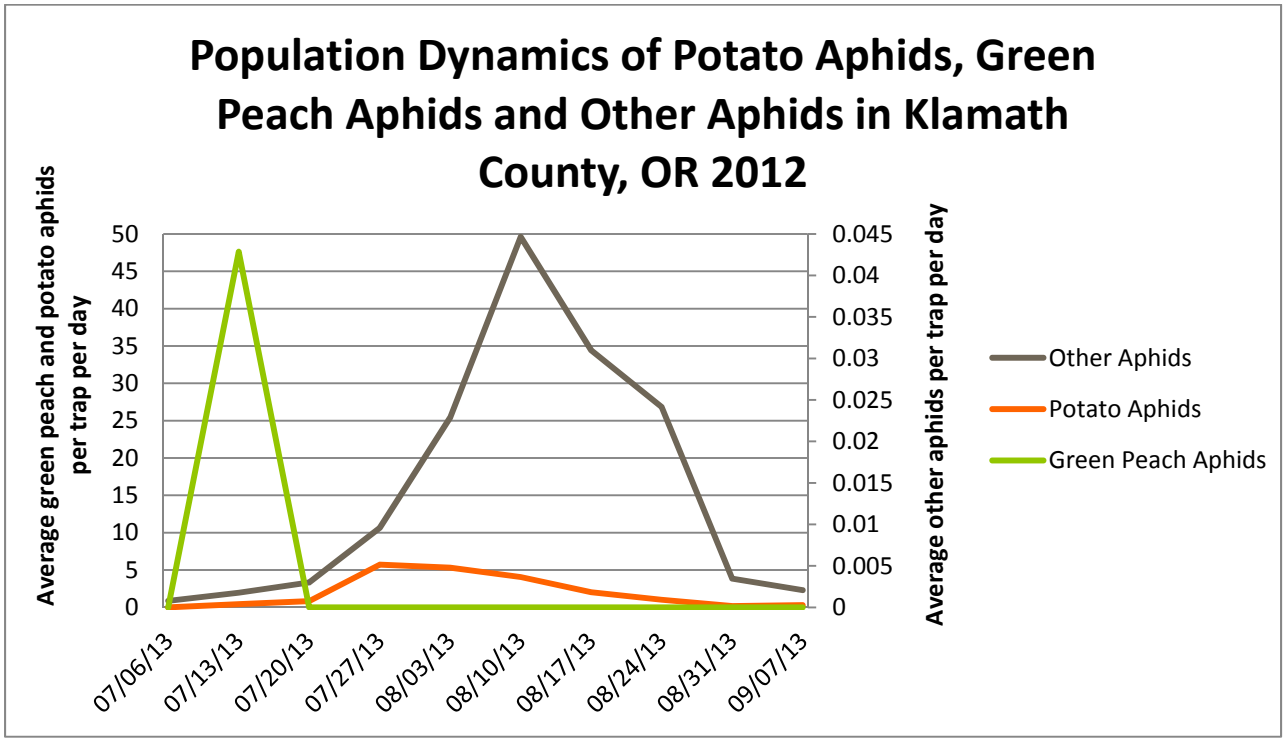


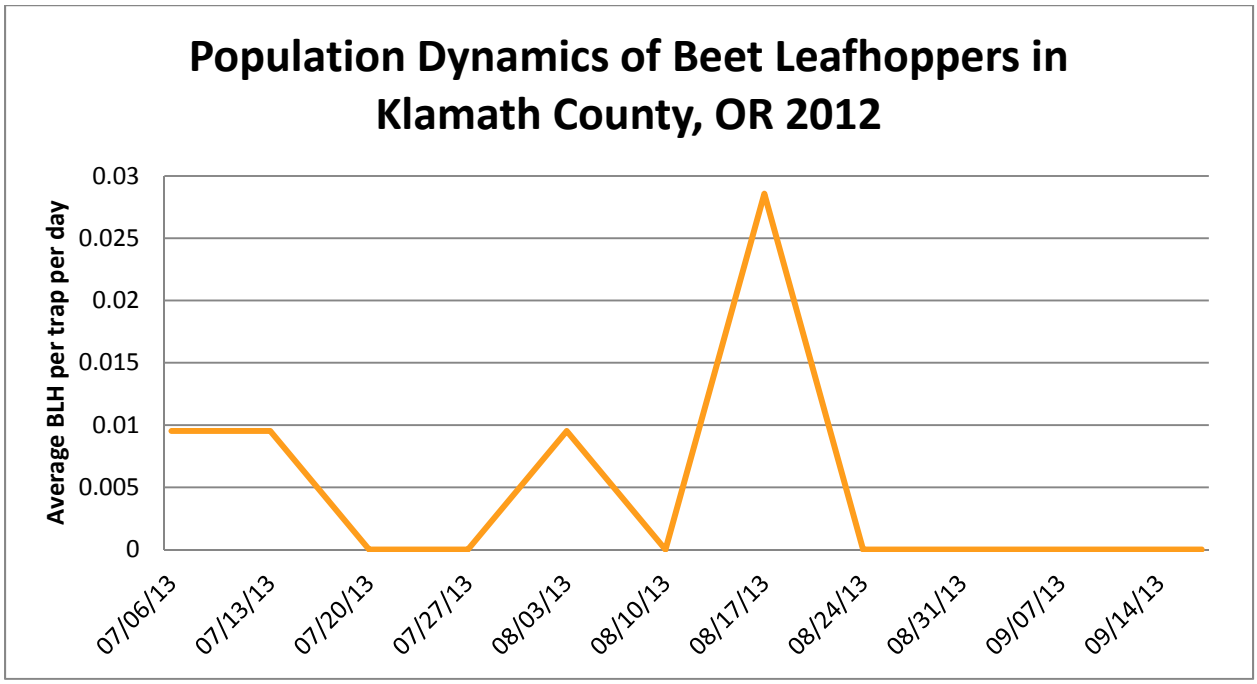



Potato Crop Water Use
2012 ET
Average ET 1999-2011
Crop Wate Use (in/day)
0.4
0.35
0.3
0.25
0.2
0.15
0.1
0.05
0
15-Jun
22-Jun
29-Jun
6-Jul
13-Jul
20-Jul
27-Jul
3-Aug
10-Aug
17-Aug
24-Aug
31-Aug
7-Sep
14-Sep
21-Sep
28-Sep

2012 Insect Trapping Results

Potato tuberworm was first detected in the Klamath Basin in late-August of 2005. KBREC initiated an extensive trapping program the following year (2006) and have continued this effort annually. In 2009, we expanded our trapping efforts to include aphids, leafhoppers, and psyllids. Fifteen (tuber moth), eleven yellow water-pan traps (aphids), and fifteen sticky cards (leafhoppers and psyllids) were placed in growers' fields shortly after crop emergence. Traps were checked weekly during the growing season and results were tabulated and made available to growers, crop consultants, and other industry personnel electronically in newsletter titled *Potato Bytes.* This newsletter was also published on the KBREC website at http://oregonstate.edu/dept/kbrec/. Collected data provided Basin producers with pertinent information to improve pest management strategies. Potato tuberworm has not been found despite an extensive four-year trapping program. The following graphs show population dynamic trends for aphids and leafhoppers throughout the growing season.




Population Dynamics of Beet Leafhoppers in Klamath County, OR 2012
Average BLH per trap per day
0.03
0.025
0.02
0.015
0.01
0.005
0
07/06/13
07/13/13
07/20/13
07/27/13
08/03/13
08/10/13
08/17/13
08/24/13
08/31/13
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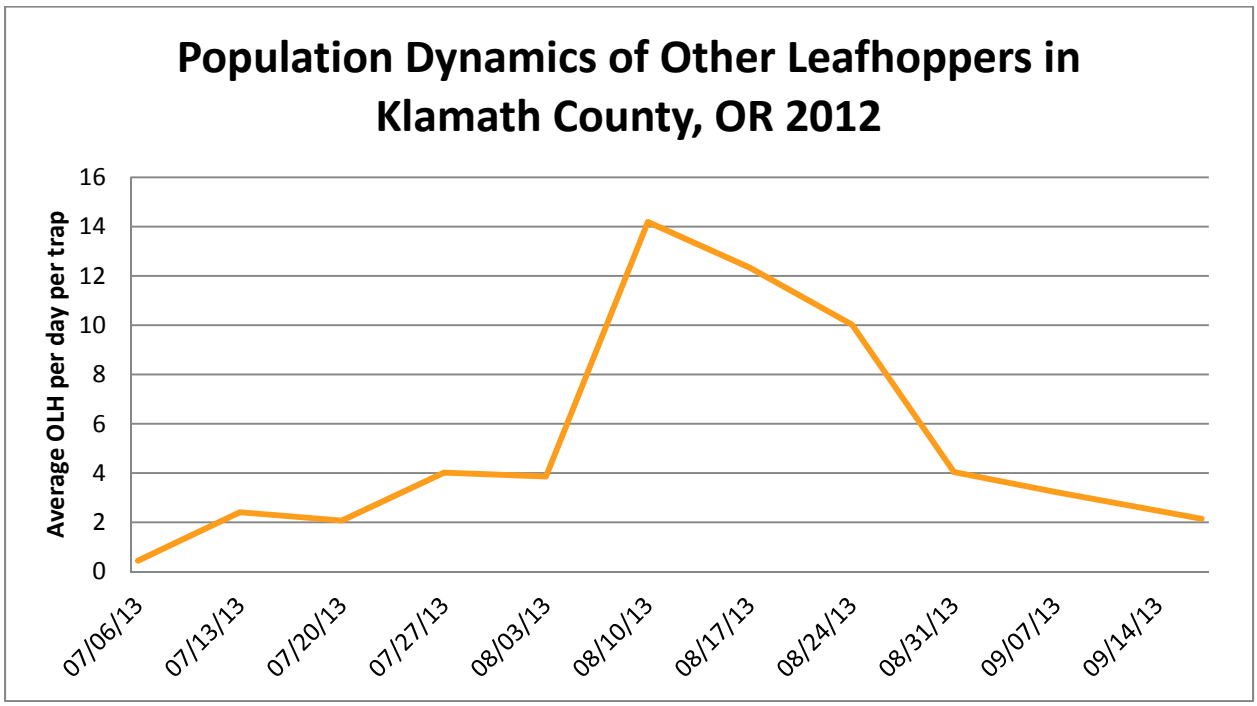

Population Dynamics of Other Leafhoppers in Klamath County, OR 2012
Average OLH per day per trap
16
14
12
10
8
6
4
2
0
07/06/13
07/13/13
07/20/13
07/27/13
08/03/13
08/10/13
08/17/13
08/24/13
08/31/13
09/07/13
09/14/13

Guide to Clone Designation

Example: AC99375-1RU		
	AC99375-1RU	Breeding Program (**A**berdeen, ID)
	A**C**99375-1RU	Selection Site (**C**olorado)
	AC**99**375-1RU	Year of Cross (19**99**)
	AC99**375**-1RU	Cross Number (**375**)
	AC99375-**1**RU	Tuber Selection (**1**)
	AC99375-1**RU**	Russet (**Ru**)

Location Codes

Designation	Breeding Program	Selection Program	Other
A	**A**berdeen, Idaho	**A**berdeen, Idaho	
AO	**A**berdeen, Idaho	**O**regon	
AOA	**A**berdeen, Idaho	**O**regon	**A**berdeen, Idaho
ATX	**A**berdeen, Idaho	**Tex**as	
BTX	**B**eltsville, Maryland	**T**exas	
CO	**C**olorado		
MWTX	**M**adison, **W**isconsin	**Tex**as	
NDA	**N**orth **D**akota	**A**berdeen, Idaho	
NY	**N**ew **Y**ork		
PA	**P**rosser, Washington	**A**berdeen, Idaho	
POR	**P**rosser, Washington	**Or**egon	
TC	**T**exas	**C**olorado	
TE	**Te**tonia, Idaho		
TXA	**T**exas	**A**berdeen, Idaho	
TXNS	**Tex**as		**N**orkotah **S**train

Miscellaneous Designations

B	Chuck **B**rown's Cross
LS	**L**ow **S**ugar
P/P	**P**urple skin/**P**urple flesh
R	**R**ed skin
R/R	**R**ed skin/**R**ed flesh
R/Y	**R**ed skin/**Y**ellow flesh
Ru	**Ru**sset
W/Y	**W**hite skin/**Y**ellow flesh
LB	**L**ate **B**light resistance
PW/Y	**P**urple skin with **W**hite eyes/ **Y**ellow flesh
P/Y	**P**urple skin/**Y**ellow flesh
P/PW	**P**urple skin/**P**urple and **W**hite flesh

Single Hill Results

Approximately, sixty six thousand (66,000) greenhouse-produced seedling tubers were planted at a remote site in the Yonna Valley area on May 22th –May 30th, 2012. Located about 25 miles east of Klamath Falls, soils are very sandy with approximately 1.0 percent organic matter and a pH of 7.0. The location provides good isolation from other potato production areas and intensively fumigated soils allows us to harvest very clean material for seed increase. Progeny included 148 families from Oregon State University; 102 from USDA, Prosser, WA; 430 from USDA, Aberdeen, Idaho. Several crosses included russet parents with virus, late blight and potato tuber worm resistance. Others included at least one parent with pigmented flesh color.

Tuber families were lifted with a two-row, level-bed digger on October 9th -10th. A selection team including researchers, extension agents, growers and industry personnel selected desirable clones from various families immediately after lifting. As expected, selection was based primarily on external appearance; however, internal evaluation was performed on a limited number of selections. All retained material was transported to KBREC, Oregon for storage. The following table outlines the number of single- hills provided by each breeding program and selection rate.

Location	General Cross Types	Number of Progeny Planted	Number of Progeny Selected	% Selection Rate
ARS Prosser, WA	Disease resistance, pigmented	5,594	72	1.2
Oregon State University	Disease resistance, mixed type	13,397	79	0.58
ARS Aberdeen, ID	Disease resistance, russet	47,693	932	1.9
Total		**66,684**	**1083**	**1.6**

Preliminary Yield (PYT-1) Russet Screening

Five hundred thirty two (532) selections from 2011 single-hills were planted in 20-hill seed increase plots at KBREC. Potato tubers were lifted using a two-row, level-bed digger on October 10, 2012. A team of about 20 research and industry personnel selected 116 clones for further evaluation based on market potential and possible disease resistance. Tubers from these selections were retained and stored at KBREC for seed increase. This material will be evaluated in a Preliminary Yield Trial (PYT-2 Russet) conducted at KBREC and other locations throughout the Pacific Northwest in 2013.

Preliminary Yield (PYT-1) Specialty Screening

One hundred eighteen (118) selections from 2011 single-hills were planted in 20-hill seed increase plots at KBREC. Potato tubers were lifted using a two-row, level-bed digger on October 10, 2012. A team of about 20 research and industry personnel selected 29 clones for further evaluation based on market potential and possible disease resistance. Tubers from these selections were retained and stored at KBREC for seed increase. This material will be evaluated in a Preliminary Yield Trial (PYT-2 Specialty) conducted at KBREC and other locations throughout the Pacific Northwest in 2013.

Preliminary Yield (PYT-1) Chip Screening

Forty eight (48) chip selections from 2011 single-hills were planted in 20-hill seed increase plots at KBREC. Potato tubers were lifted using a two-row, level-bed digger on October 10, 2012. Research and industry personnel selected 14 clones for further evaluation based on chipping potential and possible cold sweetening resistance. Seed of these selections was hand collected and stored at the KBREC potato facilities. This material will be evaluated in a Preliminary Yield Trial (PYT-2 Chip) conducted at KBREC and other locations throughout the Pacific Northwest in 2013. KBREC will also be increasing seed for future evaluation.

