

2011 TRI-STATE POTATO VARIETY TRIAL REPORT



State Experiment Stations and
USDA-ARS Cooperating

Washington

Oregon

Idaho

2011 TRI-STATE POTATO VARIETY TRIAL REPORT

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Compiled by Peggy Bain

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TABLE 1: 2011 Tri-State Potato Variety Trial - LOCATIONS, COOPERATORS, AND CULTURAL INFORMATION

Locations	Cooperators	Trial	Irrigation	Fertilizer N-P-K-S(lb/A)	Planting Date	Vine Kill Date	Harvest Date	Days to Vine Kill	Days to Harvest	Herbicides	Insecticides	Fungicides
Aberdeen Idaho (ID)	J. Stark J. Whitworth R. Novy P. Bain M. Chappell	Late	Sprink.	235-160-150-50S	4-May	7-Sep mechanical	22-Sep	126	141	Sencor Matrix Eptam	Admire Pro	Echo Dithane
Hermiston Oregon (HOR)		Late	Pivot	387-280-200-70+	15-Apr approximatly	6-Sep Gramoxone	12-Sep	144	150	Matrix Dual Magnum	Oberon Leverage Agri Mek	Bravo Dithane Omega
Klamath Falls Oregon (KOR)	B. Charlton D. Culp	Late	solid set	161-173-34-43S	24-May	12-Sep Reglone, PRO AMS Unusually wet spring conditions delayed planting. Used high amounts of insecticides due to raising seed at Klamath site.	17-Oct	111	146	Matrix Prowl H2O Outlook Eptam 7E	Admire Pro Leverage Endigo Movento Assail 70 WP Helena Fulfill	Moncut Ridomil Gold Bravo
Othello (EWA) Washington	M Pavek R. Knowles N. Fuller Z. Holden	Early	Liner	180-100-350	7-Apr	1-Aug mechanical	22-Aug	116	137	Matrix Metribuzin DF Chateau	Omega	Penncozeb
Othello (LWA) Washington	M Pavek R. Knowles N. Fuller Z. Holden	Late	Liner	335-250-480	14-Apr	15-Sep Mechanical	19-Sep	154	158	Matrix Metribuzin DF Chateau	Omega Onager	Penncozeb

TABLE 2: 2011 Tri-State Potato Variety Trial - CLONE, PARENTS, FLOWER COLOR, ENTERED BY, SEED SOURCE, STAND,
TUBER AND VINE CHARACTERISTICS, STEMS PER PLANT

No	Clone	Parents	Flower Color	Entered by	Use	Trial Year	Seed Source	Mean Stand %	Tuber				Vine			Stems/ Plant	
									Means	Shape	Means	Skin	Means	Size	Means		Maturity
1	Ranger Russet	Butte A6595-3	Med Red- purple	Check	Dual	Ck	ID	99	4.3	Long	3.9	Med Russet	2.8	Medium	2.9	Med Early	2.4
2	Russet Burbank	Early Rose ?	White	Check	Dual	Ck	ID	96	3.7	Obl-Lng	3.6	Med Russet	3.0	Medium	3.1	Medium	2.1
3*	Russet Norkotah	ND9687-5 Ru ND9526-4 Ru	White	Check	Fresh	Ck	ID	93	3.8	Obl-Lng	4.2	Med Hvy Rus	.	Very Large	3.6	Med--late	2.4
4	A98196-5	A9201-2 A9305-9	White	ID	Dual	1	ID	92	3.3	Oblong	3.2	Med Russet	2.3	Small	2.6	Med Early	1.6
5	A99029-3E	A9230-5 Summit R	White	ID	Dual	1	ID	97	3.3	Oblong	3.3	Med Russet	3.0	Medium	2.5	Early	1.5
6	A02062-1TE	A97201-4 A97299-1	White	ID	Dual	2	ID	93	4.4	Long	4.3	Med Hvy Rus	2.0	Small	2.4	Early	1.5
7	A02138-2	A96563-8 Premier R	White	ID	Dual	1	ID	98	2.2	Rnd-Obl	3.0	Light Russet	2.0	Small	2.6	Med Early	2.3
8	A02144-2	A97123-10 A96563-8	White	ID	Dual	1	ID	96	2.9	Oblong	3.7	Med Russet	1.3	Small	2.1	Early	2.2
9	A02507-2LB	EGA0902-2 GemStar R	White	ID	Dual	1	ID	98	3.1	Oblong	3.5	Med Russet	3.0	Medium	2.7	Med Early	2.2
10	A03131-4TE	A98082-17 A98104-4	White	ID	Dual	1	ID	96	2.5	Rnd-Obl	4.0	Med Russet	2.0	Small	2.9	Med Early	2.3
11	A03158-2TE	A98292-2 A98104-4	White	ID	Dual	1	ID	98	3.4	Oblong	3.7	Med Russet	2.8	Medium	2.8	Med Early	2.2
12	A001114-4	AO92017-6 A86102-6	White	OR	Dual	2	OR	97	3.1	Oblong	3.4	Med Russet			3.3	Medium	1.9
13	A002060-3	A97201-4 Premier R	White	OR	Dual	2	OR	93	2.8	Oblong	3.4	Med Russet			3.6	Med--late	2.2
14	OR05039-4	AO95245-2 PA00N29-3	White	OR	Dual	1	OR	94	4.2	Long	1.9	White			3.5	Medium	1.8

