

2010 TRI-STATE POTATO VARIETY TRIAL REPORT

State Experiment Stations and
USDA-ARS Cooperating

Washington

Oregon

Idaho

2010 TRI-STATE POTATO VARIETY TRIAL REPORT

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Compiled by Peggy Bain

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TABLE 1: 2010 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.	135-105-0	3-May	2-Sep mechanical	21-Sep	122	141	Sencor Matrix Eptam	Admire Pro	Echo
Hermiston Oregon (HOR)	D. Hane,	Late	Pivot	275-280-300-40 2B-5ZN	5-Apr	2-Sep cut/beat/enquik	16-Sep	150	164	Eptam Matix	Mocap Admire Monitor Asana Onager	Vapam Ridomil Gold Bravo Dithane Quadris Omega
Klamath Falls Oregon (KOR)	B. Charlton D. Culp	Late	solid set	160-191-185-97S 5.85Zn-1.05B	13-May	2-Sep Rely	11-Oct	112	151	Matrix Metribuzin	Admire Pro	Topps MZ Quadris Ridomil Bravo Headline Quadris Endura
Othello (EWA) Washington	M Pavek R. Knowles N. Fuller Z. Holden	Early	Liner	165-110-450	7-Apr	4-Aug mechanical	23-Aug	119	138	Prowl H2O Matrix Sencor	Platinum Success	Penncozeb Omega
Othello (LWA) Washington	M Pavek R. Knowles N. Fuller Z. Holden	Late	Liner	290-160-550	15-Apr	18-Sep Mechanical	21-Sep	156	159	Prowl H2O Matrix Sencor	Platinum Success	Penncozeb Omega

TABLE 2: 2010 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	OR	99	4.6	Long	4.0	Med Russet	3.0	Medium	3.3	Medium	3.8
2	Russet Burbank	Early Rose ?	White	Check	Dual	Ck	OR	97	4.0	Obl-Lng	3.8	Med Russet	3.3	Med-large	2.8	Med Early	4.4
3*	Russet Norkotah	ND9687-5 Ru ND9526-4 Ru	White	Check	Fresh	Ck	OR	98	3.6	Obl-Lng	4.0	Med Russet	3.1	Med-large	2.6	Med Early	4.4
4	A01025-4	A96095-3 Premier R	White	ID	Dual	1	ID	97	3.8	Obl-Lng	2.7	Light Russet	3.2	Med-large	2.6	Med Early	5.2
5	A01124-3	Bannock R A94020-3	White	ID	Dual	1	ID	98	3.5	Oblong	3.8	Med Russet	2.7	Medium	2.6	Med Early	3.7
6	A02060-3TE	A97201-4 Premier R	White	ID	Dual	1	ID	97	3.6	Obl-Lng	3.7	Med Russet	3.2	Med-large	3.2	Medium	5.1
7	A02062-1TE	A97201-4 A97299-1	White	ID	Dual	1	ID	95	4.9	Long	4.0	Med Russet	2.2	Small	3.2	Medium	3.3
8	A98134-2	A8670-7 A9201-6	Med Red-purple	ID	Dual	1	ID	98	3.4	Oblong	3.9	Med Russet	3.2	Med-large	3.0	Med Early	5.1
9	AO01114-4	AO92017-6 A86102-6	White	OR	Dual	1	OR	99	3.7	Obl-Lng	4.2	Med Hvy Rus	2.8	Medium	3.1	Medium	3.6
10	AO02060-3	A97201-4 Premier R	White	OR	Dual	1	OR	99	3.1	Oblong	3.7	Med Russet	2.2	Small	2.4	Early	4.6
11	AO02183-2	A97236-3 Premier R	White	OR	Dual	2	OR	98	4.0	Obl-Lng	3.7	Med Russet	2.7	Medium	3.5	Medium	5.1
12	PA03NM5-1	Blazer R PA98NM21-14	White	ID	Dual	1	ID	95	3.1	Oblong	3.7	Med Russet	3.0	Medium	3.5	Medium	5.0

Numerical values are means of all trial locations.

1.0-2.0=Round, 2.1-2.5=Round-Oblong, 2.6-3.5=Blocky, 3.6-4.0=Oblong, 4.1-5.0=Long

1.0-2.0=White, 2.1-3.0=Light Russet, 3.1-4.0=Medium Russet, 4.1-4.5=Medium Heavy Russet, 4.6-5.0 Heavy Russet

1.0-2.5=Small, 2.6-3.0=Medium, 3.1-4.0=Medium-Large, 4.1-4.5=Large, 4.6-5.0=Very Large

1.0-2.5=Early, 2.6-3.0=Medium-Early, 3.1-3.5=Medium, 3.6-4.0= Medium-Late, 4.1-4.5=Late, 4.6-5.0=Very Late

TABLE 3: 2010 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	630	630	3	493	951	521	790	689	5
2	Russet Burbank	678	678	1	511	994	487	860	713	4
3	Russet Norkotah	568	568	7		557	513	535	535	11
4	A01025-4	592	592	5	547	974	580	963	766	1
5	A01124-3	415	415	11	413	665	479	671	557	10
6	A02060-3TE	518	518	8	469	1033	541	1007	763	2
7	A02062-1TE	440	440	10	346	484	424	602	464	12
8	A98134-2	455	455	9	488	710	517	808	631	7
9	AO01114-4	581	581	6	398	791	421	673	571	9
10	AO02060-3	615	615	4	408	897	507	721	633	6
11	AO02183-2	673	673	2	465	1056	508	974	751	3
12	PA03NM5-1	389	389	12	420	904	463	689	619	8
Location Means		546	546		451	835	497	774	639	
LSD (.05)									117	