Fresh Market Value – Methods

Graphs showing the difference in gross returns per acre (Fresh Market Value) compared to Russet Norkotah are provided for all entries in both the Tri-state and Western Regional Russet Trials. Values were calculated by subtracting the gross return of Russet Norkotah from the gross return of each particular entry. Net packing shed returns to growers were calculated using a four-year average of fresh potato prices in the Klamath Basin and a packing shed cost of $6.00/cwt. Assessing the fresh value of a given entry is difficult as packing sheds utilize various tuber sizes to meet current market orders. For example, all tubers that meet 90 or 100 count carton specifications are sometimes used to fill 5 and 10 lb. bale orders. As expected, these types of scenarios are not accounted for in our assumptions. In addition, this type of economic analysis does not account for consumer preference. As such, entries which appear to lack fresh market appeal are highlighted as white bars. The table below lists point prices per tuber size and grade with associated pack fees for grade and size categories used.

KBREC Grade Size	Markets/Packaging[1]	Range of Tuber Sizes for Each Package type	Four Year Klamath Basin Avg. $/cwt	Packaging and Handling
4-8 oz.	10% to 90 and 100 count	7-9.5 oz.	$16.77	$6.00
	90% to 10 lb. poly bags	4-7 oz.	$10.88	$6.00
8-12 oz.	70, 80, and 90 count	8.5-12.5 oz.	$19.42	$6.00
>12-20 oz.	50 and 60 count	12.5-18 oz.	$21.97	$6.00
<4 oz. and culls	bulk culls	<4 and cull	$4.06	$2.94
No. 2	100 lb burlap sacks	10-20 oz.	$14.40	$6.00

[1]Count = tuber number per 50 lb. carton.

2012 Replicated Trial Cultural Information

Location: Klamath Falls, OR

Soil Type: Poe fine sandy loam, pH 6.8

Planting Date: May 16 for State Spec., PYT Spec., State Russet & PYT Russet

Vine Kill Date: September 10: Roll Vines and Reglone application at labeled rate

Harvest Date: October 10 for PYT; October 16 for variety trials

Irrigation: Solid-set sprinkler -19.02 inches applied + precipitation; 18.87 recorded ET

Plot Length: 25 hills

In-row spacing: 9.25 inches

Row spacing: 36 inches

Number of Reps: 4 reps for Statewide Trials and 1 rep for PYT Trials

Fertilizer: 193-116-250-132

Weed Control: Powell, Matrix

Insecticides: Admire, Movento, Endigo, Asana, Fulfill, Assail

Fungicides: Moncut, Ridomil/Bravo, Endura

Nematode Control: Soil fumigation with Vapam and Vydate C-LV chemigated

General Comments:

Cool spring with slightly above normal precipitation. Excellent weather conditions from emergence to vine-kill. Minimal internal disorders, short rotation led to poor skin finish on most specialty lines. Yields average to slightly below.

2012 Preliminary Yield (PYT-2) Russet Trial

Location: OSU KBREC – Klamath Falls, OR
Planting Date: May 16
Harvest Date: October 6
Fertility: 193-116-250-132
Vine Kill Date: September 10
Days to Vine kill: 117
In-Row Spacing: 9.25 inch

The PYT-2 Russet Trial evaluates recently selected clones, often only three years removed from single-hill selection. Retained entries are further evaluated in replicated trials at several Oregon locations before advancing (if applicable) to the Tri-state trial which includes testing locations in Washington and Idaho. This trial included 3 standard varieties and 50 new entries. The Oregon Potato Variety Development Team chose to advance 12 selections to the Statewide Russet Trial in 2013 and discarded the remaining selections due to poor performance. **Only retained selections are listed in the following tables.**

Clone	Male Parent	Female Parent
AOR06565-1	A99034-2E	AOO487-22LB
AOR06950-3	AO96781-4	A01259-51LBY
AOR06955-1	A00715-8	PA98NM25-5
AOR06987-4	A92030-5	PA00N14-2
AOR06987-6	A92030-5	PA00N14-2
AOR061075-1	PA03NM21-5	PA03NM5-3
AOR07431-1	A02086-10	A99375-41LB
AOR07919-4	A00385-2	PA03NM3-4
AOR08031-3	Clearwater Russet	A01010-1
OR09126-1	Canela	CO98067-7RU
COOR07208-1KF	Blazer Russet	AC97306-1RU
COOR08294-2KF	CO99100-1RU	PA00N14-2

2012 Statewide Russet Trial

Location: OSU KBREC – Klamath Falls, OR
Planting Date: May 23
Harvest Date: October 16
Fertility: 193-116-250-132
Vine Kill Date: September 10
Days to Vine kill: 110
In-Row Spacing: 9.25 inch

The Statewide Russet Trial evaluates selections retained from the PYT-2 Russet Trial at three locations in Oregon. As mentioned earlier, selections retained from this trial are advanced to the Tri-state Trial which includes testing locations in Washington and Idaho. Testing locations in Oregon represent diverse climatic conditions (hot, long-season and cool, short-season) which allow for the retention of selections that exhibit stability over multiple locations. Oregon selections remain in the Statewide Trial until they complete Tri-state and Western Regional evaluation or are discarded. Despite a warmer season, potato plots at the KBREC site performed above average. The following is a summary of the Klamath Falls field results.

Stand Counts

- **30 Day**

Slow emergence: AO06030-5 (56%), COO07092-2KF (63%), AO06191-1 (71%)

Plant and Tuber Growth and Development

- **Average Tuber Number Per Plant**

Most: AO06929-3KF (11.6), OR08040-1 (10.1)
Least: AO06783-1KF (5.2), COO07092-2KF (5.3)

- **Average Tuber Size (oz.)**

Largest: AO071020-4KF (11.4), AO06783-1KF (10)
Smallest: AO06929-3KF (4.3), AO06103-1 (5.1)

- **Undersized Tubers (<4 oz.) cwt/Acre**

Most: AO06030-5 (70.2), AO06191-1 (51.7)
Least: AO06064-2KF (11.5), AO06070-1KF (19.2)

Yield and Economic Data

- **Total Yield (cwt/Acre)**

Highest: COO07240-1KF (758), AO07469-2 (729)
Lowest: AO06187-1 (418), Russet Norkotah (473)

- **US No. 1 Yield (cwt/Acre)**

Highest: AO07469-2 (570), AO061003-1KF (476)
Lowest: AO06783-1KF (276), Ranger Russet (289)

- **Carton Yield (8-20 oz.) cwt/Acre**

Highest: AO07469-2 (428), AO06070-1KF (343)
Lowest: AO06103-1 (169), AO06929-3KF (168)

Tuber Defect Incidence (40 tuber sample of 8-12 oz. tubers)

- **Hollow Heart**

Notable Defects: OR08055-1 (10%), Russet Burbank (7.5%)

- **Blackspot Bruise**

Notable Defects: Ranger Russet (32.5%), AO07010-1 (22.5%), AO06103-1 (22.5%)

Entry	Total Yield		US # 1s* > 4 oz.	US # 2s* > 4 oz.****	Culls & <4 oz.	Carton Yield 100-50 count (US 1's 8-20 oz)	
	(cwt/A)	stats**	% of total yield			% of total yield	(cwt/A)
Ranger Russet	593	DEFG	49	38	13	32	187
Russet Burbank	523	GHI	60	26	14	36	187
Russet Norkotah	473	HI	57	27	16	38	179
AO05278-1	643	BCDEF	75	14	11	51	329
AO05281-1KF	607	CDEFG	67	14	19	42	255
AO05286-1KF	634	BCDEF	64	25	11	34	216
AO06064-2KF	663	ABCDE	53	31	16	39	260
AO06070-1KF* **	708	ABC	69	14	17	48	343
POR08NCKP2-1	562	EFGH	51	34	14	38	213
OR08014-1	677	ABCD	63	21	16	44	298
OR08014-4* **	709	ABC	65	20	14	42	296
OR08040-1	646	BCDEF	60	16	24	34	220
OR08055-1* **	656	ABCDEF	68	21	11	48	317
AO06030-5	633	BCDEF	67	19	14	47	296
AO06103-1	561	EFGH	67	12	21	28	158
AO06187-1	418	I	73	14	13	41	169
AO06191-1* **	594	DEFG	68	26	6	48	285
AO07010-1	589	DEFG	67	27	6	53	312
AO07469-2* **	729	AB	78	11	11	59	428
COO07025-1KF* **	687	ABCD	65	17	18	48	330
COO07092-2KF	550	FGH	63	26	11	49	267
COO07240-1KF	758	A	50	34	16	37	278
AO06092-1KF	709	ABC	61	30	9	48	343
AO071020-4KF	710	ABC	51	42	6	42	297
AO06783-1KF	647	BCDEF	43	51	7	32	209
AO06732-1KF	650	ABCDEF	46	39	15	33	216
AO06929-3KF* **	590	DEFG	70	4	26	29	168
AO061003-1KF* **	677	ABCD	70	19	11	42	281
LSD (0.05)		**109**					

*Percent values may not total 100% due to rounding

**Entries showing the same letter are not significantly different at the 5% level

***Entries retained for further testing in 2013

**** Includes US # 1 >20oz

Entry	US # 1 Yield					8-12 oz	Internal Defects (%)			
	>4 oz.		%				8-12 oz. tubers*****			
	(cwt/A)	STATS**	4-8 oz.	8-12 oz.	12-20 oz.	Specific Gravity	HH	IBS	SEB	IB
Ranger Russet	289	GH	35	31	34	1.089	0.0	0.0	12.5	32.5
Russet Burbank	315	GH	41	32	27	1.088	7.5	0.0	7.5	15.0
Russet Norkotah	269	H	33	32	35	1.073	5.0	0.0	2.5	15.0
AO05278-1	480	AB	31	35	33	1.094	0.0	2.5	15.0	17.5
AO05281-1KF	408	BCDEF	37	37	26	1.084	5.0	0.0	0.0	17.5
AO05286-1KF	405	CDEFG	47	37	16	1.075	0.0	0.0	2.5	5.0
AO06064-2KF	354	BCDE	27	34	40	1.086	0.0	0.0	17.5	17.5
AO06070-1KF* **	489	BCDE	30	38	32	1.094	2.5	0.0	0.0	2.5
POR08NCKP2-1	289	AB	27	41	32	1.080	2.5	0.0	2.5	17.5
OR08014-1	424	GH	30	38	32	1.078	0.0	0.0	0.0	17.5
OR08014-4* **	464	BCDE	36	38	25	1.090	5.0	0.0	15.0	20.0
OR08040-1	385	AB	43	38	19	1.078	0.0	2.5	2.5	7.5
OR08055-1* **	446	EFGH	29	37	34	1.094	10.0	0.0	10.0	20.0
AO06030-5	423	AB	30	33	37	1.092	0.0	0.0	0.0	17.5
AO06103-1	374	BCDE	58	30	12	1.086	0.0	0.0	0.0	22.5
AO06187-1	304	EFGH	44	32	24	1.076	0.0	2.5	25.0	17.5
AO06191-1* **	403	H	29	26	45	1.086	0.0	0.0	0.0	17.5
AO07010-1	395	AB	21	38	41	1.092	2.5	0.0	0.0	22.5
AO07469-2* **	570	BCDE	25	45	30	1.075	2.5	2.5	2.5	10.0
COO07025-1KF* **	444	A	26	35	39	1.081	0.0	0.0	0.0	17.5
COO07092-2KF	346	BCD	23	33	44	1.089	0.0	0.0	0.0	20.0
COO07240-1KF	381	CDEFG	27	35	39	1.087	0.0	0.0	2.5	5.0
AO06092-1KF	430	AB	20	39	41	1.078	0.0	0.0	5.0	17.5
AO071020-4KF	364	BCD	18	26	56	1.085	0.0	0.0	32.5	17.5
AO06783-1KF	276	EFG	24	34	42	1.094	0.0	2.5	7.5	12.5
AO06732-1KF	302	FGH	29	34	37	1.083	0.0	0.0	12.5	15.0
AO06929-3KF* **	411	CDEFG	59	32	9	1.090	0.0	0.0	0.0	12.5
AO061003-1KF* **	476	BC	41	38	21	1.093	0.0	0.0	0.0	15.0
LSD (0.05)		**77**								