TABLE 3: 2011 Tri-State Potato Variety Trial - TOTAL YIELD (CWT/A) - EARLY AND LATE HARVEST

No.	Clone	Total Yield - Early Harvest (CWT/A)			Total Yield - Late Harvest (CWT/A)					
		(EWA)	Entry Mean	Rank	(ID)	(OR)		(LWA)	Entry Mean	Rank
					Herm	KF				
1	Ranger Russet	468	468	7	491	1057	562	810	730	3
2	Russet Burbank	487	487	5	430	1021	514	807	693	4
3	Russet Norkotah	360	360	14		465	513	513	497	
4	A98196-5	505	505	3	405	940	518	699	641	5
5	A99029-3E	511	511	2	464	845	447	668	606	7
6	A02062-1TE	442	442	8	375	625	450	605	514	10
7	A02138-2	483	483	6	402	902	452	789	636	6
8	A02144-2	428	428	11	361	629	487	648	531	9
9	A02507-2LB	388	388	13	477	1208	482	816	746	2
10	A03131-4TE	496	496	4	418	770	573	639	600	8
11	A03158-2TE	551	551	1	561	1108	524	892	771	1
12	AO01114-4	429	429	10		926	442	677	682	
13	AO02060-3	403	403	12		829	502	724	685	
14	OR05039-4	437	437	9		1077	437	660	725	
Location Means		456	456		438	886	493	711	647	
LSD (.05)									126	

Entries
not in all
locations
are not
ranked

TABLE 4: 2011. Tri-State Potato Variety Trial - YIELD OF U.S. #1'S (CWT/A & %) - EARLY AND LATE HARVEST

No.	Clone	U.S. No. 1's - Early Harvest (CWT/A)/%			U.S. No. 1's - Late Harvest (CWT/A)/%				Entry Mean	Rank
		(EWA)	Entry Mean	Rank	(ID)	(OR)		(LWA)		
					Herm	KF				
1	Ranger Russet	394	394	9	380	799	383	703	566	3
		84	84	9	78	79	68	87	78	7
2	Russet Burbank	411	411	6	248	644	310	380	396	10
		84	84	9	58	63	60	84	66	11
3	Russet Norkotah	249	249	14		379	366	382	376	
		69	69	14		82	71	74	76	
4	A98196-5	455	455	2	362	838	438	602	560	4
		90	90	3	89	89	84	86	87	2
5	A99029-3E	449	449	3	329	456	250	589	406	9
		88	88	6	71	54	56	88	67	10
6	A02062-1TE	412	412	5	322	500	354	551	432	7
		93	93	1	86	80	79	91	84	4
7	A02138-2	407	407	7	355	774	291	675	524	6
		84	84	9	88	86	64	86	81	5
8	A02144-2	324	324	12	268	540	310	537	414	8
		76	76	13	73	86	64	83	77	8
9	A02507-2LB	316	316	13	358	970	324	745	599	2
		81	81	12	75	80	67	91	78	6
10	A03131-4TE	443	443	4	356	713	487	558	529	5
		89	89	5	85	93	85	87	88	1
11	A03158-2TE	493	493	1	499	858	424	841	656	1
		90	90	3	89	77	81	94	85	3
12	AO01114-4	369	369	10		835	352	601	596	
		86	86	8		90	80	89	86	
13	AO02060-3	355	355	11		712	342	661	572	
		88	88	6		86	68	91	82	
14	OR05039-4	398	398	8		930	329	621	627	
		91	91	2		86	75	94	85	
Location Means		391	391		348	711	354	603	504	
		85	85		79	81	72	88	80	
LSD (.05)									121	

Entries not
in all
locations
are not
ranked

TABLE 5: 2011 Tri-State Potato Variety Trial - YIELD > 12 OZ (CWT/A & %) - EARLY AND LATE HARVEST

No.	Clone	U.S. No. 1's > 12 OZ - Early Harvest			U.S. No. 1's > 12 OZ - Late Harvest				Entry Mean	Rank
		(CWT/A)/%		Entry Mean	Rank	(OR)				
		(EWA)	(CWT/A)/%			(ID)	Herm	KF		
1	Ranger Russet	35	35	9	99	578	155	228	265	4
		7	7	9	20	55	28	28	33	6
2	Russet Burbank	51	51	7	57	417	29	309	203	5
		11	11	6	13	41	6	38	25	9
3	Russet Norkotah	3	3	14		109	148	31	96	
		1	1	14		24	29	6	20	
4	A98196-5	144	144	2	168	619	120	314	305	2
		28	28	2	42	66	23	45	44	2
5	A99029-3E	236	236	1	109	228	85	347	192	7
		46	46	1	23	27	19	52	30	7
6	A02062-1TE	68	68	4	152	300	104	234	198	6
		15	15	4	41	48	23	39	38	3
7	A02138-2	11	11	11	91	429	49	190	190	8
		2	2	12	23	48	44	24	35	5
8	A02144-2	11	11	11	17	228	15	127	97	10
		3	3	11	5	36	3	20	16	11
9	A02507-2LB	9	9	13	199	583	114	280	294	3
		2	2	12	42	48	24	34	37	4
10	A03131-4TE	84	84	3	60	378	186	105	182	9
		17	17	3	14	49	32	16	28	8
11	A03158-2TE	52	52	6	239	622	169	425	364	1
		10	10	7	43	56	32	48	45	1
12	AO01114-4	66	66	5		599	136	193	309	
		15	15	4		65	31	28	41	
13	AO02060-3	21	21	10		432	75	310	272	Entries not in all locations are not ranked
		5	5	10		52	15	343	137	
14	OR05039-4	39	39	8		735	65	343	381	
		9	9	8		68	15	52	45	
Location Means		59	59		119	447	104	245	229	
		12	12		27	49	23	55	38	
LSD (.05)									114	