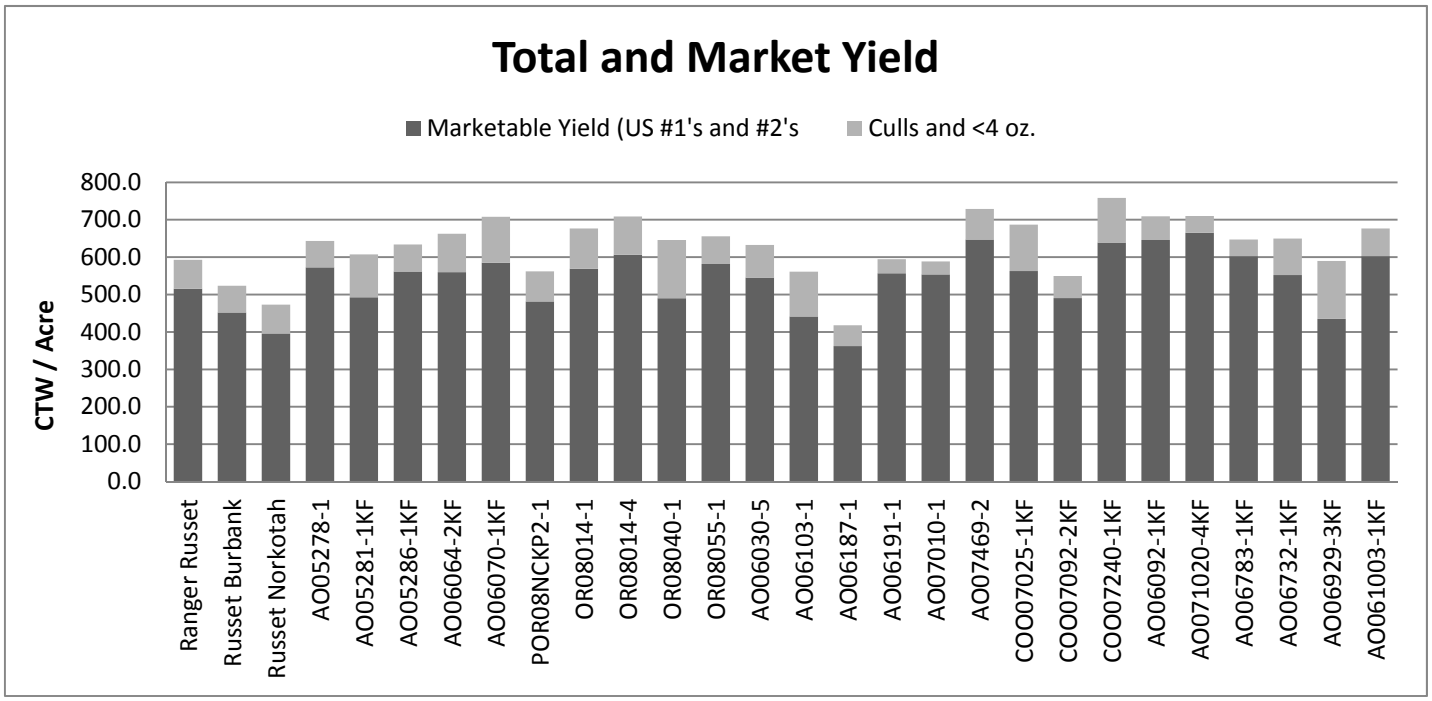
Entry	Stand %	Average Tuber		Growth Cracks (1-5 none)	Shatter (1-5)	Skin Color (1-5 dark)	Russeting (1-5 hvy.)	Length Width Ratio	Shape Uniformity (1-5 ex.)	Rhizoc (1-5 none)
		Wt. (oz.)	No. tubers/plant							
Ranger Russet	93	7.8	6.5	4.3	4.2	4.0	4.0	2.31	3.3	4.2
Russet Burbank	86	6.3	7.0	4.1	4.4	4.0	4.0	1.74	3.6	3.9
Russet Norkotah	82	7.2	5.6	4.6	4.5	4.8	5.0	2.01	3.9	4.8
AO05278-1	79	7.0	7.8	4.6	4.3	4.0	5.0	1.69	4.0	4.5
AO05281-1KF	89	6.1	8.5	4.6	3.9	2.5	2.5	1.92	4.0	3.0
AO05286-1KF	86	6.1	8.8	4.3	4.0	3.4	3.3	1.71	3.5	4.8
AO06064-2KF	87	8.0	7.0	3.3	3.9	4.0	4.0	1.72	3.8	4.3
AO06070-1KF* **	96	6.8	8.9	4.5	3.5	4.0	4.0	1.74	4.4	3.8
POR08NCKP2-1	85	7.3	6.5	3.8	3.9	5.0	5.0	1.69	3.0	4.3
OR08014-1	84	6.5	8.9	3.1	2.6	2.6	2.6	1.52	3.8	2.6
OR08014-4* **	82	7.0	8.6	4.0	3.1	4.0	4.1	1.62	3.8	3.1
OR08040-1	90	5.4	10.1	4.0	4.3	4.0	4.0	1.86	4.0	4.1
OR08055-1* **	90	7.5	7.5	4.4	4.3	4.3	4.8	1.75	4.1	4.3
AO06030-5	56	8.3	6.5	4.3	4.1	4.8	4.9	1.89	4.3	4.1
AO06103-1	94	5.1	9.3	4.4	4.1	4.5	5.0	1.60	4.0	3.1
AO06187-1	91	6.9	5.3	4.1	4.1	4.3	4.9	1.72	4.6	4.6
AO06191-1* **	71	9.5	5.3	5.0	4.3	4.8	5.0	1.73	4.8	4.3
AO07010-1	96	9.3	5.4	4.5	2.9	4.4	4.5	1.72	4.1	4.3
AO07469-2* **	81	7.4	8.3	4.3	4.3	4.3	4.6	1.63	4.1	4.4
COO07025-1KF* **	91	9.1	6.3	4.4	4.4	4.0	4.9	1.80	4.5	4.6
COO07092-2KF	63	8.9	5.2	4.6	4.4	4.0	4.0	1.79	4.1	4.4
COO07240-1KF	95	8.5	7.5	3.7	4.2	4.0	4.3	1.80	3.7	4.3
AO06092-1KF	92	9.2	6.5	4.4	3.9	4.0	4.0	1.82	3.6	3.9
AO071020-4KF	95	11.4	5.2	4.0	4.0	4.0	4.0	1.70	4.1	3.9
AO06783-1KF	93	10.0	5.1	4.1	3.3	4.8	4.9	1.72	3.6	3.1
AO06732-1KF	82	8.5	6.5	3.1	4.4	4.0	4.0	1.70	3.3	4.0
AO06929-3KF* **	95	4.3	11.6	4.6	4.1	4.3	4.3	1.87	4.6	2.5
AO061003-1KF* **	93	6.0	9.6	4.5	4.4	4.0	4.3	1.52	3.6	4.9

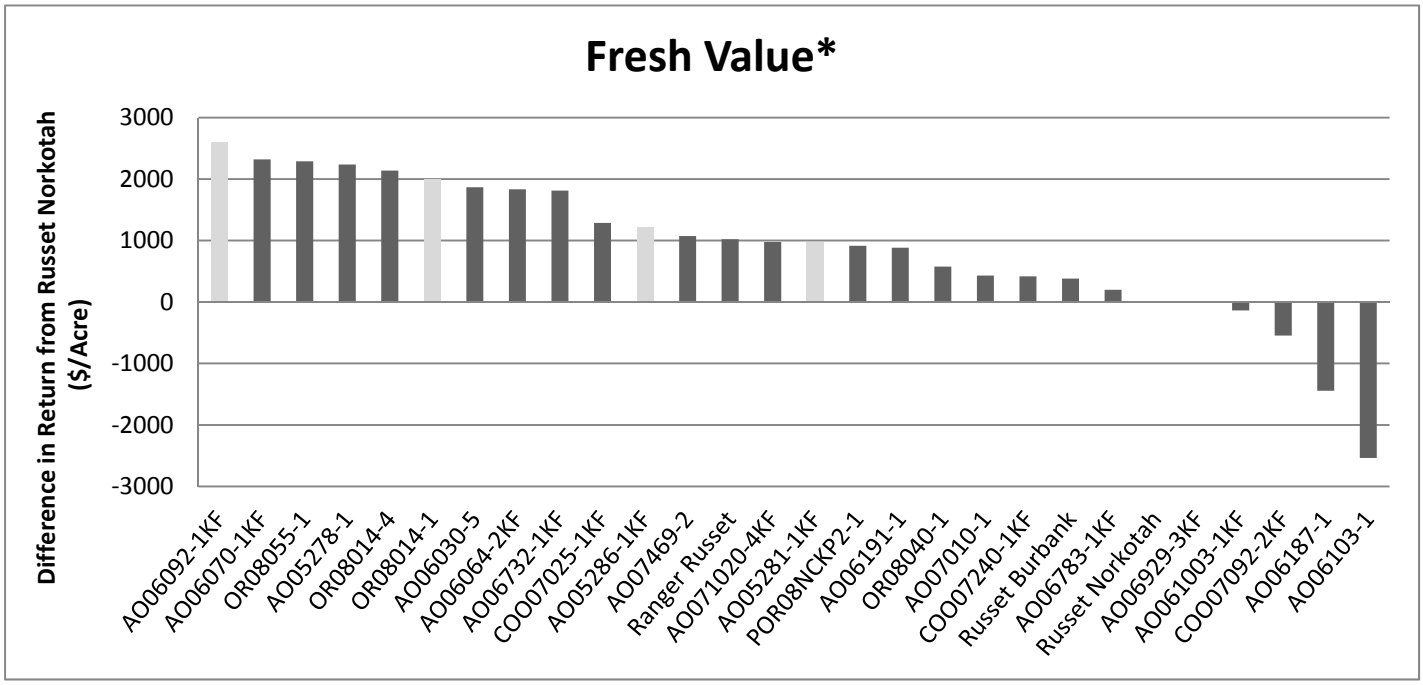
*Percent values may not total 100% due to rounding

**Entries showing the same letter are not significantly different at the 5% level

***Entries retained for further testing in 2011

*****Internal Defects: HH=hollow heart, IBS=internal brown spot, SEB=stem end browning, IB= impact bruise





*Difference in gross return per acre (Fresh Value) from Russet Norkotah calculated by subtracting the gross return of Russet Norkotah from the gross return of the particular entry. Entries with white-colored bars may not appeal to fresh market consumers due to the undesirable shape or appearance. Refer to page 12 for parameters used to collect gross return to growers.

Entry	2012 KBREC- Statewide Russet Comments
Ranger Russet	hooky-crooky x 4, 2's x 3, MS x 3
Russet Burbank	Mis-shaped x 4, fair, 2's, Small
Russet Norkotah	Pty x 3, mis-shaped x 4, Poor
AO05278-1	Coarse x 4, typy x 4, water management?
AO05281-1KF	Process only, Lenticels, Typy x 3
AO05286-1KF	Pointy x 4, lenticels x 2, mis-shaped x 2, not fresh x 3
AO06064-2KF	Big, plump, pointy x 2, growth cracks x 3, drop x 4
AO06070-1KF* **	Typy x 4, green ends x 3, keep x 3
POR08NCKP2-1	Junk x 2, drop x 2
OR08014-1	Process only, short x 4, drop x 4
OR08014-4* **	Shatter bruise x 3, 2's x 3, drop x 4
OR08040-1	Small x 2, erratic size, pointy, mis-shaped, drop x 3
OR08055-1* **	Typy x 4, lenticels x 2, keep x 4
AO06030-5	Typy x 4, coarse x 2, keep x 4
AO06103-1	Coarse x 4, short x 3, small x 2, drop x 4
AO06187-1	Typy x 4, small x 3, no yield x 4, drop
AO06191-1* **	Typy x 4, real nice x 4, keep x 4
AO07010-1	Shatter bruise x 3, thumbnail cracks, big, typy x 3, potential?
AO07469-2* **	Typy x 4, nice x 4, keep x 4
COO07025-1KF* **	Typy x 4, nice x 4, too Long for fresh x 3???, keep x 4
COO07092-2KF	Typy x 4, erratic size, some mis-shaped & 2's, Keep?
COO07240-1KF	Big x 4, green ends x 2, growth cracks x 3, mis-shaped x 3, drop x 4
AO06092-1KF	Big x 4, pointy x 2, not fresh, early process?
AO071020-4KF	Big x 4, typy x 4, green ends & growth cracks x 2, Closer Spacing?, Keep?
AO06783-1KF	MS x 4, 2's x 4, junk, drop x 4
AO06732-1KF	2's x 4, drop x 4
AO06929-3KF* **	Typy x 4, small x 4, rhizoc x 4, drop?
AO061003-1KF* **	Dents & dimples x 3, flat x 2, drop x 3

Entries Retained for Further Evaluation in 2013

Entry	2012 KBREC- Statewide Russet Comment	Entry	2012 KBREC- Statewide Russet Comment
Ranger Russet		**Russet Burbank**	
	Hooky-crooky, 2's, boomerangs, mis-shaped		Few mis-shaped, typy,2's, fair
Russet Norkotah		**AO06070-1KF**	
	Pointy stem end, mis-shaped, fair-poor		Really nice, typy, green end rot, skinning, keep
OR08014-4		**OR08055-1**	
	Lumpy, dented, lenticel scaring, high 2's, green ends, shatter bruised, flat, some mis-shaped, fairly typy		Typy, nice, lenticel scaring, keep
AO06191-1		**AO07469-2**	
	Excellent, typy, really nice, keep		Typy, coarse, nice, keep
AO06929-3KF		**AO061003-1KF**	
	Bad rhizoc, lenticel scaring, small, typy, a little flat		Dents, dimples, flat, small, short, typy, fair

2012 Tri-State Russet Trial

Location: OSU KBREC – Klamath Falls, OR
Planting Date: May 23
Harvest Date: October 17
Fertility: 193-116-250-132
Vine Kill Date: September 10
Days to Vine kill: 110
In-Row Spacing: 9.25 inch

The Tri-state Russet Trial evaluates relatively advanced selections originally selected in both Oregon and Idaho. Entries are evaluated for both fresh market and processing potential in Washington, Idaho, and Oregon. Disposition of entries in this trial are determined by the Tri-state Technical Committee and if retained, advance to the Western Regional Russet Trial. Despite a warmer season, potato plots at the KBREC site performed above average. The following is a summary of the Klamath Falls field results.

Stand Counts

- **30 Day**

Slow emergence: Russet Norkotah (22%), A0073-2 (59%), A05052-3TE (61%)
Full emergence: A02424-83LB (98%), A05015-5TE (97%)

Plant and Tuber Growth and Development

- **Average Tuber Number Per Plant**

Most: A02424-83LB (10), A0073-2 (8.9)
Least: Russet Norkotah (2.9), A06015-13TE (4), OR05039-4 (5)

- **Average Tuber Size (oz.)**

Largest: A06015-13TE (10.4), A06029-5TE (10.4), and A03082-4 (9.5)
Smallest: A0073-2 (5.5), A02424-83LB (5.8)

- **Undersized Tubers (<4 oz.) cwt/Acre**

Most: POR06V12-3 (65.2), A02424-83LB (64.5)
Least: A06015-13TE (8), A06029-5TE (10.5)

Yield and Economic Data

- **Total Yield (cwt/Acre)**

Highest: A03082-4 (828), A05013-29 (712)
Lowest: Russet Norkotah (395), A05015-5TE (524)

- **US No. 1 Yield (cwt/Acre)**

Highest: A02424-83LB (481), A0073-2 (421)
Lowest: A06015-13TE (173), A06029-5TE (183)

- **Carton Yield (8-20 oz.) cwt/Acre**

Highest: A01325-1 (305), OR05039-4 (288)
Lowest: A06015-13TE (128), A06029-5TE (134)

- **Gross Return ($/acre)**

Fresh Market Highest: A06003-3TE
Fresh Market Lowest: A06084-1TE

Tuber Defect Incidence (40 tuber sample of 8-12 oz. tubers)

- **Hollow Heart**

Notable Defects: A0012-5 (20%), Russet Norkotah (10%)

- **Blackspot Bruise**

Notable Defects: AO01114-4 (32.5%), A03921-2 (25%), and A0073-2 (22.5%)

Entry	Total Yield		US # 1s* > 4 oz.	US # 2s* > 4 oz.***	Culls* & <4 oz.	Carton Yield 100-50 count (US 1's 8-20 oz)	
	(cwt/A)	STATS**	% of Total Yield			% of Total Yield	(cwt/A)
Ranger Russet	639	BCDEF	42	46	12	28	180
Russet Burbank	559	FGHIJ	55	32	13	41	229
Russet Norkotah	395	FGHI	56	33	11	41	161
A0012-5	562	GHIJK	67	27	6	43	240
A0073-2	529	GHIJK	80	10	10	42	223
A01325-1	682	BCD	54	36	10	45	305
A02144-2	528	GHIJK	67	16	17	41	217
A02424-83LB	688	BC	70	16	14	39	266
A03082-4	828	A	44	42	14	33	277
A03921-2	675	BCDE	44	39	17	31	211
A05013-29	712	B	43	41	16	32	231
A05015-5TE	524	GHIJK	61	26	13	46	243
A05052-3TE	455	K	60	23	17	41	187
A06003-3TE	590	CDEFGH	58	33	9	45	265
A06015-13TE	493	HIJK	35	54	11	26	128
A06029-5TE	623	BCDEFG	29	55	15	21	134
A06084-1TE	587	DEFGH	69	18	13	42	248
AO01114-4	505	HIJK	76	14	10	52	263
AO3123-2	576	EFGHI	62	26	12	41	236
OR05039-4	485	IJK	73	19	8	59	288
POR06V12-3	559	FGHIJ	70	15	15	47	261
LSD (0.05)		**100**					