TABLE 6: 2011 Tri-State Potato Variety Trial - YIELD < 4 OZ (CWT/A & %) - EARLY AND LATE HARVEST

No.	Clone	Yield < 4 OZ - Early Harvest (CWT/A)/%			U.S. No. 1's < 4 OZ - Late Harvest (CWT/A)/%				Entry Mean	Rank
		(EWA)	Entry Mean	Rank	(ID)	(OR)		(LWA)		
						Herm	KF			
1	Ranger Russet	56	56	6	26	22	60	63	43	5
		12	12	5	5	2	11	8	7	7
2	Russet Burbank	60	60	5	56	28	92	2	45	4
		12	12	5	13	3	18	8	11	3
3	Russet Norkotah	99	99	1		44	44	117	68	
		27	27	1		9	9	23	14	
4	A98196-5	37	37	12	22	16	40	50	32	10
		7	7	12	5	2	8	7	6	8
5	A99029-3E	40	40	10	47	43	30	31	38	6
		8	8	11	10	5	7	5	7	6
6	A02062-1TE	23	23	13	15	18	30	39	26	11
		5	5	13	4	3	7	6	5	10
7	A02138-2	73	73	3	31	42	62	2	34	9
		15	15	4	8	5	14	9	9	4
8	A02144-2	97	97	2	87	34	103	96	80	1
		23	23	2	24	5	21	15	16	1
9	A02507-2LB	65	65	4	26	30	45	47	37	7
		17	17	3	5	2	9	6	6	8
10	A03131-4TE	48	48	8	48	34	34	68	46	3
		10	10	8	12	4	6	11	8	5
11	A03158-2TE	56	56	6	24	35	44	45	37	7
		10	10	8	4	3	8	5	5	10
12	AO01114-4	39	39	11		28	28	67	41	
		9	9	10		3	6	10	6	
13	AO02060-3	44	44	9		26	57	49	44	
		11	11	7		3	11	7	7	
14	OR05039-4	11	11	14		20	35	14	23	
		3	3	14		2	8	2	4	
Location Means		53	53		40	31	50	48	42	
LSD (.05)		12	12		9	4	10	9	8	20

Entries
not in all
locations
are not
ranked

TABLE 7: 2011 Tri-State Potato Variety Trial - SPECIFIC GRAVITY - EARLY AND LATE HARVEST

No.	Clone	Specific Gravity - Early Harvest		Specific Gravity - Late Harvest				Entry Mean	Rank
		EWA	Rank	ID	Herm	KF	LWA		
1	Ranger Russet	1.086	4	1.086	1.080	1.078	1.081	1.081	7
2	Russet Burbank	1.083	9	1.078	1.076	1.088	1.082	1.081	8
3	Russet Norkotah	1.083	7	.	1.066	1.074	1.070	1.070	14
4	A98196-5	1.083	8	1.089	1.080	1.088	1.085	1.086	4
5	A99029-3E	1.076	12	1.080	1.079	1.087	1.084	1.082	6
6	A02062-1TE	1.075	14	1.078	1.075	1.084	1.080	1.079	12
7	A02138-2	1.089	2	1.092	1.079	1.088	1.089	1.087	2
8	A02144-2	1.083	6	1.085	1.071	1.088	1.089	1.083	5
9	A02507-2LB	1.081	11	1.083	1.088	1.084	1.096	1.088	1
10	A03131-4TE	1.075	13	1.080	1.070	1.074	1.077	1.075	13
11	A03158-2TE	1.083	10	1.079	1.071	1.086	1.081	1.079	11
12	AO01114-4	1.090	1		1.081	1.087	1.089	1.086	3
13	AO02060-3	1.087	3		1.073	1.086	1.081	1.080	9
14	OR05039-4	1.085	5		1.074	1.084	1.081	1.080	10
Location Means		1.083		1.083	1.076	1.084	1.083	1.081	
LSD (0.5)								0.006	

TABLE 8: 2011 Tri-State Potato Variety Trial - AVERAGE TUBER SIZE, AND TUBER SHAPE

No. Clone	Average Tuber Size (oz)					Tuber Shape (Length/Width Ratio)					
	WA E	ID L	OR KF	WA L	Entry Late only	WA E	ID L	OR Herm	OR KF	WA L	Entry Means
1 Ranger Russet	6.0	8.1	7.9	7.5	7.8	1.90	2.41	1.87	2.25	1.58	2.00
2 Russet Burbank	6.3	6.4	5.9	8.2	6.8	1.90	2.04	1.89	1.69	1.94	1.89
3 Russet Norkotah	4.6	.	7.8	5.1	6.4	1.71	.		1.98	2.03	1.90
4 A98196-5	7.8	9.5	7.9	8.8	8.7	1.56	1.71	1.36	1.63	1.46	1.55
5 A99029-3E	8.7	7.6	8.4	10.3	8.8	1.43	1.59	1.40	1.85	1.52	1.56
6 A02062-1TE	7.6	8.7	7.9	8.5	8.4	2.03	2.54	1.90	2.01	1.89	2.07
7 A02138-2	5.6	7.3	6.2	7.3	6.9	1.33	1.57	1.31	1.59	1.22	1.40
8 A02144-2	5.0	5.1	5.8	6.3	5.8	1.31	1.97	1.46	1.67	1.50	1.58
9 A02507-2LB	5.5	9.5	7.6	8.4	8.5	1.61	1.80	1.37	1.76	1.43	1.59
10 A03131-4TE	6.6	6.4	8.4	6.8	7.2	1.46	1.54	1.39	1.52	1.46	1.47
11 A03158-2TE	6.6	9.5	8.1	9.4	9.0	1.74	2.06	1.36	1.88	1.50	1.71
12 AO01114-4	7.2		8.4	7.1	7.7	1.62			1.67	1.61	1.63
13 AO02060-3	5.9		6.8	8.6	7.7	1.59		1.57	1.85	1.55	1.64
14 OR05039-4	7.8		7.3	10.4	8.9	2.09		1.88	2.09	1.85	1.98
Location Means	6.5	7.8	7.5	8.0	7.8	1.66	1.92	1.56	1.82	1.61	1.71
LSD (0.5)					1.5						

TABLE 9: 2011 Tri-State Potato Variety Trial - EXTERNAL DEFECTS - GROWTH CRACKS, SECOND GROWTH, SHATTER BRUISE, SCAB - MEANS OF LOCATIONS

No.	Clone	Growth Cracks ¹		Second Growth ¹		Shatter Bruise ¹			Scab ¹	
		Early	Late	Early	Late	Early	Late	AB ²	Early	ID
1	Ranger Russet	4.7	4.7	5.0	4.5	3.0	4.0	3.4	5.0	4.0
2	Russet Burbank	4.7	4.2	5.0	3.6	3.0	3.8	2.9	5.0	5.0
3	Russet Norkotah	5.0	4.6	5.0	4.5	4.0	4.2	.	5.0	.
4	A98196-5	4.3	4.5	5.0	4.7	2.0	3.7	3.0	5.0	5.0
5	A99029-3E	4.0	3.7	5.0	4.3	4.0	3.6	3.0	5.0	5.0
6	A02062-1TE	5.0	4.7	5.0	4.6	4.0	4.0	3.4	5.0	5.0
7	A02138-2	5.0	4.5	5.0	4.7	3.0	2.2	2.6	5.0	4.8
8	A02144-2	4.7	3.0	5.0	4.7	1.0	3.2	2.3	5.0	5.0
9	A02507-2LB	5.0	4.7	5.0	4.2	2.0	2.2	2.0	5.0	5.0
10	A03131-4TE	5.0	4.8	5.0	4.8	3.0	3.2	2.1	5.0	4.5
11	A03158-2TE	5.0	4.7	5.0	4.8	3.0	3.5	2.7	5.0	5.0
12	AO01114-4	4.7	4.6	5.0	5.0	2.0	3.0		5.0	
13	AO02060-3	5.0	3.7	5.0	5.0	3.0	3.4		5.0	
14	OR05039-4	5.0	4.3	5.0	4.6	4.0	4.0		5.0	
Means		4.8	4.3	5.0	4.6	2.9	3.4	2.7	5.0	4.8
LSD (.05)			NS		NS		NS		NS	

¹ Score 1-5, with 1=severe, 5=none.

² Aberdeen shatter scores obtained from bruise evaluation conducted using a shatter chamber [1-5(none)].

TABLE 10: 2011 Tri-State Potato Variety Trial - INTERNAL DEFECTS - HOLLOW HEART PLUS BROWN CENTER, INTERNAL BROWN SPOT, VASCULAR DISCOLORATION/NET NECROSIS, BLACKSPOT - MEANS OF LOCATIONS

No.	Clone	Percent Hollow Heart plus Brown Center		Percent Internal Brown Spot		Percent Net Necrosis/Vascular Discoloration		Blackspot Bruise				
		Early	Late	Early	Late	Early	Late	Washington ¹		Herm	KF	AB ³
								Early	Late	OR	OR ²	
1	Ranger Russet	0.0	1.5	11.1	1.0	-n/a-	2.5	3.0	4.0	5.0	25	2.5
2	Russet Burbank	56.0	12.4	6.3	1.3	-n/a-	0.0	4.0	5.0	5.0	18	3.3
3	Russet Norkotah	0.0	2.5	0.0	3.8	-n/a-	0.0	5.0	5.0		10	.
4	A98196-5	4.0	0.6	8.0	1.3	-n/a-	2.5	3.0	5.0	5.0	25	2.6
5	A99029-3E	0.0	3.8	4.0	2.7	-n/a-	2.5	5.0	5.0	5.0	23	2.9
6	A02062-1TE	0.0	1.6	0.0	2.1	-n/a-	1.3	5.0	5.0	5.0	18	3.6
7	A02138-2	0.0	1.5	0.0	2.3	-n/a-	0.0	4.0	4.0	5.0	40	2.5
8	A02144-2	0.0	0.0	0.0	3.3	-n/a-	0.0	4.0	4.0	5.0	20	3.0
9	A02507-2LB	0.0	5.6	0.0	2.7	-n/a-	0.0	5.0	4.0	5.0	20	3.7
10	A03131-4TE	4.8	2.3	0.0	1.3	-n/a-	3.8	5.0	5.0	5.0	20	2.7
11	A03158-2TE	12.5	5.0	0.0	1.3	-n/a-	0.0	4.0	5.0	5.0	15	3.0
12	AO01114-4	0.0	0.0	0.0	1.7	-n/a-	0.0	5.0	5.0	5.0	20	
13	AO02060-3	0.0	0.0	0.0	1.3	-n/a-	0.0	5.0	4.0	5.0	10	
14	OR05039-4	0.0	1.7	0.0	1.7	-n/a-	0.0	5.0	5.0	5.0	15	
Means		5.5	2.7	2.1	2.0		0.9	4.4	4.6	5.0	20	3.0
LSD (.05)			NS		NS		NS					