Entry	US # 1 Yield					8-12 oz Specific Gravity	Internal Defects (%) 8-12 oz. tubers****			
	>4 oz. (cwt/A)	STATS**	%*							
			4-8 oz.	8-12 oz.	>12 oz.		HH	IBS	SEB	VD
Ranger Russet	267	F	33	33	34	1.085	0.0	0.0	8.0	0
Russet Burbank	307	DEF	25	34	40	1.091	8.0	5.0	5.0	3.0
Russet Norkotah	221	EF	27	33	40	1.073	5.0	0.0	3.0	3.0
A0012-5	376	BCD	36	44	20	1.092	20.0	0.0	3.0	0.0
A0073-2	421	AB	47	42	11	1.089	0.0	0.0	8.0	3.0
A01325-1	370	BCD	18	41	42	1.090	3.0	3.0	3.0	0.0
A02144-2	353	BCD	39	40	21	1.089	0.0	5.0	13.0	3.0
A02424-83LB	481	A	45	40	16	1.090	0.0	0.0	25.0	0.0
A03082-4	367	BCD	25	35	41	1.082	0.0	0.0	0.0	3.0
A03921-2	299	DEF	29	40	31	1.102	0.0	0.0	8.0	0.0
A05013-29	308	DEF	25	35	39	1.088	0.0	0.0	8.0	13
A05015-5TE	320	CDEF	24	34	42	1.093	0.0	0.0	3.0	3.0
A05052-3TE	271	EF	31	36	33	1.100	3.0	8.0	0.0	3.0
A06003-3TE	345	BCDE	23	36	41	1.088	0.0	3.0	5.0	10
A06015-13TE	173	G	26	27	47	1.087	0.0	0.0	5.0	0.0
A06029-5TE	183	G	27	33	40	1.09	0.0	2.5	7.5	2.5
A06084-1TE	405	AB	39	39	22	1.085	0.0	0.0	18.0	0.0
AO01114-4	385	BC	32	43	26	1.098	0.0	0.0	5.0	3.0
AO3123-2	356	BCD	34	40	26	1.084	0.0	0.0	5.0	3.0
OR05039-4	353	BCD	18	40	42	1.091	0.0	0.0	3.0	0.0
POR06V12-3	391	BC	33	40	27	1.094	0.0	0.0	5.0	0.0
LSD (0.05)		**76.6**								

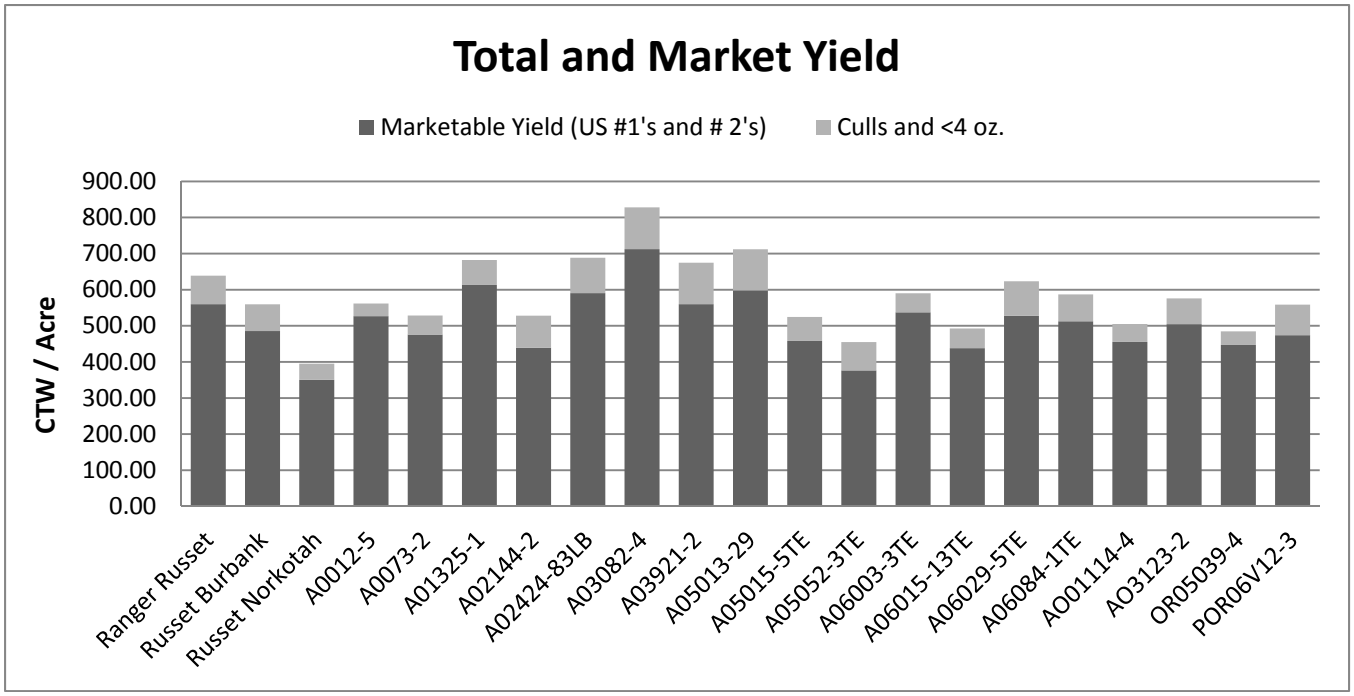
Entry	Stand %	Average Tuber		Length Width Ratio	Rhizoc (1-5 none)	Skin Color (1-5 dark)	Russeting (1-5 hvy)	Greening (1-5 none)	Shape Uniformity (1-5 ex.)	Shatter (1-5 none)
		Wt. (oz.)	Number tubers/plant							
Ranger Russet	64	8.0	6.8	2.01	3.6	4.0	4.0	4.0	3.0	4.0
Russet Burbank	78	7.7	6.2	1.80	4.5	4.0	4.0	4.5	3.5	4.5
Russet Norkotah	22	7.2	2.9	2.00	5.0	5.0	5.0	3.3	4.0	4.5
A0012-5	67	7.4	6.4	1.47	3.0	4.5	5.0	4.4	3.5	3.5
A0073-2	59	5.5	8.0	1.67	4.0	4.0	4.0	4.3	4.5	3.5
A01325-1	76	9.2	6.2	1.54	4.0	1.5	1.5	3.4	3.0	2.5
A02144-2	76	6.3	7.2	1.75	4.0	3.5	3.5	4.0	4.0	3.0
A02424-83LB	98	5.8	10.8	1.80	3.0	1.0	1.1	3.3	4.0	3.0
A03082-4	93	9.5	7.4	1.73	3.5	2.0	2.0	3.3	2.5	3.0
A03921-2	84	8.5	6.7	1.60	3.5	2.0	1.5	2.9	3.0	2.5
A05013-29	97	7.6	7.9	2.02	4.5	2.0	2.0	3.5	4.0	4.0
A05015-5TE	82	8.0	5.6	1.65	4.0	2.5	2.5	3.3	4.0	4.0
A05052-3TE	61	6.4	6.0	1.76	4.5	2.0	2.0	3.1	4.0	3.5
A06003-3TE	82	8.3	6.0	1.59	4.5	4.5	5.0	3.8	3.5	4.0
A06015-13TE	80	8.0	4.0	1.61	5.0	4.5	5.0	4.0	3.0	4.0
A06029-5TE	84	10.1	5.0	1.77	4.0	2.0	2.0	3.5	3.0	2.0
A06084-1TE	91	6.2	8.0	1.84	4.5	4.5	5.0	4.4	4.0	3.5
AO01114-4	89	7.0	6.1	1.69	4.0	4.0	4.0	4.3	4.5	2.5
AO3123-2	85	6.5	7.5	1.87	4.5	3.5	3.5	4.0	4.0	4.0
OR05039-4	80	8.3	4.9	1.79	4.0	1.0	1.5	4.0	4.5	4.0
POR06V12-3	73	5.9	8.0	1.73	4.0	5.0	5.0	4.0	4.5	4.0

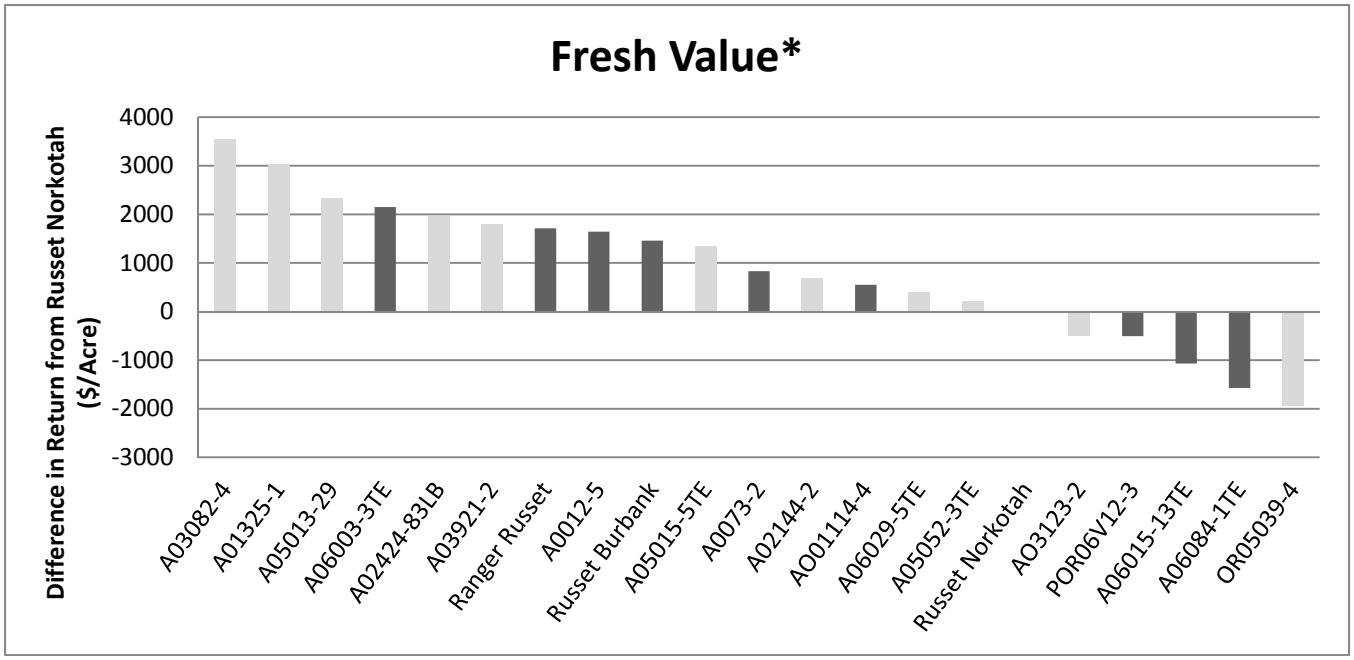
*Percent values may not total 100% due to rounding

**Entries showing the same letter are not significantly different at the 5% level

*** Includes US # 1's > 20oz

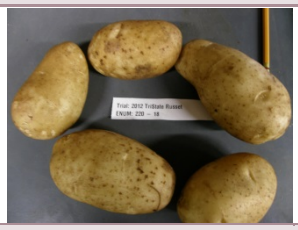
*****Internal Defects: HH=hollow heart, IBS=internal brown spot, SEB=stem end browning, VD=vascular discoloration





*Difference in gross return per acre (Fresh Value) from Russet Norkotah calculated by subtracting the gross return of Russet Norkotah from the gross return of the particular entry. Entries with white-colored bars may not appeal to fresh market consumers due to the undesirable shape or appearance. Refer to page 12 for parameters used to collect gross return to growers.

Entry	2012 KBREC- Tri-State Russet Comment	Entry	2012 KBREC- Tri-State Russet Comment
Ranger Russet		**Russet Burbank**	
	Hooky crooky, mis-shaped, 2's		Poor, pointy, mis-shaped
Russet Norkotah		**A0012-5**	
	Mis-shaped, pointy stem ends, green ends, fair		Erratic shape and size, too round, poor, drop
A0073-2		**A01325-1**	
	Small, typy, fresh potential, nice, keep		Shatter bruise, mis-shaped, process only, poor
A02144-2		**A02424-83LB**	
	Rot, shatter bruised, lenticel scaring, process only, fair, lite net		Process only, typy, smooth, keep
A03082-4		**A03921-2**	
	Lumpy, poor, mis-shaped, shatter bruised, junk, drop		Process only, mis-shaped, shatter bruised, popeyes, drop
A05013-29		**A05015-5TE**	
	Pointy stem ends, fair, blotchy skin, process only, 2's, mis-shaped		Typy, green ends, light skin, process only, low set, fair

Entry	2012 KBREC- Tri-State Russet Comment	Entry	2012 KBREC- Tri-State Russet Comment
A05052-3TE		**A06003-3TE**	
	Blotchy skin, mis-shaped, pointy, lenticel scaring, low yield, process only, fair		Plump, erratic size, heavy net, skinning, coarse, pop eyes, poor
A06015-13TE		**A06029-5TE**	
	Heavy net, dent, dimples, junk		Process only, pointy, lenticel scaring, mis-shaped, large, shatter bruise
A06084-1TE		**AO01114-4**	
	Heavy net, fair, close for fresh, brows		Typy, fresh potential, shatter bruise, drop
AO03123-2		**OR05039-4**	
	Process only, plump, erratic size, typy, 2's, light net		Pointy stem ends, typy, few mis-shaped, lenticel scaring
POR06V12-3			
	Heavy net, small, typy, fresh potential		

2012 Western Regional Russet Trial

Location: OSU KBREC – Klamath Falls, OR
Planting Date: May 23
Harvest Date: October 19
Fertility: 193-116-250-132
Vine Kill Date: September 10
Days to Vine kill: 110
In-Row Spacing: 9.25 inch

Regional Trials are evaluated at multiple locations in Oregon, Washington, Idaho, Colorado, Texas, and California. Entries graduating from Tri-state and Southwestern (CO, TX, CA) trials are included in this trial. Entry disposition is determined by the Western Regional Technical Committee. Entries are typically evaluated for three years (if applicable) before graduating. Upon graduation, sponsoring states (state making initial selection) determine if the selection will be eligible for commercial release and assume the lead role in acquiring Plant Variety Protection (PVP). This trial included three standard varieties and 14 new clones at the KBREC location. In most circumstances, a period of 12 to 15 years is required to release a variety following the actual breeding cross and advancement through the Regional Trial. Despite a warm growing season and heavier than normal nematode pressure, potato plots at the KBREC site performed above average for total yield. The following is a summary of the Klamath Falls field results.

Stand Counts

- **30 Day**

Slow emergence: Ranger Russet (65%), R. Norkotah (74%)
Full emergence: A01010-1 (99%), A03158-2TE (99%), A02138-2 (97%)

Plant and Tuber Growth and Development

- **Average Tuber Number Per Plant**

Most: CO03276-5RU (9.9), AC00395-2RU (9.4), AO02183-2 (9.3)
Least: Ranger Russet (4.7), Russet Norkotah (4.8), Russet Burbank (5.5)

- **Average Tuber Size (oz.)**

Largest: Russet Burbank (8.4), A02507-2LB (8.4), R. Norkotah (8.3)
Smallest: CO03187-1RU (4.9), PA00N14-2 (6.1), A02138-2 (6.3)

- **Undersized Tubers (<4 oz.) cwt/Acre**

Most: CO03187-1RU (70.2), CO03276-5RU (51.7), AO02183-2 (50.5)
Least: A02507-2LB (11.5), A03158-2TE (19.2), R. Burbank (19.7)

Yield and Economic Data

- **Total Yield (cwt/Acre)**

Highest: CO03276-5RU (801), AO02183-2 (748)
Lowest: Russet Burbank (366), Russet Norkotah (443)

- **US No. 1 Yield (cwt/Acre)**

Highest: CO03276-5RU (612), AO02183-2 (574)
Lowest: Russet Burbank (192), Russet Norkotah (247)

- **Carton Yield (8-20 oz.) cwt/Acre**

Highest: CO03276-5RU (531), A01010-1 (519)
Lowest: Russet Burbank (169), Russet Norkotah (217)

- **Gross Return ($/acre)**

Fresh Market Highest: PA00N14-2
Fresh Market Lowest: A03158-2TE

Tuber Defect Incidence (40 tuber sample of 8-12 oz. tubers)

- **Hollow Heart**

Notable Defects: R. Norkotah (7.5%)

- **Blackspot Bruise**

Notable Defects: AO00057-2 (27.5%), CO03276-5RU (25%)

Entry	Total Yield		US # 1s* > 4 oz.	US # 2s* > 4 oz.***	Culls* & <4 oz.	Carton Yield 100-50 count (US 1's 8-20 oz)	
	(cwt/A)	STATS**	% of Total Yield			% of Total Yield	(cwt/A)
Ranger Russet	539	DEFG	50	39	11	50	271
Russet Burbank	366	H	46	33	21	46	169
Russet Norkotah	443	GH	49	37	14	49	217
A99029-3E	636	BCD	78	12	11	78	495
A01010-1	723	ABC	72	20	9	72	519
A02138-2	633	BCD	63	27	10	63	399
A02507-2LB	602	CDE	76	20	4	76	458
A03158-2TE	713	ABC	58	37	5	58	415
AC00395-2RU	708	ABC	67	25	9	67	471
AO00057-2	554	DEFG	73	18	10	73	402
AO02060-3	569	DEF	65	25	10	65	372
AO02183-2	748	AB	66	20	14	66	497
AO96305-3	472	FGH	81	8	11	81	381
CO03187-1RU	504	EFG	68	16	16	68	344
CO03202-1RU	577	DEF	68	17	15	68	390
CO03276-5RU	801	A	66	24	9	66	531
PA00N14-2	491	EFG	75	14	11	75	371
LSD (0.05)		**124**					

Entry	US # 1 Yield					8-12 oz Specific Gravity	Internal Defects (%) 8-12 oz. tubers****			
	>4 oz. (cwt/A)	STATS**	%							
			4-8 oz.	8-12 oz.	12-20 oz.		HH	IB	BS	CRS
Ranger Russet	271	GF	25	33	42	1.094	0.0	22.5	0.0	0.0
Russet Burbank	169	H	37	30	33	1.085	0.0	7.5	0.0	0.0
Russet Norkotah	217	GH	28	45	26	1.071	7.5	2.5	0.0	0.0
A99029-3E	495	AB	31	33	35	1.088	0.0	20.0	0.0	0.0
A01010-1	519	B	33	38	29	1.091	0.0	2.5	0.0	0.0
A02138-2	399	CDE	40	35	25	1.089	0.0	15.0	0.0	0.0
A02507-2LB	458	ABCD	19	31	50	1.088	0.0	22.5	0.0	0.0
A03158-2TE	415	BCDE	23	38	40	1.081	0.0	15.0	0.0	0.0
AC00395-2RU	471	ABC	43	32	25	1.102	2.5	15.0	0.0	0.0
AO00057-2	402	DE	33	26	41	1.090	0.0	27.5	0.0	0.0
AO02060-3	372	AB	30	34	36	1.089	2.5	2.5	0.0	0.0
AO02183-2	497	AB	36	38	26	1.089	2.5	7.5	0.0	0.0
AO96305-3	381	DE	35	36	28	1.090	2.5	12.5	0.0	0.0
CO03187-1RU	344	EF	50	34	16	1.084	0.0	20.0	0.0	0.0
CO03202-1RU	390	CDE	28	33	38	1.088	0.0	10.0	0.0	0.0
CO03276-5RU	531	A	33	36	31	1.081	0.0	25.0	2.5	0.0
PA00N14-2	371	DE	37	35	28	1.090	0.0	12.5	0.0	0.0
LSD (0.05)		**90**								

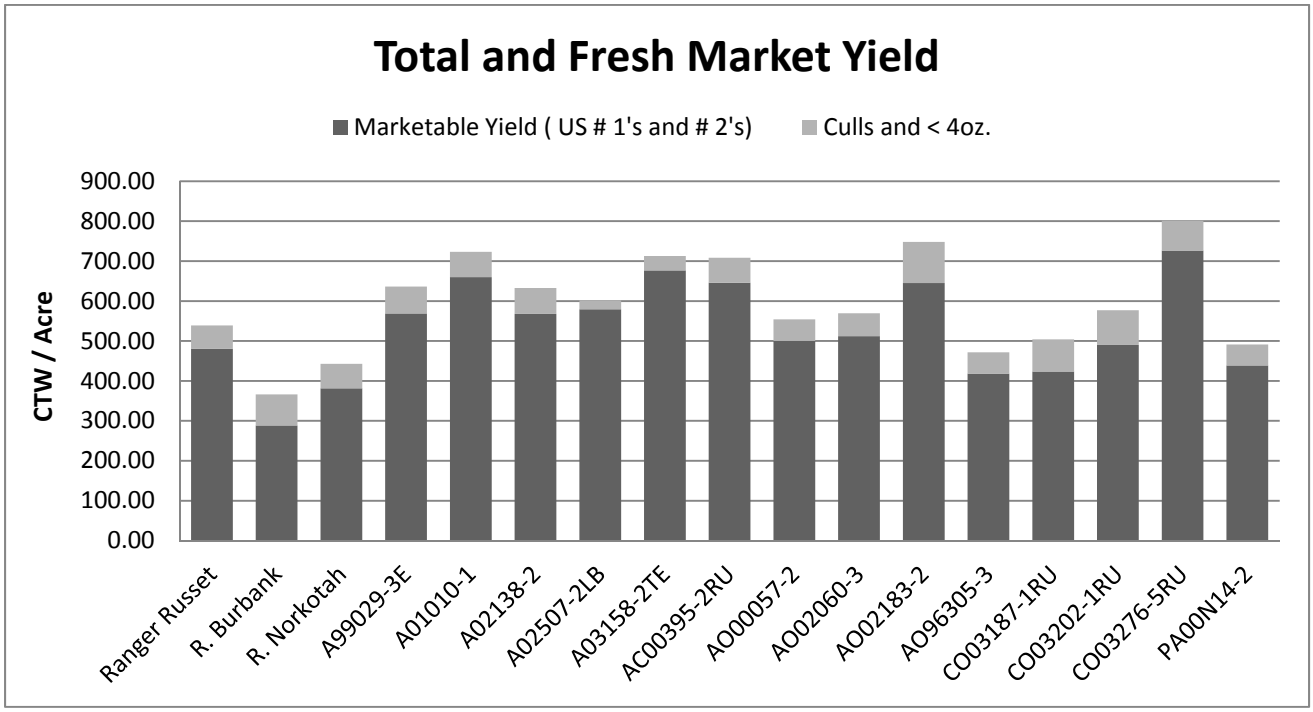
Entry	Stand %	Average Tuber		Skinning (1-5 none)	Shatter (1-5 none)	Skin Color (1-5 dark)	Russeting (1-5 hvy)	Growth Cracks (1-5 lnone)	Shape Uniformity (1-5 ex.)	Length Width Ratio
		Wt. (oz.)	Number tubers/plant							
Ranger Russet	91	8.4	5.5	4.0	4.0	4.0	4.0	4.0	3.6	1.094
Russet Burbank	65	6.8	4.7	4.5	4.0	4.0	4.0	3.5	3.1	1.085
Russet Norkotah	74	8.3	4.8	4.0	4.5	4.6	4.5	4.5	3.6	1.071
A99029-3E	89	7.2	7.5	4.0	3.5	4.0	4.0	4.0	4.4	1.088
A01010-1	99	7.3	8.7	4.0	4.0	4.5	4.5	4.5	4.0	1.091
A02138-2	97	6.3	8.5	3.5	2.5	3.0	3.0	5.0	3.5	1.089
A02507-2LB	87	8.4	6.1	4.0	3.0	4.0	4.5	4.5	4.1	1.088
A03158-2TE	99	7.7	8.0	4.5	3.5	4.0	4.0	4.0	4.1	1.081
AC00395-2RU	96	6.4	9.4	4.0	4.0	4.0	5.0	5.0	4.0	1.102
AO00057-2	87	7.0	6.7	4.5	4.0	4.5	4.5	4.5	4.3	1.090
AO02060-3	91	7.0	6.9	4.0	4.0	4.0	4.0	4.0	4.4	1.089
AO02183-2	96	6.9	9.3	4.5	4.5	4.5	4.5	4.5	4.5	1.089
AO96305-3	89	6.4	6.2	3.5	4.5	3.5	3.5	4.5	4.6	1.090
CO03187-1RU	95	4.9	8.8	4.5	4.5	4.0	4.5	4.5	4.1	1.084
CO03202-1RU	83	7.1	6.9	4.5	4.0	4.0	4.5	4.5	4.0	1.088
CO03276-5RU	99	6.8	10.0	4.5	4.0	4.0	4.5	4.5	4.1	1.081
PA00N14-2	53	6.1	6.8	4.5	4.0	4.5	5.0	4.5	4.1	1.090

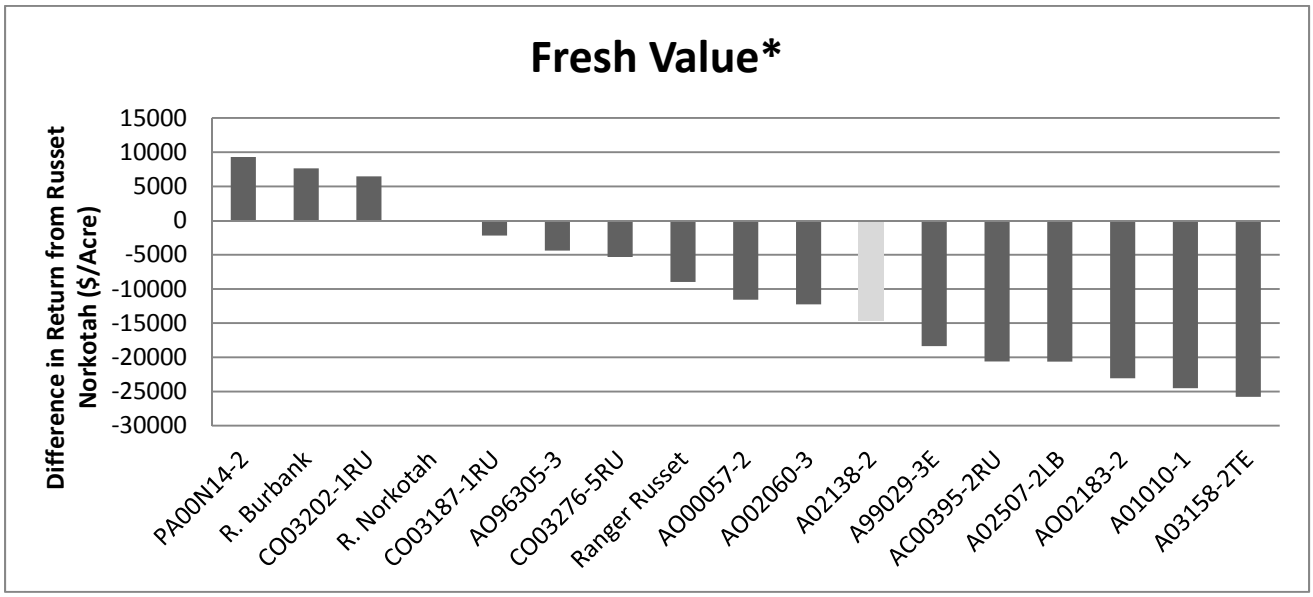
*Percent values may not total 100% due to rounding

**Entries showing the same letter are not significantly different at the 5% level

*** Includes US # 1's > 20oz

*****Internal Defects: HH=hollow heart, IB=impact bruise, BS= brown center, CRS=corky ring-spot





*Difference in gross return per acre (Fresh Value) from Russet Norkotah calculated by subtracting the gross return of Russet Norkotah from the gross return of the particular entry. Entries with white-colored bars may not appeal to fresh market consumers due to the undesirable shape or appearance. Refer to page 12 for parameters used to collect gross return to growers.

Entry	2012 KBREC- Regional Russet Comment	Entry	2012 KBREC- Regional Russet Comment
Ranger Russet		**Russet Burbank**	
	Hooky crooky, boomerangs		Mis-shaped, knobs, poor, pointy, low yield
Russet Norkotah		**A99029-3E**	
	Mis-shaped, poor, knobs, small		Typy, fresh potential, shatter bruise, coarse, keep
A01010-1		**A02138-2**	
	Poor skin, to rough, process only, heavy net, dents, lenticel scaring		Process only, plump, bruised, mis-shaped, round, poor, drop
A02507-2LB		**A03158-2TE**	
	Typy, flat, shatter bruise, keep		Process only, mis-shaped, long, heavy net, deep eyes, shatter bruised

Entry	2012 KBREC- Regional Russet Comment	Entry	2012 KBREC- Regional Russet Comment
AC00395-2RU		**AO00057-2**	
	Flat, pears, poor, mis-shaped, high # 2's		Typy, flattish, keep, fresh?
AO02060-3		**AO02183-2**	
	Growth cracks, fair, typy, nice fresh potential		Process, keep, long, typy
AO96305-3		**CO03187-1RU**	
	Typy, nice, low yield, lite net		Pears, coarse russeting, mis-shaped, not fresh, small
CO03202-1RU		**CO03276-5RU**	
	Too long, hooks, fair, drop, ranger like, not fresh,		Typy, large, fresh potential, mish-shaped, pears, heavy net
PA00N14-2			
	Typy, small, erratic size, small, fair, keep		

2012 Preliminary Yield (PYT-2) Specialty Trial

Location: OSU KBREC – Klamath Falls, OR
Planting Date: May 16
Harvest Date: October 10
Fertility: 193-116-250-132
Vine Kill Date: September 10
Days Grown: 117
In-Row Spacing: 9.25 inch

The PYT-2 Specialty Trial evaluates recently selected clones, often only two years removed from single-hill selection. Retained entries are further evaluated in replicated trials at several Oregon locations before advancing (if applicable) to the Tri-state trial which includes testing locations in Washington and Idaho. This trial included 2 standard varieties and 23 new entries. The Oregon Potato Variety Development Team chose to advance 8 selections to the Statewide Specialty Trial in 2013 and discarded the remaining selections due to poor performance. **Only retained selections are listed in the following tables.**

Clone	Male Parent	Female Parent
POR10PG3-3	OR04198-1	Alaska 8-3
POR10PG3-5	OR04198-1	Alaska 8-3
POR10PG3-6	OR04198-1	Alaska 8-3
POR10PG3-9	OR04198-1	Alaska 8-3
AOR0626-2	NY136(W2-112)	A99331-2RY
AOR06262-7	NY136(W2-112)	A99331-2RY
AOR06267-3	Villeta Rose	A99331-2RY
COOR08040-2	Magic Molly	CO03031-2R/R

2012 Statewide Specialty Trial

Location: OSU KBREC – Klamath Falls, OR
Planting Date: May 24
Harvest Date: October 18
Fertility: 193-116-250-132
Vine Kill Date: September 11
Days to Vine kill: 109
In-Row Spacing: 9 inch

The Statewide Specialty Trial evaluates selections retained from the PYT-2 Specialty Trial at three locations in Oregon. As mentioned earlier, selections retained from this trial are advanced to the Tri-state Trial which includes testing locations in Washington and Idaho. Testing locations in Oregon represent diverse climatic conditions (hot, long-season and cool, short-season) which allow for the retention of selections that exhibit stability over multiple locations. Oregon selections remain in the Statewide Trial until they complete Tri-state and Western Regional evaluation or are discarded. Despite a warmer than average growing season and high nematode pressure, potato plots at the KBREC site performed above average. The following is a summary of the Klamath Falls field results.