¹ Score 1-5, with 1=severe, 5=none.

² Klamath Falls, Oregon is percentage of tuber showing blackspot bruising.

³ Aberdeen blackspot scores from an abrasive peel test [1-5(none)].

TABLE 11: 2011 Tri-State Potato Variety Trial - FRENCH FRY COLOR (00-4.0(darkest)), AND PERCENT SUGAR ENDS

No. Clone	Fry 44 or 45 ^o								Fry 40 ^o				% Sugar Ends
	ID ¹	LWA ²	Postharvest 3 state avg. ³	All Entries		Mean	Rank	ID ¹	LWA ²	Mean	Postharvest 3 state avg. ³	ID	
				Mean	Rank								
1 Ranger Russet	1.0	1.0	0.7	0.9	12	0.9	9	3.6	2.0	2.8	1.7	5	
2 Russet Burbank	1.4	1.0	1.7	1.4	13	1.4	10	4.0	3.0	3.5	3.0	18	
3 Russet Norkotah	.							.				.	
4 A98196-5	0.5	0.0	0.3	0.3	9	0.3	6	3.0	1.0	2.0	1.3	0	
5 A99029-3E	1.6	0.0	0.3	0.6	11	0.6	8	4.0	1.0	2.5	2.0	2	
6 A02062-1TE	0.6	0.0	0.0	0.2	6	0.2	4	3.6	0.0	1.8	1.3	1	
7 A02138-2	0.4	0.0	0.0	0.1	3	0.1	1	2.7	0.0	1.3	0.3	0	
8 A02144-2	0.4	0.0	0.0	0.1	4	0.1	2	2.3	0.0	1.2	0.0	1	
9 A02507-2LB	0.8	0.0	0.0	0.3	8	0.3	5	2.4	0.0	1.2	0.3	2	
10 A03131-4TE	0.4	0.0	0.0	0.1	5	0.1	3	2.5	1.0	1.7	1.0	3	
11 A03158-2TE	0.7	0.0	1.0	0.6	10	0.6	7	3.9	2.0	2.9	2.7	3	
12 AO01114-4		0.0	0.5	0.3	7	Entries not in all locations are not ranked			2.0	2.0	2.0		
13 AO02060-3		0.0	0.0	0.0	1				1.0	1.0	1.5		
14 OR05039-4		0.0	0.0	0.0	1				1.0	1.0	1.0		
Location Means	0.8		0.3	0.4		0.5		3.2		1.9	1.4	4	

¹ Samples held for 4 week cool down period - 7 weeks at storage temperature.

² Samples held for 60 days at 44 or 40°F

³ Three state average processed at Washington - For complete postharvest results see <http://www.potatoes.wsu.edu/>

TABLE 12: 2011 Tri-State Potato Variety Trial - DISEASE EVALUATIONS

No. Clone	Vert. Wilt/ Early Dying		Early Blight AB ¹			Late Blight Corvallis ²			Common Scab AB ¹		% Net Necrosis/ vascular discoloration ¹		Pecto- bacterium Soft Rot ¹	Metr.
	AB ¹		Foliar		Tuber	Foliar		Tuber	% Serious		AB		AB	Reaction
	(0-9)	AUDPC	(0-9)	AUDPC	%	0-9	AUDPC	%	Incidence	Defect	Incidence	% Serious Defect	0-5	AB ³
1 Ranger Russet	5.3	167	5.7	237	10	8.0	1198	18.0	20.2	6.0	58	4	0.8	MR
2 Russet Burbank	7.7	507	6.7	391	3	8.0	1180	5.0	0.0	0.0	78	55	1.6	MS
3 Russet Norkotah	9.0	960	.	750	0	9.0	1354	5.0	7.0	1.3	65	5	2.9	--
4 A98196-5	6.0	195	7.0	497	19	7.0	1167	0.0	15.6	2.6	62	17	1.4	MR
5 A99029-3E	3.3	36	4.7	133	10	9.0	1265	0.0	7.8	0.9	66	19	2.9	MR
6 A02062-1TE	7.7	507	7.3	598	1	9.0	1381	0.0	0.0	0.0	42	0	1.3	R
7 A02138-2	6.7	265	6.7	371	4	9.0	1400	0.0	17.5	5.8	53	16	2.7	R
8 A02144-2	9.0	930	.	833	2	9.0	1400	0.0	14.1	5.1	36	22	1.8	MR
9 A02507-2LB	2.3	19	3.7	44	2	6.0	557	0.0	2.3	0.0	38	17	1.9	MR
10 A03131-4TE	7.3	357	7.7	595	13	9.0	1397	0.0	1.5	0.0	82	4	1.0	VS
11 A03158-2TE	5.7	219	6.0	310	4	9.0	1349	0.0	3.8	0.0	61	9	0.3	MR
12 AO01114-4	--	--	--	--	--	--	--	--	--	--	--	--	--	--
13 AO02060-3	--	--	--	--	--	--	--	--	--	--	--	--	--	--
14 OR05039-4	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MEANS	6.4	378	6.1	433	6	8.4	1241	2.5	8.2	2.0	58	15	1.7	
LSD @ .05	1.7		1.7		14.0	0.8	138	8			24	22.0	1.8	