Stand Counts

- **30 Day**

Slow emergence: Yukon Gold (15%), OR04077-1 (73%)

Plant and Tuber Growth and Development

- **Average Tuber Number Per Plant**

Most: Red LaSoda (7.8), Yukon Gold (7.5)
Least: POR09PG57-1 (2.2), POR09NCL3-1 (2.3)

- **Average Tuber Size (oz.)**

Largest: Red LaSoda (7.8), Yukon Gold (7.5)
Smallest: POR09PG57-1 (2.2), PA07NC27-2Y (2.3)

- **C Size Tubers (≤ 1.875 inch diameter and <4 oz.) cwt/Acre**

Most: POR09NCL3-1 (84), POR09PG57-1 (80)
Least: Red LaSoda (7), Yukon Gold (14)

- **B Size Tubers (1.875-2.25 inch diameter and <4 oz.) cwt/Acre**

Most: OR07309-1 (181), POR09NCL3-1 (166)
Least: Yukon Gold (29), Red LaSoda (30)

Yield Data

- **Total Yield (cwt/Acre)**

Highest: OR08178-1 (787), Red LaSoda (692)
Lowest: POR09PG57-1 (335), OR04077-1 (367)

- **US No. 1 Yield (cwt/Acre)**

Highest: OR07309-1 (524), PA07NC27-2Y (499)
Lowest: POR09PG57-1 (268), Red LaSoda (343)

- **% U.S. #1s**

Highest: OR07309-1 (524), PA07NC27-2Y (499)
Lowest: POR09PG57-1 (268), Red LaSoda (343)

Tuber Defect Incidence (40 tuber sample)

- **External Defects:**

Moderate greening observed in OR08178-1. Red LaSoda had a high incidence of growth cracks.

- **Internal Defects:**

Most entries had low incidence of internal defects. Some varieties showed a high percent of corky ring spot and internal brown spot with OR07309-1(23% CRS) and (30% IBS).

Entry	Skin Color	Primary skin color rating (1-5 dark)	Flesh Color	Primary flesh color rating (1-5 dark)	Total Yield		US # 1's* > 0 oz.	Culls* > 0 oz.	Oversized >14oz.	External Defects (1-5 none)	
					(cwt/A)	STATS**	% of Total Yield			Growth crack	Knobs
Yukon Gold	Yellow	2.4	Yellow	3	472	BC	75	7	18	4.7	4.8
All Blue	Purple	4.5	Purple	3	452	BCD	92	6	1	5.0	4.9
Purple Majesty	Purple	4.5	Purple	5	504	B	89	11	0	4.7	4.2
Red LaSoda	Red	2.0	Red	1	692	A	50	38	12	2.6	3.3
OR04077-1	Red	4.0	Red	2	367	CD	95	4	1	4.9	5.0
OR07309-1	Yellow	3.0	Yellow	2	538	B	97	2	0	5.0	5.0
OR08178-1	Yellow	2.5	Yellow	2	787	A	58	34	7	4.3	3.4
POR09PG57-1	Yellow	4.0	Yellow	5	335	D	80	25	0	4.9	4.4
POR09NCL3-1	Yellow	2.0	Yellow	2	468	BC	93	7	0	4.9	4.5
PA07NC27-2Y	White	2.0	Yellow	2	563	B	89	9	2	5.0	5.0
LSD (0.05)						**116**					

Entry	US # 1 Yield							Specific Gravity	Internal Defects (%)****			
	(cwt/A)	STATS**	%						HH	IBS	SEB	CRS
			C size	B size	4-6 oz.	6-10 oz.	10-14 oz.					
Yukon Gold	355	CDE	4	8	21	39	28	1.088	3	0	8	0
All Blue	418	BCD	15	32	30	19	4	1.087	0	1	0	0
Purple Majesty	449	ABC	9	26	29	26	10	1.087	3	0	0	0
Red LaSoda	343	DE	2	9	25	30	35	1.083	10	3	3	0
OR04077-1	348	DE	8	25	38	23	6	1.101	0	3	10	0
OR07309-1	524	A	7	35	37	21	1	1.086	0	30	0	23
OR08178-1	458	AB	5	11	29	30	25	1.081	0	0	8	0
POR09PG57-1	268	E	30	35	28	7	0	1.077	0	0	5	0
POR09NCL3-1	436	ABCD	19	38	28	13	2	1.094	0	0	3	0
PA07NC27-2Y	499	AB	10	24	32	24	9	1.110	0	0	0	0
LSD (0.05)		**98**										

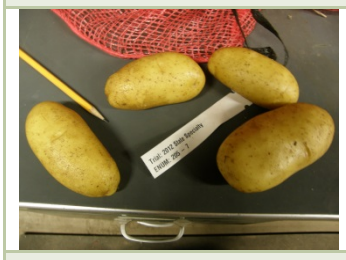
Entry	Stand %	Average Tuber		Rhizoc (1-5 none)	Shatter Bruise (1-5 none)	Russeting (1-5 hvy)	Skinning (1-5 none)	Size uniformity (1-5 ex.)	Shape uniformity (1-5 ex.)	Eye Depth (1-5 shal.)
		Wt. (oz.)	Number tubers/plant							
Yukon Gold	15	7.5	5.9	3.5	4.5	1.0	4.0	4.0	4.0	4.5
All Blue	90	4.6	11.0	4.0	4.5	2.0	4.3	3.0	2.5	2.5
Purple Majesty	82	3.5	10.6	4.0	5.0	2.5	4.5	3.5	3.5	4.0
Red LaSoda	98	7.8	7.4	3.5	4.5	1.0	4.3	3.0	3.0	2.0
OR04077-1	73	3.4	9.0	4.5	4.5	1.5	4.5	4.0	4.5	5
OR07309-1	98	2.7	16.6	4.0	4.5	2.5	5.0	4.5	4.5	4.0
OR08178-1	88	5.0	13.3	4.0	4.0	1.5	4.6	3.0	3.5	4.5
POR09PG57-1	95	2.2	12.6	2.0	5.0	1.0	5.0	4.0	4.5	3.0
POR09NCL3-1	93	2.3	17.2	4.5	4.0	1.0	4.8	4.5	4.0	4.5
PA07NC27-2Y	92	3.3	14.7	4.0	4.0	1.0	5.0	4.0	4.0	5.0

*Percent values may not total 100% due to rounding

**Entries showing the same letter are not significantly different at the 5% level

*** Includes US # 1's > 20oz

*****Internal Defects: HH=hollow heart, IBS= internal brown spot, SEB= stem end browning, CRS=corky ring-spot

Entry	2012 KBREC- Statewide Specialty Comment	Entry	2012 KBREC- Statewide Specialty Comment
Yukon Gold		**All Blue**	
	Big, Smooth, Typy, Nice		Bronzing, high culls, drop
Purple Majesty		**Red LaSoda**	
	Total junk, 90% culls		Large, lumpy, growth cracks, drop
OR04077-1		**OR07309-1**	
	Smooth, low skin defects, low yield		Poor skin, lenticel scaring, black dot, drop
OR08178-1		**POR09PG57-1**	
	Green ends, mis-shaped, pointy		Severe rhizoc, high culls
POR09NCL3-1		**PA07NC27-2Y**	
	Dull skin, road mapping, lenticels scaring, stem end nipples		Smooth, stem end nipples, impact bruise, drop

2012 Tri-State Specialty Trial

Location: OSU KBREC – Klamath Falls, OR
Planting Date: May 24
Harvest Date: October 18
Fertility: 193-116-250-132
Vine Kill Date: September 10
Days to Vine kill: 109
In-Row Spacing: 9.25 inch

The Tri-state Specialty Trial evaluates relatively advanced selections originally selected in both Oregon and Idaho. Entries are evaluated for both fresh market and processing potential in Washington, Idaho, and Oregon. Disposition of entries in this trial are determined by the Tri-state Technical Committee and if retained, advance to the Western Regional Russet Trial. Despite a warmer season, potato plots at the KBREC site performed above average. The following is a summary of the Klamath Falls field results.

Stand Counts

- **30 Day**

Slow emergence: Yukon Gold (47%), A05201-1Y (57%), A05173-6P (68%)

Plant and Tuber Growth and Development

- **Average Tuber Number Per Plant**

Most: A05182-7RY (20.7), POR06PG24-2 (18.06), POR07PG20-2 (16.8)
Least: Dark Red Norland (5.6), Yukon Gold (6.5)

- **Average Tuber Size (oz.)**

Largest: Yukon Gold (7.7), A05173-6P (5.8)
Smallest: POR02PG12-1 (1.7), POR07PG3-1 (1.7), and OR04198-1 (1.9)

- **C Size Tubers (<1.875 inch diameter and <4 oz.) cwt/Acre**

Most: POR06PG24-2 (164), POR02PG12-1 (134)
Least: Dark Red Norland (5.0), A05173-6P (8.0), A05173-2RY (8)

- **B Size Tubers (1.875-2.25 inch diameter and <4 oz.) cwt/Acre**

Most: POR07PG20-2 (169), NDA081451CB-1CY (161)
Least: Dark Red Norland (27), Yukon Gold (21)

Yield Data

- **Total Yield (cwt/Acre)**

Highest: NDA081451CB-1CY (673), A05182-7RY (644)
Lowest: OR04198-1 (296), POR02PG12-1 (299)

- **US No. 1 Yield (cwt/Acre)**

Highest: NDA081451CB-1CY (627), A05182-7RY (624)
Lowest: Yukon Gold (192), POR02PG12-1 (261)

- **% U.S. #1s**

Highest: A05182-7RY (97%), POR07PG20-2 (95%)
Lowest: Yukon Gold (61%), A02267-1Y (75%)

Tuber Defect Incidence (40 tuber sample)

- **External Defects**

All entries had a low incidence of external defects for greening, growth cracks, and knobs.

- **Internal Defects**

Most entries had low incidence of internal defects.

Entry	Skin Color	Primary skin color rating (1-5 dark)	Flesh Color	Primary flesh color rating (1-5 dark)	Total Yield		US # 1's* > 0 oz.	Culls * > 0 oz.	Oversize >14oz.	External Defects (1-5 none)	
					(cwt/A)	STATS**	% of Total Yield			Growth crack	Knobs
Dark Red Norland	Red	2.0	White	1.0	371	FGH	89	4	7	4.5	5.0
A05173-6P	Red	1.5	White	1.5	574	ABC	76	11	13	3.5	4.5
NDA050237B-R	Red	4.0	White	1.0	614	AB	91	4	6	4.5	5.0
NDA8512C-1R	Red	3.5	White	1.0	425	EFG	89	10	1	4.0	4.5
A02267-5PY	Red/Purple	3.0	Yellow	2.5	563	ABCD	94	5	1	4.5	5.0
A05173-2RY	Red/Purple	1.5	Yellow	1.5	602	AB	78	13	9	4.5	4.5
AO03545-2	Red/Purple	3.0	Yellow	2.0	355	FGH	92	8	0	4.0	4.5
Yukon Gold	Yellow	1.5	Yellow	2.0	314	GH	61	12	27	4.5	4.0
A02267-1Y	Yellow	2.0	Yellow	2.0	619	ABC	75	13	5	4.5	4.5
A05182-7RY	Rose/White	1.0	Yellow	2.0	644	A	97	3	0	5.0	5.0
A05197-1Y	Yellow	1.5	Yellow	3.0	605	AB	92	6	2	4.5	4.5
A05201-1Y	Yellow	3.0	Yellow	2.5	440	DEF	90	10	0	4.5	4.5
NDA070942-1CY	Pink	1.0	Yellow	2.0	499	BCDE	86	14	1	4.0	4.0
NDA081451CB-1CY	Yellow	2.0	Yellow	2.0	673	A	93	7	0	4.0	5.0
OR04198-1	Yellow	4.0	Yellow	5.0	296	H	90	9	1	4.5	4.5
OR08112-1	Yellow	1.0	Yellow	2.0	449	DEF	87	13	0	4.5	4.0
POR02PG12-1	White	1.5	Yellow	2.0	299	H	87	13	0	4.5	4.5
POR06PG24-2	Yellow	3.0	Yellow	2.5	366	FGH	90	10	0	5.0	4.5
POR07PG20-2	Pink	2.0	Yellow	4.5	412	EFGH	95	5	0	5.0	4.5
POR07PG3-1	Yellow	1.5	Yellow	3.0	465	CDEF	93	7	0	4.5	4.5
LSD (0.05)					**124**						

Entry	US # 1 Yield							Specific Gravity	Internal Defects (%)****			
	(cwt/A)	STATS**	%									
			C size	B size	4-6 oz.	6-10 oz.	10-14 oz.		HH	IBS	VD	SEB
Dark Red Norland	329	EFG	1	8	28	39	24	1.060	0.0	0.0	5.0	0.0
A05173-6P	437	CDE	2	10	25	38	25	1.064	0.0	0.0	2.5	7.5
NDA050237B-R	556	AB	3	19	24	35	18	1.068	0.0	0.0	0.0	2.5
NDA8512C-1R	379	DEF	3	17	34	39	7	1.071	0.0	0.0	2.5	0.0
A02267-5PY	527	ABC	6	27	39	26	2	1.083	0.0	0.0	7.5	5.0
A05173-2RY	468	BCD	2	12	22	37	27	1.065	2.5	0.0	0.0	0.0
AO03545-2	327	EFG	16	45	30	8	1	1.086	0.0	0.0	0.0	0.0
Yukon Gold	192	H	1	11	16	25	47	1.082	5.0	0.0	0.0	0.0
A02267-1Y	466	BCD	3	18	40	28	12	1.074	0.0	0.0	0.0	0.0
A05182-7RY	624	A	10	43	32	14	1	1.084	0.0	0.0	0.0	0.0
A05197-1Y	554	AB	3	18	39	29	12	1.078	0.0	0.0	0.0	0.0
A05201-1Y	397	DE	10	38	35	14	3	1.082	2.5	0.0	0.0	0.0
NDA070942-1CY	428	CDE	8	35	31	22	4	1.061	0.0	2.5	0.0	0.0
NDA081451CB-1CY	627	A	4	26	38	30	3	1.089	0.0	0.0	0.0	5.0
OR04198-1	268	FGH	28	35	26	9	2	1.073	0.0	0.0	0.0	2.5
OR08112-1	392	DE	23	30	30	15	2	1.065	0.0	0.0	0.0	7.5
POR02PG12-1	261	GH	51	42	7	0	0	1.080	0.0	2.5	0.0	0.0
POR06PG24-2	329	EFG	50	39	10	1	0	1.081	0.0	0.0	0.0	2.5
POR07PG20-2	391	DE	17	43	30	9	0	1.067	0.0	0.0	2.5	2.5
POR07PG3-1	434	CDE	7	28	36	20	9	1.073	0.0	0.0	0.0	0.0
LSD (0.05)		**114**										