¹ Evaluations made at Aberdeen, Idaho by Jonathan Whitworth; scale as indicated with highest number being most severe. For 0 to 9: 0=no symptoms; 1= trace; 2=1-5%; 3=5-10%; 4=10-20%; 5=25-40%; 6=40-60%; 7=60-70%; 8=75-90%; 9=90-100% dead or dying with typical disease symptoms.

Early Blight and Vert. Wilt AUDPC: Area Under the Disease Progress Curve based on foliar readings taken 106, 113, and 120 days after planting.

Common Scab and Net Necrosis serious defects are the number of tubers with a 3 rating (0-5 scale) or higher, divided by the total number of tubers examined. Net necrosis data from PLRV-infected plots.

For 0 to 5: 0=0%/none; 5=100%/severe as a combination of tuber area and degree impacted by Fusarium and Pectobacterium inoculations.

² Evaluations made at Corvallis, Oregon by Solomon Yilma; 1=no foliar injury; 3=5-10%; 5=25-40%; 7=60-75%; 8=75-90%; 9=90-100%.

Late blight AUDPC=area under the disease progress curve. Higher number indicates more disease over time; % of tubers examined with any late blight symptoms.

³ Metribuzin Reaction measured at Aberdeen, ID. VR=very resistant, R=Resistant, MR=Moderately resistant, MS=moderately susceptible, S=susceptible VS=very susceptible

TABLE 13: 2011 Tri-State Potato Variety Trial - SOLIDS, DEXTROSE, SUCROSE, PROTEIN,
VITAMIN C, AND GLYCOALKALOIDS - ABERDEEN

Clone	Solids Oven Dry (%)	Sugars		Protein (%DWB)	Vitamin C (mg/100g FWB)	Glycoalkaloids (mg/100gFWB)
		Dextrose (%FWB)	Sucrose (%FWB)			
1 Ranger Russet	21.9	0.04	0.22	4.73	31.1	4.9
2 Russet Burbank	19.3	0.06	0.16	4.53	19.0	2.6
3 Russet Norkotah						
4 A98196-5	22.6	0.02	0.17	5.64	27.8	17.0
5 A99029-3E	20.9	0.03	0.20	4.86	22.4	4.4
6 A02062-1TE	20.0	0.06	0.15	5.95	28.2	2.2
7 A02138-2	22.8	0.00	0.16	5.85	26.2	7.0
8 A02144-2	20.6	0.01	0.11	5.78	25.7	5.6
9 A02507-2LB	22.2	0.03	0.21	5.40	21.3	6.9
10 A03131-4TE	21.7	0.02	0.17	4.77	29.5	3.4
11 A03158-2TE	18.7	0.06	0.16	6.16	25.9	5.7
12 A001114-4						
13 A002060-3						
14 OR05039-4						
Means	21.1	0.03	0.17	5.37	25.7	6.0

FWB = fresh weight basis DWB = dry weight basis

Glycoalkaloids: The 2011 Lenape check from Aberdeen was 38.4 mg/100g

TABLE 14: 2011 Tri-State Potato Variety Trial - MERIT SCORES (1-5(best))

No.	Clone	Process					Postharvest Merit * 3 State Avg.	Fresh					
		Early WA	ID	WA	MEANS	RANK		Early WA	ID	OR	WA	MEANS	RANK
1	Ranger Russet	3.4	3.5	3.7	3.6	4	3.5	2.7	3.2	2.0	2.5	2.6	9
2	Russet Burbank	3.1	3.0	2.6	2.8	11	2.5	2.2	2.4	1.0	2.0	1.9	14
3	Russet Norkotah	2.9	.	1.4	.		Fresh Only	3.2	.	3.0	2.3	2.8	4
4	A98196-5	4.0	3.8	2.8	3.3	7	4.3	3.1	3.6	2.0	2.2	2.7	7
5	A99029-3E	3.7	2.8	2.6	2.7	12	4.0	3.7	2.2	1.0	2.2	2.3	11
6	A02062-1TE	2.1	2.5	2.4	2.4	13	3.7	3.0	3.6	2.3	3.0	3.0	2
7	A02138-2	3.3	4.0	2.2	3.1	10	4.6	2.1	2.8	1.0	2.3	2.0	12
8	A02144-2	2.7	3.2	3.4	3.3	6	4.5	1.3	2.6	2.3	1.4	1.9	13
9	A02507-2LB	3.2	4.0	4.1	4.1	2	4.6	2.0	3.0	2.0	3.3	2.6	10
10	A03131-4TE	2.4	4.5	1.9	3.2	9	4.3	3.4	2.6	2.3	2.3	2.7	8
11	A03158-2TE	4.2	3.8	3.3	3.5	5	3.8	4.4	3.6	1.7	4.5	3.5	1
12	AO01114-4	3.8		4.1	4.1	1	4.1	3.0		3.0	2.3	2.8	6
13	AO02060-3	3.7		3.8	3.8	3	4.2	3.1		2.7	2.8	2.9	3
14	OR05039-4	3.8		3.2	3.2	8	4.5	3.0		2.0	3.5	2.8	5
Location Means		3.3	3.5	3.0	3.3			2.9	3.0	2.0	2.6	2.6	

* For Complete information and procedures see Washington at www.potatoes.wsu.edu/

TABLE 15: 2011 Tri-State Potato Variety Trial - SUMMARY

Clone	Year in Trial	Use	Yield Late		% US#1's		Tuber Size		Specific Gravity	Fry Color	P F	Merit Score	Comments	Dis	
1 Ranger	CK	Dual	730	v. high	566 78		7.8		81	0.9	3.6 2.6				
2 R. Burbank	Ck	Dual	693	high	396 66	lowest	6.8		81	1.4	2.8 1.9				
E* Norkotah	Ck	Fresh	497	low	376 76		6.4		70	lowest					
4 A98196-5	1	Dual	641	med-high	560 87		8.7	large	86	0.3	3.3 2.7		high TGA	drop	
5 A99029-3E	1	Dual	606	medium	406 67	low	8.8	large	82	0.6	2.7 2.3			adv early	
6 A02062-1TE	2	Dual	514	med-low	432 84		8.4		79	0.2	2.4 3.0			early only	
7 A02138-2	1	Dual	636	med-high	524 81		6.9		87	high	0.1	3.1 2.0		adv WR	
8 A02144-2	1	Dual	531	med-low	414 77	low	5.8	small	83		0.1	3.3 1.9		return	
9 A02507-2LB	1	Dual	746	v. high	599 78		8.5		88	highest	0.3	4.1 2.6	best	disease resistance	adv WR
10 A03131-4TE	1	Dual	600	medium	529 88	high %	7.2			low	0.1	3.2 2.7		early only	
11 A03158-2TE	1	Dual	771	v. high	656 85	high	9.0	large	79		0.6	3.5 3.5		adv WR	
12 A001114-4	2	Dual	682	high	596 86		7.7		86		0.3	4.1 2.8		return	
13 A002060-3	2	Dual	685	high	572 82	high %	7.7		80		0.0	3.8 2.9		adv WR	
14 OR05039-4	1	Dual	725	v. high	627 85	high	8.9	large	80		0.0	3.2 2.8		return	

TABLE 16: 2011 Tri-State Potato Variety Trial - LATE HARVEST TRIAL COMMENTS AND INFORMATION BY STATE

Entry	Clone	Comments from Hermiston	Malformed % Total Yield	Visual rating 1-5 (perfect)	Comments from Idaho
1	Ranger Russet	Large, long, many irregular shapes.	2.9	2.0	thin, smaller and straighter than typical
2	Russet Burbank	Irregular shapes, large.	1.1	1.0	looks, fair for RB, Few knobs and jelly ends
4	A98196-5	Mostly round, some footballs.	0.0	2.0	Med russ, blocky, nice,
5	A99029-3E	Non uniform size and shape. DISCARD!	16.5	1.0	M-H russ, misshaped, rot
6	A02062-1TE	Long, skinny, non uniform shape.	1.7	2.3	long, thin, MHR, few curves
7	A02138-2	Round, short, bumpy shape*	0.4	1.0	shatter, poor skin, rot
8	A02144-2	Smaller, some typy, some irregular shapes.	0.4	2.3	small
9	A02507-2LB	Short with irregular shapes.	1.9	2.0	skinned, misshaped, points
10	A03131-4TE	Short and round.	0.0	2.3	MHR, blocky, lumpy, shatter
11	A03158-2TE	Looks like Ranger, some typy, some rough, eyes a bit deep.	1.4	1.7	large, long, deep eyes
12	AO01114-4	Mostly typy, eyes a bit deep, large.	0.7	3.0	
13	AO02060-3	Mostly typy, a few irregular shapes.	0.0	2.7	
14	OR05039-4	Light russet, bumpy shape*, long.	1.2	2.0	