Entry	Stand %	Average Tuber		Length Width Ratio	Shatter Bruise (1-5 none)	Russeting (1-5 hvy)	Rhizoc (1-5 none)	Size uniformity (1-5 ex.)	Shape uniformity (1-5 ex.)	Eye Depth (1-5 shal.)
		Wt. (oz.)	Number tubers/plant							
Dark Red Norland	94	5.5	5.7	1.15	4.5	1.0	4.6	3.5	4.0	4.0
A05173-6P	68	5.8	8.3	1.35	4.0	1.0	4.9	3.5	4.1	4.0
NDA050237B-R	73	4.37	12.6	1.04	4.3	1.0	2.8	3.5	4.4	4.0
NDA8512C-1R	74	4.3	8.3	1.14	2.6	1.5	4.0	3.5	3.9	4.0
A02267-5PY	92	2.9	16.8	0.97	4.0	1.0	4.3	4.0	4.1	4.0
A05173-2RY	88	5.2	9.9	1.31	4.4	1.0	5.0	4.0	4.3	4.0
AO03545-2	75	2.3	6.5	1.31	3.0	1.5	3.0	4.0	4.0	4.0
Yukon Gold	47	7.7	14.2	1.28	4.4	1.5	2.4	4.5	4.5	4.5
A02267-1Y	75	3.7	20.7	1.24	4.0	1.0	4.8	4.0	4.0	4.0
A05182-7RY	75	2.7	11.4	1.13	4.3	1.0	4.6	4.5	4.5	4.0
A05197-1Y	85	4.6	13.2	1.17	4.1	1.0	4.8	4.0	4.1	4.0
A05201-1Y	57	2.9	14.7	1.09	4.4	1.0	4.6	4.0	4.5	4.0
NDA070942-1CY	97	3.1	13.6	1.03	3.6	1.5	3.9	3.5	3.9	4.0
NDA081451CB-1CY	98	3.9	14.7	1.14	4.0	1.0	2.3	4.0	4.4	4.0
OR04198-1	97	1.9	13.7	1.31	4.4	1.0	1.6	4.0	3.8	3.5
OR08112-1	82	2.6	15.8	2.75	4.4	1.0	4.3	4.0	4.0	4.0
POR02PG12-1	91	1.7	16.8	1.43	3.0	1.5	4.0	4.5	4.0	3.5
POR06PG24-2	83	1.7	18.0	2.51	4.5	1.0	3.5	4.5	4.5	4.5
POR07PG20-2	80	2.0	16.8	1.03	4.4	1.0	4.8	4.0	4.6	4.0
POR07PG3-1	84	3.1	13.2	0.93	3.8	1.0	4.5	3.5	4.1	4.0

*Percent values may not total 100% due to rounding

**Entries showing the same letter are not significantly different at the 5% level

*** Includes US # 1's > 20oz

*****Internal Defects: HH=hollow heart, IBS= internal brown spot, VD= vesicular discoloration, SEB= stem end browning

Entry	2012 KBREC- Tri-State Specialty Comment	Entry	2012 KBREC- Tri-State Specialty Comment
Dark Red Norland		**A05173-6P**	
	Bronzing, high cullage, drop		Smooth, low skin defects, color issues?
NDA050237B-1R		**NDA8512C-1R**	
	Smooth, shiny, low skin defects, some rhizoc		Bronzing, shatter bruise, poor skin, high cullage, drop
A02267-5PY		**A05173-2RY**	
	High black dot/bronzing, high cullage, drop		Smooth, low skin defects, ugly color
AO03545-2		**Yukon Gold**	
	Bronzing, mis-shaped, shatter bruise, high cullage, drop		Smooth, typy, large, keep
A02267-7		**A05182-7RY**	
	Smooth, typy, low skin defects, some black dot, keep		Small, typy, low skin defects, ugly color

Entry	2012 KBREC- Tri-State Specialty Comment	Entry	2012 KBREC- Tri- State Specialty Comment
A05197-1Y		**A05201-1Y**	
	Inconsistent eye-splash, flat, looks like Yukon Gold, drop		Small, typy, lenticel scaring, nothing special, drop
NDA070942-1CY		**NDA081451CB-1CY**	
	Rot, mis-shaped, ugly color, drop		Smooth, rhizoc bad, high cullage, drop
OR04198-1		**OR05112-1**	
	Sprouts, Rhizoc bad, high cullage, drop		Stem end rot, pointy stem end, drop
POR02PG12-1		**POR06PG24-2**	
	Shatter bruise, impact bruise, poor, drop		Nice, typy, low defects, high pack out
POR07PG20-2		**POR07PG3-1**	
	Sprouts, smooth, low skin defects		Smooth, sprouts, impact bruise, shatter bruise

2012 Regional Specialty Trial

Location: OSU KBREC – Klamath Falls, OR
Planting Date: May 24
Harvest Date: October 18
Fertility: 193-116-250-132
Vine Kill Date: September 10
Days Grown: 109
In-Row Spacing: 9.25 inch

Regional Trials are evaluated at multiple locations in Oregon, Washington, Idaho, Colorado, Texas, and California. Entries graduating from Tri-state and Southwestern (CO, TX, CA) trials are included in this trial. Entry disposition is determined by the Western Regional Technical Committee. Entries are typically evaluated for three years (if applicable) before graduating. Upon graduation, sponsoring states (state making initial selection) determine if the selection will be eligible for commercial release and assume the lead role in acquiring Plant Variety Protection (PVP). This trial included two standard varieties and 13 new clones at the KBREC location. Only Tri-state entries originating in Oregon and Idaho were evaluated at KBREC due to budgetary constraints. Despite a warm growing season and heavier than normal nematode pressure, potato plots at the KBREC site performed above average for total yield. The following is a summary of the Klamath Falls field results.

Stand Counts

- **30 Day**

Slow emergence: Purple Majesty (24%), Dark Red Norland (40%), CO00291-5R (49%)

- **C Size Tubers (< 1.875 inch diameter and <4 oz.) cwt/Acre**

Most: POR05PG56-1 (93), OR04131-2 (39)
Least: Yukon Gold (1), COTX01403-4R/Y (2), CO04021-2R/Y (5)

- **B Size Tubers (1.875-2.25 inch diameter and <4 oz.) cwt/Acre**

Most: POR05PG56-1 (221), CO0413-1W/Y (198)
Least: ATTX98453-6R (27), Dark Red Norland (29)

Yield Data

- **Total Yield (cwt/Acre)**

Highest: CO04021-2R/Y (720), COTX01403-4R/Y (708)
Lowest: Purple Majesty (262), OR04131-2 (310)

- **US No. 1 Yield (cwt/Acre)**

Highest: ATTX98468-5R/Y (545), CO0413-1W/Y (587)
Lowest: Yukon Gold (203), Purple Majesty (237)

- **% U.S. #1s**

Highest: POR05PG56-1 (95), CO0413-1W/Y (93)
Lowest: Red LaSoda and CO04021-2R/Y (60%)

Tuber Defect Incidence (40 tuber sample)

- **Internal Defects**
  Two entries had high incidence of impact bruise (IB); ATX03564-1Y/Y (23%) and CO00277-2R (20%). Red LaSoda exhibited hollow heart (15%).

Entry	Skin Color	Primary skin color rating (1-5 dark)	Flesh Color	Total Yield		US # 1's* > 0 oz.	Culls* > 0 oz.	Oversized >14oz.
				(cwt/A)	STATS**	% of Total Yield		
Dark Red Norland	Red	1	White	398	D	82	11	7
Red LaSoda	Red	1	White	579	B	60	35	5
ATTX98453-6R	Red	1	White	416	CD	63	12	25
CO00277-2R	Red	1	White	555	B	85	12	3
CO00291-5R	Red	1	White	374	DE	86	12	2
OR04131-2	Red	1	White	310	DE	93	7	0
ATTX98468-5R/Y	Red-Purple	2	Yellow	831	A	66	22	13
CO04021-2R/Y	Red-Purple	3	Yellow	720	A	60	35	5
COTX01403-4R/Y	Red-Purple	2	Yellow	708	A	45	25	30
Purple Majesty	Purple	5	Purple	262	E	90	9	1
POR05PG56-1	Purple	3	Purple	424	CD	95	5	0
Yukon Gold	Yellow	3	Yellow	330	DE	62	11	27
ATX03564-1Y/Y	Yellow	2	Yellow	748	A	63	33	5
CO0413-1W/Y	Yellow	3	Yellow	525	BC	93	7	0
OR04036-5	Yellow	3	Yellow	369	DE	84	12	4
LSD (0.05)					**126**			

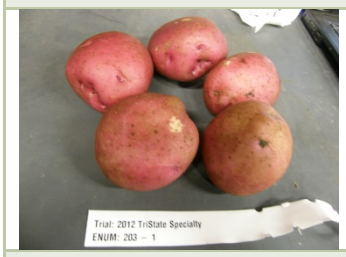
Entry	US # 1 Yield							Stand	Internal Defects (%) ****			
	(cwt/A)	STATS**	%*									
			C size	B size	4-6 oz.	6-10 oz.	10-14 oz.	%	HH	IBS	IB	SEB
Dark Red Norland	325	CDE	3	9	19	44	26	40	3	0	13	0
Red LaSoda	346	CDE	1	9	28	37	25	87	15	5	10	0
ATTX98453-6R	262	EF	2	10	19	31	39	62	0	0	10	3
CO00277-2R	470	AB	3	16	27	37	17	80	0	0	20	3
CO00291-5R	320	DE	2	14	25	43	16	57	0	0	10	7
OR04131-2	288	EF	14	44	37	5	0	84	0	0	13	8
ATTX98468-5R/Y	545	A	2	11	26	28	33	100	0	0	10	3
CO04021-2R/Y	431	BC	1	8	26	42	23	83	0	0	20	0
COTX01403-4R/Y	319	DE	1	6	17	33	43	87	0	0	10	0
Purple Majesty	237	EF	17	27	30	21	5	24	0	0	0	0
POR05PG56-1	402	BCD	23	55	21	1	0	94	0	0	0	0
Yukon Gold	203	F	0	13	16	23	48	57	3	0	0	0
ATX03564-1Y/Y	468	AB	3	13	34	27	23	95	0	0	23	13
CO0413-1W/Y	487	AB	6	41	40	11	2	99	3	0	10	0
OR04036-5	312	DEF	2	18	27	33	21	59	0	0	20	3
LSD (0.05)		**110**										

*Percent values may not total 100% due to rounding

**Entries showing the same letter are not significantly different at the 5% level

*** Includes US # 1's > 20oz

*****Internal Defects: HH=hollow heart, IBS= internal brown spot, IB= impact bruise, SEB= stem end browning

Entry	2012 KBREC- Regional Specialty Comment	Entry	2012 KBREC- Regional Specialty Comment
Dark Red Norland		**Red LaSoda**	
	Pale, larger, poor		Large, lumpy, growth cracks, low skin defects
ATTX98453-6R		**CO00277-2R**	
	Pale, lenticel scaring, skin bronzing, shatter bruise, drop		Severe rhizoc, skinning, bronzing, high cullage, drop
CO00277-2R		**CO00291-5R**	
	Skinning, shatter bruise, bronzing, drop		Typy, smooth, low skin defects
ATTX98468-5R/Y		**CO04021-2R/Y**	
	Pale color, mis-shaped, Red LaSoda look-alike, drop		Large, green ends, flat, high skin defects, drop
COTX01403-4R/Y		**Purple Majesty**	
	One big bucket of culls		Junky skin, 80% culls at the packing shed, drop

Entry	2012 KBREC- Regional Specialty Comment	Entry	2012 KBREC- Regional Specialty Comment
POR05PG56-1		**Yukon Gold**	
	Typy, low skin defects,		Large, smooth, low skin defects
ATX03564-1Y/Y		**CO04013-1W/Y**	
	Sprouts, pears, junky skin, drop		Skin russeting, lenticel scaring, dingy color, sprouts, drop
OR04036-5			
	Smooth, typy, low skin defects		

2012 Preliminary Yield (PYT-2) Chip Trial

Location: Klamath Falls
Planting Date: May 25
Harvest Date: October 12
Fertility: 193-116-250-132
Vine Kill Date: September 10
Days to Vine kill: 108 days
In-Row Spacing: 9.25 inch

The PYT-2 Chip Trial evaluates recently selected clones, often only two years removed from single-hill selection. Retained entries are further evaluated in replicated trials at several Oregon locations before advancing (if applicable) to the Tri-state trial which includes testing locations in Washington and Idaho. Fourteen selections were evaluated with five retained for further evaluation.

Clone	Male Parent	Female Parent
AOR01144-3	A091812-1	COA96141-2
AOR08087-4	A91814-5	AO0188-3C
OR09253-1	C097065-7W	Dakota Diamond
OR09256-2	N/A	N/A
NDOR071227CB-1	ND 860-2	ND 028888CB-1

2012 State Chip Trial

Location: OSU KBREC – Klamath Falls, OR
Planting Date: May 23 Vine Kill Date: September 10
Harvest Date: October 17 Days Grown: 110
Fertility: 193-116-250-132 In-Row Spacing: 9.25 inch

Chipping potatoes comprise a significant portion of Klamath Basin acreage and identification of public varieties suitable for export remains a high priority for Basin producers. Trials were initiated in 2008 and 2009 with funding from the Oregon Potato Commission to identify acceptable chipping varieties for export markets using advanced selections and recently released varieties from the Tri-State, Southwest, North-central, and Eastern breeding programs. In 2012 eight varieties and advanced chipping selections were evaluated for yield, grade, processing quality, and storability to determine their suitability to meet existing export demands for raw product. All field data was collected at the KBREC site. Tubers from each replication were placed in long-term commercial storage with processing evaluations conducted by Baley-Trotman Farms. Results for 2012 are listed below.

Stand Counts

- **30 Day**

  Slow emergence: NDOR082305CB-5 (76%), NDOR071282CB-2 (83%)

Plant and Tuber Growth and Development

- **Average Tuber Number Per Plant**

  Most: NDOR07128CB (14.5), NDOR071227CB-1 (12.1)
  Least: Chipeta (5.9), NDOR071109C-1 (8.3)

- **Average Tuber Size (oz.)**

  Largest: Chipeta (7.6), Atlantic and NDOR082305CB-5 (7.1)
  Smallest: NDOR07128CB and NDOR071227CB-1 (4.1)

- **Undersized Tubers (<4 oz.) cwt/Acre**

  Most: NDOR071227CB-1 (127), NDOR07128CB (95)
  Least: Atlantic (19), Chipeta (24),

Yield Data

- **Total Yield (cwt/Acre)**

  Highest: NDOR07128CB (715), NDOR082305CB-5 (707)
  Lowest: NDOR071109C-1and Chipeta (530)

- **Marketable Yield >4 oz. (cwt/Acre)**

  Highest: NDOR07128CB (540), NDOR071282CB-2 (480)
  Lowest: Chipeta (301), NDOR071109C-1 (422)

- **% Marketable Yield >4 oz.**

  Highest: NDOR082305CB-5 (650), Atlantic (584)
  Lowest: Chipeta (462), NDOR071227CB-1 (433)

Tuber Defect Incidence (40 tuber sample)

- **External Defects**

NDOR071227CB-1 and NDOR071282CB-2 showed a propensity for shatter bruise.