Entry	Clone	Comments from Klamath Falls	tubers/ plant	Russeting (1-5 hvy)	Skinning (1-5 none)	Size Uni. (1-5 ex.)	Shape Uni. (1-5 ex.)	Depth (1-5 shal.)	Misshapen (1-5 none)
1	Ranger Russet	Crook, long, process only	6.3	3.9	4.3	3.0	3.3	3.5	3.3
2	Russet Burbank	Small, knobby, fair	7.8	4.3	4.4	3.1	3.0	3.5	3.0
3	Russet Norkotah	Typy, nice	4.6	4.6	4.6	3.6	3.9	4.0	3.9
4	A98196-5	Typy, small, ok	5.8	4.5	3.9	3.9	4.3	4.0	4.4
5	A99029-3E	Process, growth cracks, poor	4.7	2.5	3.9	2.6	3.0	4.0	3.1
6	A02062-1TE	Pointy, long, fresh?	5.1	4.6	4.3	3.8	4.3	4.0	4.1
7	A02138-2	Short, growth cracks, MS, drop	6.3	3.9	3.8	3.3	3.3	4.0	3.3
8	A02144-2	Short, small, drop	7.3	4.3	4.5	3.5	4.0	4.0	3.8
9	A02507-2LB	Knobby, pointy, shatter, drop	5.7	4.8	4.1	3.5	3.8	3.9	3.6
10	A03131-4TE	Round, heavy hide, fair	6.1	4.9	4.5	3.8	4.1	4.0	4.1
11	A03158-2TE	Typy, uniform, nice	5.6	4.0	4.1	4.1	4.4	4.1	4.4
12	AO01114-4	Real nice, typy	4.7	4.1	4.0	3.8	4.4	4.0	4.1
13	AO02060-3	Typy, growth cracks, fair	7.3	4.4	4.4	3.8	4.3	4.0	4.4
14	OR05039-4	Process, fair	5.2	1.8	5.0	3.5	3.6	3.9	3.8

TABLE 17: 2011 Tri-State Harvest Potato Variety Trials - WASHINGTON STATE POSTHARVEST EVALUATIONS

Entry	Clone	Comments from Washington Early Trial	Stem/ Plant	Carton Yield		Process Yield	
				100-50 count (US 1's 7-18 oz)		US 1's and 2's >6oz	
				% of Total Yield	Tons/A	% of Total Yield	Tons/A
1	Ranger	Skinny, shape a bit irregular, long.	2.0	45.7	10.7	60.1	14.1
2	R. Burbank	Mostly ttypy, shape a bit irregular.	2.0	54.9	13.4	66.0	16.1
E*	Norkotah	Small, mostly ttypy.	2.3	22.1	4.0	36.9	6.6
4	A98196-5	Large, mostly ttypy, flat.	1.5	61.7	15.6	75.8	19.1
5	A99029-3E	Large, nonuniform shape, shallow eyes.	1.4	60.4	15.4	79.8	20.4
6	A02062-1TE	Long, skinny, with dark russetting.	1.5	69.0	15.3	81.0	17.9
7	A02138-2	Round, light russetting, with irregular shapes.	2.2	45.5	11.0	60.5	14.6
8	A02144-2	Pear shaped, small. Not an early variety.	2.0	27.7	5.9	41.6	8.9
9	A02507-2LB	Small, some ttypy, round.	2.1	34.5	6.7	52.4	10.2
10	A03131-4TE	Small, nonuniform shape, a bit round.	1.9	55.9	13.8	69.2	17.2
11	A03158-2TE	Mostly ttypy, deep eyes.	2.3	58.1	16.0	71.7	19.7
12	AO01114-4	Looks like Russet Norkotah, ttypy.	1.9	55.5	11.9	68.5	14.7
13	AO02060-3	Blocky, mostly ttypy, short, nonuniform russetting.	2.3	44.9	9.1	61.0	12.3
14	OR05039-4	Light skin, skinny and long.	2.0	66.7	14.6	82.1	18.0

Entry	Clone	Comments from Washington Late Trial	Stem/ Plant	100-50 count (US 1's 7-18 oz)		US 1's and 2's >6oz	
				100-50 count (US 1's 7-18 oz)		US 1's and 2's >6oz	
				% of Total Yield	Tons/A	% of Total Yield	Tons/A
1	Ranger	Mostly ttypy.	2.4	58.3	23.6	76.8	31.1
2	R. Burbank	Shape highly variable; some ugly, mostly ttypy.	1.9	52.5	21.2	77.5	31.3
E*	Norkotah	Small, skinny, some ttypy.	2.4	35.3	9.1	49.7	12.7
4	A98196-5	Variable shape, spotty russetting.	1.4	54.8	19.2	80.1	28.0
5	A99029-3E	Highly variable shape, some pears - DISCARD.	1.2	55.0	18.4	87.6	29.3
6	A02062-1TE	Long, skinny, pointy; space closer for shorter tubers.	1.5	66.5	20.1	83.6	25.3
7	A02138-2	Round, bumpy baseballs - DISCARD.	2.0	58.7	23.2	76.2	30.1
8	A02144-2	Small, variable shapes, many pear-shaped.	1.8	53.5	17.3	68.7	22.3
9	A02507-2LB	Short, round, light russet, poor skin set.	1.8	66.7	27.2	82.8	33.8
10	A03131-4TE	Small, round, baseballs and pears - DISCARD.	2.0	58.9	18.8	73.2	23.4
11	A03158-2TE	Mostly ttypy, but bumpy; deep eyes.	1.7	61.9	27.6	87.1	38.9
12	AO01114-4	Mostly ttypy, light russet, some skin cracking.	1.9	53.5	18.1	71.6	24.3
13	AO02060-3	Large, blocky, shape variable, some shatter.	2.0	61.2	22.2	82.8	30.0
14	OR05039-4	Long, skinny; ugly, feathery skin, poor skin set.	1.6	64.1	21.2	91.3	30.1

Complete postharvest evaluations and procedures are found at: www.potatoes.wsu.edu