- **Internal Defects**

Hollow Heart: Atlantic (42.5%)

Vascular discoloration: NDOR071109C-2 (12.5%)

Stem end browning: NDOR071109C-1 (10%)

Entry	Total Yield		> 4 oz.*	< 4 oz.*	Oversized > 14 oz.	Culls*	Skin color rating (1-5 dark)
	(cwt/A)	STATS**		% of Total Yield			
Atlantic	689	AB	62.7	2	22	12.5	1.6
Chipeta	530	C	56.7	4	30	8.5	1.4
NDOR071109C-1	530	C	79.5	7	9	3.2	1.0
NDOR071109C-2	629	ABC	67.6	7	17	6.7	1.0
NDOR082305CB-5	707	A	67.3	5	24	2.2	1.0
NDOR071227CB-1* **	588	BC	71.9	21	1	4.8	1.0
NDOR071282CB-2	660	AB	72.8	9	9	8.4	1.0
NDOR07128CB	715	A	75.5	13	5	5.5	1.0
LSD (0.05)		**108**					

Entry	Yield US # 1 (>4 oz.)					External Defects (1-5 none)			
	(cwt/A)	STATS**	%*			Green	Growth crack	Knobs	Shatter
			4-6 oz.	6-10 oz.	10-14 oz.				
Atlantic	432	AB	18.1	27.2	28.6	3.5	4.0	4.0	4.0
Chipeta	301	C	9.1	24.1	32.0	3.5	4.1	4.0	3.9
NDOR071109C-1	422	B	28.1	37.3	23.8	4.5	4.9	4.9	4.3
NDOR071109C-2	425	B	20.2	30.5	28.3	4.1	5.0	4.6	4.5
NDOR082305CB-5	476	AB	15.5	29.4	28.3	4.4	4.9	5.0	4.3
NDOR071227CB-1* **	423	A	42.2	38.0	17.5	4.5	5.0	4.8	3.3
NDOR071282CB-2	480	AB	35.8	31.3	21.0	4.5	4.9	4.9	2.9
NDOR07128CB	540	A	33.8	30.4	28.7	4.3	5.0	5.0	3.8
LSD (0.05)									

Entry	Specific Gravity	Stand %	Average Tuber		Internal Defects (%)*						
			Wt. (oz.)	Number tubers/plant	HH	BC	IBS	SEB	VD	HB	IB
Atlantic	1.093	79	7.1	8.3	42.5	0.0	2.5	0.0	0.0	0.0	7.5
Chipeta	1.087	95	7.6	5.9	7.5	0.0	0.0	0.0	2.5	0.0	5.0
NDOR071109C-1	1.064	90	5.5	8.2	0.0	2.5	0.0	10.0	2.5	5.0	5.0
NDOR071109C-2	1.062	93	6.0	9.0	5.0	0.0	10.0	5.0	12.5	5.0	2.5
NDOR082305CB-5	1.084	76	7.1	8.4	2.5	0.0	0.0	5.0	2.5	5.0	10.0
NDOR071227CB-1* **	1.083	94	4.1	12.1	12.5	0.0	2.5	7.5	5.0	2.5	7.5
NDOR071282CB-2	1.072	83	6.1	9.2	0.0	0.0	0.0	2.5	0.0	7.5	7.5
NDOR07128CB	1.068	90	4.1	14.5	0.0	0.0	7.5	2.5	0.0	7.5	5.0

*Percent values may not total 100% due to rounding

**Entries showing the same letter are not significantly different at the 5% level

*** Includes US # 1's > 20oz

*****Internal Defects: HH=hollow heart, BC= brown center, IBS= internal brown spot, SEB= stem end browning VD= vascular discoloration, HB= hard bite, IB= impact bruise

Entry	Rhizoc (1-5 ex.)	Russeting (1-5 hvy)	Shape (1-5 long)	Size uniformity (1-5 ex.)	Shape uniformity (1-5 ex.)	Eye Depth (1-5 shal.)
Atlantic	3.5	1.9	1.6	3.9	4.0	4.4
Chipeta	2.9	1.7	1.8	3.5	3.8	4.1
NDOR071109C-1	4.5	1.0	1.5	3.9	4.5	4.4
NDOR071109C-2	4.6	1.0	1.0	4.2	4.5	4.1
NDOR082305CB-5	3.6	1.0	1.0	3.9	4.4	4.5
NDOR071227CB-1* **	4.0	1.0	1.0	4.1	4.4	4.5
NDOR071282CB-2	4.0	1.0	1.0	3.9	4.5	4.6
NDOR07128CB	4.1	1.0	1.0	4.1	4.8	5.0

Entry	2012 KBREC-State Chip Comment	Entry	2012 KBREC- State Chip Comment
Atlantic		**Chipeta**	
	Rough, fair		Large, rough, fair
NDOR071109C-1		**NDOR071109C-2**	
	Typy, low impact bruise, smooth, keep		Nice smooth, low impact bruise, keep
NDOR071204CB-5		**NDOR071227CB-1**	
	Lenticel scaring, low impact bruise, smooth, keep		Small, impact bruise, black dot
NDOR071282-2		**NDOR071282CB-4**	
	Impact bruise, rot, drop		Rot, impact bruise, rot, drop

2012 Regional Chip Trial

Location: OSU KBREC – Klamath Falls, OR
Planting Date: May 24
Harvest Date: October 18
Fertility: 193-116-250-132
Vine Kill Date: September 10
Days Grown: 109
In-Row Spacing: 9.25 inch

Chipping potatoes comprise a significant portion of Klamath Basin acreage and identification of public varieties suitable for export remains a high priority for Basin producers. Trials were initiated in 2008 and 2009 with funding from the Oregon Potato Commission to identify acceptable chipping varieties for export markets using advanced selections and recently released varieties from the Tri-State, Southwest, North-central, and Eastern breeding programs. In 2012 thirteen varieties and advanced chipping selections were evaluated for yield, grade, processing quality, and storability to determine their suitability to meet existing export demands for raw product. All field data was collected at the KBREC site. Tubers from each replication were placed in both short and long-term commercial storage with processing evaluations conducted by Baley-Trotman Farms. Results for 2012 are listed below.

Stand Counts

- **30 Day**

Slow emergence: Atlantic (48%), A01143-3C (64%)

Plant and Tuber Growth and Development

- **Average Tuber Number Per Plant**

Most: Accumulator (11.9), Tundra (W2310-3) (11.2)
Least: Atlantic (2.9), A01143-3C (5.2)

- **Average Tuber Size (oz.)**

Largest: Atlantic (8.8), CO03243-3W (8.5)
Smallest: Tundra (W2310-3) (4.6), AC01151-5W 94.3)

- **Undersized Tubers (<4 oz.) cwt/Acre**

Most: AC01151-5W (90), Lamoka (84)
Least: Atlantic (5), CO03243-3W (85)

Yield Data

- **Total Yield (cwt/Acre)**

Highest: CO03243-3W (667), Chipeta (659)
Lowest: Atlantic (294), A01143-3C (316)

- **Marketable Yield >4 oz. (cwt/Acre)**

Highest: CO03243-3W (642), Chipeta (616)
Lowest: Atlantic (244), A01143-3C (285)

- **% Marketable Yield >4 oz.**
- Highest: A01143-3C (94.84), Tundra (W2310-3) (94.5)
- Lowest: Atlantic (62.24), Chipeta (72.02)

Tuber Defect Incidence (40 tuber sample)

- **External Defects**

AC03433-1W exhibited a fair amount of tuber greening. Lamoka and CO02033-1W showed a propensity for shatter bruise.

- **Internal Defects**

Hollow Heart: Atlantic (62.5%), A00188-3C (22.5%), AC03433-1W (22.5%)

Hard Bite: Atlantic and Tundra (W2310-3) (25%)

Entry	Total Yield		> 4 oz.*	< 4 oz.*	Culls*	Oversize > 14oz.	Skin color rating (1-5 dark)
	(cwt/A)	STATS**	% of Total Yield				
Atlantic	294	G	50	2	17	33	1.6
Chipeta	659	A	64	6	6	30	1.3
A00188-3C	501	CD	85	11	6	9	1.0
A01143-3C	316	FG	83	7	10	7	1.0
AC01151-5W	484	BCD	95	19	4	1	1.0
AC03433-1W	533	CD	75	5	7	18	1.0
CO02024-9W	430	CDE	93	16	1	5	1.0
CO02033-1W	424	DE	93	12	4	2	1.1
CO02321-4W	465	CDE	87	7	6	7	1.0
CO03243-3W	667	AB	67	3	4	29	1.0
Lamoka	510	ABC	83	16	5	12	1.0
Accumulator	610	AB	91	12	6	2	1.4
Tundra (W2310-3)	384	EF	94	10	6	0	1.6
LSD (0.05)		**112**					

Entry	Yield US # 1 (>4 oz.)					External Defects (1-5 none)			
	(cwt/A)	STATS**	%*			Green	Growth crack	Knobs	Shatter
			4-6 oz.	6-10 oz.	10-14 oz.				
Atlantic	146	D	14.4	43.8	41.8	3.9	4.1	4.5	3.4
Chipeta	420	B	20.5	37.2	42.4	3.8	4.8	5.0	3.9
A00188-3C	425	B	36.4	42.2	21.4	4.5	4.8	5.0	4.3
A01143-3C	262	C	30.9	40.5	28.6	4.0	4.6	5.0	3.9
AC01151-5W	459	AB	42.0	42.6	15.4	4.3	5.0	5.0	4.5
AC03433-1W	400	B	22.1	38.4	39.6	3.6	4.6	5.0	4.1
CO02024-9W	402	B	52.4	38.0	9.6	4.4	5.0	5.0	4.1
CO02033-1W	396	B	47.3	40.9	11.8	4.0	5.0	5.0	3.3
CO02321-4W	405	B	27.2	40.8	32.0	3.8	5.0	5.0	4.6
CO03243-3W	448	B	19.5	37.8	42.7	4.1	4.8	5.0	4.1
Lamoka	421	B	39.9	39.7	20.4	4.5	4.9	5.0	3.1
Accumulator	558	A	39.7	41.8	18.6	4.3	4.9	5.0	3.9
Tundra (W2310-3)	362	BC	40.6	47.1	12.3	4.1	5.0	5.0	4.4
LDS (0.05)		**106**							

Entry	Stand %	Average Tuber			Internal Defects (%)****						
		Wt. (oz.)	Number tubers/plant	Specific Gravity	HH	BC	IBS	SEB	VD	HB	IB
Atlantic	48	8.8	2.9	1.091	62.5	0.0	0.0	0.0	0.0	25.0	5.0
Chipeta	95	7.1	8.4	1.083	0.0	0.0	0.0	0.0	0.0	15.0	7.5
A00188-3C	98	5.2	9.0	1.090	22.5	0.0	2.5	2.5	0.0	7.5	2.5
A01143-3C	64	5.6	5.2	1.089	2.5	2.5	0.0	0.0	0.0	20.0	2.5
AC01151-5W	90	4.3	11.2	1.085	7.5	0.0	0.0	5.0	0.0	12.5	5.0
AC03433-1W	71	7.1	6.7	1.084	22.5	0.0	0.0	0.0	0.0	20.0	0.0
CO02024-9W	96	4.3	10.0	1.085	0.0	0.0	0.0	2.5	0.0	22.5	25.0
CO02033-1W	71	4.8	8.4	1.096	17.5	0.0	2.5	0.0	2.5	17.5	0.0
CO02321-4W	91	6.0	7.1	1.091	2.5	0.0	0.0	2.5	0.0	22.5	2.5
CO03243-3W	92	8.5	6.9	1.086	5.0	0.0	0.0	0.0	0.0	12.5	10.0
Lamoka	68	4.8	10.7	1.070	5.0	0.0	0.0	0.0	2.5	20.0	5.0
Accumulator	98	4.8	11.9	1.096	7.5	0.0	0.0	0.0	0.0	17.5	7.5
Tundra (W2310-3)	98	4.6	7.6	1.098	0.0	0.0	0.0	0.0	0.0	25.0	12.5

*Percent values may not total 100% due to rounding

**Entries showing the same letter are not significantly different at the 5% level

*** Includes US # 1's > 20oz

*****Internal Defects: HH=hollow heart, BC=brown center, IBS=internal brown spot, SEB=stem end browning, VD=vascular discoloration, HB=hard bite, IB= impact bruise

Entry	Rhizoc (1-5 ex.)	Russeting (1-5 hvy)	Shape (1-5 long)	Size uniformity (1-5 ex.)	Shape uniformity (1-5 ex.)	Eye Depth (1-5 shal.)
Atlantic	4.1	1.6	2.0	2.5	2.6	4.5
Chipeta	3.9	1.5	1.4	3.5	4.0	4.3
A00188-3C	4.5	1.0	1.0	3.9	4.5	4.9
A01143-3C	2.6	1.0	1.1	3.1	4.0	4.6
AC01151-5W	4.8	1.0	1.0	4.3	5.0	4.6
AC03433-1W	4.6	1.4	1.0	3.5	4.8	4.9
CO02024-9W	4.4	1.0	1.0	4.3	4.3	4.9
CO02033-1W	4.9	1.1	1.3	3.9	3.9	5.0
CO02321-4W	3.6	1.0	1.0	3.4	4.6	5.0
CO03243-3W	4.4	1.5	1.0	4.4	4.9	4.6
Lamoka	3.9	1.0	1.0	4.0	4.4	5.0
Accumulator	4.4	1.8	1.6	3.4	3.9	4.0
Tundra (W2310-3)	5.0	1.8	1.1	3.5	3.9	4.8

Entry	2012 KBREC- Regional Chip Comments
Atlantic	Poor, Fair
Chipeta	Large, green end rot, shatter bruise
A00188-3C	Typy, smooth, low impact bruise
A01143-3C	Poor, impact bruise, folded bud end
AC01151-5W	Typy, smooth, impact bruise, best appearance
AC03433-1W	Typy, lenticel scaring, erratic size
CO02024-9W	Flat, small, impact bruise, drop
CO02033-1W	Flat, shatter bruise, impact bruise, drop
CO02321-4W	Nice, smooth, erratic size
CO03243-3W	Typy, large, impact bruise
Lamoka	Smooth, typy, shatter bruise
Accumulator	Lumpy, stem end nipples, poor
Tundra (W2310-3)	Flat, black dot, small, poor

2011 Chip Processing Results

Processing results of the 2011 Chip Variety Trial are included in the following graphs. Potatoes were processed in April, 2011.

Likewise, 2012 processing data will be included in the 2013 report.

Entry	Specific Gravity[1]		TDF %[2]	Solids	Sugars	
	Field	Storage			Dextrose	Sucrose
Atlantic	1.090	1.088	29.4	18.26	N/A	N/A
Chipeta	1.090	1.091	26.0	18.62	N/A	N/A
A01143-3C	1.091	1.091	4.9	18.64	N/A	N/A
AC01151-5W	1.082	1.078	14.4	16.34	N/A	N/A
CO00188-4W	1.081	1.084	20.1	17.45	N/A	N/A
CO00197-3W	1.086	1.077	59.8	16.23	N/A	N/A
CO00270-7W	1.079	1.070	0.0	14.95	N/A	N/A
CO02024-9W	1.083	1.083	30.1	17.30	N/A	N/A
CO02033-1W	1.095	1.095	13.1	19.42	N/A	N/A
CO02321-4W	1.094	1.094	19.4	19.25	N/A	N/A
Marcy	1.085	1.083	29.8	17.36	N/A	N/A
NY115	1.083	1.085	17.7	17.59	N/A	N/A
NY138 (Weneta)	1.089	1.089	21.0	18.29	N/A	N/A
NY139 (Lamoka)	1.097	1.095	24.4	19.29	N/A	N/A
NY140	1.085	1.084	24.5	17.38	N/A	N/A
Mega Chip	1.095	1.090	21.1	18.64	N/A	N/A
W2133-1 (Nicolet)	1.091	1.086	25.2	17.94	N/A	N/A
W2310-3 (Tundra)	1.094	1.092	13.0	18.92	N/A	N/A

[1] Specific gravity measured out of field and after storage for 2 months at 500 F.

[2] % Total Defects = % of finished chips out of grade; includes internal & external defects (e.g. HH, Green, Dark Color, etc.)

[3] Percent fresh weight basis measured after storage for 2 months at 500 F.

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