TABLE 4: 2010. 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	591	591	1	413	831	392	719	589	3
		94	94	1	84	87	75	91	84	6
2	Russet Burbank	581	581	2	345	749	344	725	541	5
		86	86	10	68	75	71	84	75	12
3	Russet Norkotah	499	499	6		469	413	400	427	9
		88	88	8		84	80	75	80	10
4	A01025-4	522	522	5	410	851	398	874	633	2
		88	88	8	75	87	69	91	81	9
5	A01124-3	381	381	11	363	563	377	619	481	7
		92	92	2	88	85	79	92	86	2
6	A02060-3TE	472	472	8	412	907	391	955	666	1
		91	91	3	88	87	72	95	86	4
7	A02062-1TE	397	397	10	314	416	357	526	403	12
		90	90	5	91	86	84	87	87	1
8	A98134-2	404	404	9	403	589	385	694	518	6
		89	89	6	83	83	74	86	82	8
9	AO01114-4	485	485	7	345	737	362	570	426	10
		83	83	12	87	93	86	85	86	2
10	AO02060-3	545	545	4	351	770	427	615	464	8
		89	89	6	86	86	84	85	85	5
11	AO02183-2	577	577	3	378	893	394	903	558	4
		86	86	10	81	85	77	93	84	7
12	PA03NM5-1	354	354	12	312	753	326	600	413	11
		91	91	3	74	83	70	87	77	11
Location Means		484	484		368	711	381	683	536	
LSD (.05)		89	89		82	85	77	88	83	121

TABLE 5: 2010 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						
		(CWT/A)/%		Entry Mean	Rank	(ID)	(OR)		(LWA)	Entry Mean	Rank
		(EWA)					Herm	KF			
1	Ranger Russet	255		255	1	83	501	166	305	264	3
		40		40	2	17	53	32	39	35	3
2	Russet Burbank	99		99	5	40	357	58	233	172	6
		15		15	8	8	36	12	27	21	7
3	Russet Norkotah	46		46	10		69	128	11	69	11
		8		8	10		12	25	2	13	11
4	A01025-4	232		232	3	147	540	142	402	308	2
		39		39	3	27	55	25	42	37	2
5	A01124-3	94		94	7	48	146	98	177	117	8
		23		23	5	12	22	20	26	20	9
6	A02060-3TE	233		233	2	176	526	106	541	337	1
		45		45	1	38	51	20	54	41	1
7	A02062-1TE	79		79	8	79	67	104	121	93	10
		18		18	7	23	14	25	20	21	8
8	A98134-2	98		98	6	31	87	53	105	69	12
		22		22	6	6	12	10	13	10	12
9	AO01114-4	37		37	12	51	381	101	196	182	5
		6		6	11	13	48	24	29	29	4
10	AO02060-3	65		65	9	40	394	110	98	161	7
		11		11	9	10	44	22	14	23	6
11	AO02183-2	42		42	11	20	460	95	328	226	4
		6		6	11	4	44	19	34	25	5
12	PA03NM5-1	137		137	4	29	202	49	129	102	9
		35		35	4	7	22	11	19	15	10
Location Means		118		118		68	311	101	221	175	
LSD (.05)		22		22		15	34	20	27	24	126

TABLE 6: 2010 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)/%					
		(EWA)	Entry Mean	Rank	(ID)	(OR)		(LWA)	Entry Mean	Rank
						Herm	KF			
1	Ranger Russet	29	29	11	22	32	34	68	39	11
		5	5	11	4	3	7	9	6	12
2	Russet Burbank	73	73	3	61	59	74	77	68	5
		11	11	3	12	6	15	9	11	5
3	Russet Norkotah	60	60	5		71	35	135	80	1
		11	11	3		13	7	25	15	1
4	A01025-4	45	45	6	42	65	47	86	60	7
		8	8	8	8	7	8	9	8	8
5	A01124-3	32	32	10	30	43	40	43	39	11
		8	8	8	7	6	8	6	7	11
6	A02060-3TE	28	28	12	27	58	65	47	49	8
		5	5	11	6	6	12	5	7	10
7	A02062-1TE	39	39	7	13	56	41	75	46	9
		9	9	6	4	12	10	13	10	7
8	A98134-2	35	35	8	40	79	78	114	78	2
		8	8	8	8	11	15	14	12	2
9	AO01114-4	88	88	2	40	26	27	90	46	10
		15	15	1	10	3	6	13	8	8
10	AO02060-3	64	64	4	41	64	40	105	63	6
		10	10	5	10	7	8	15	10	6
11	AO02183-2	95	95	1	82	82	73	69	77	3
		14	14	2	18	8	14	7	12	4
12	PA03NM5-1	34	34	9	56	76	68	84	71	4
		9	9	6	13	8	15	12	12	2
Location Means		54	54		43	62	53	84	61	
LSD (.05)		10	10		10	8	11	12	10	22

TABLE 7: 2010 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	1.077	7	1.088	1.082	1.088	1.088	1.086	4	
2 Russet Burbank	1.080	6	1.084	1.077	1.088	1.082	1.083	7	
3 Russet Norkotah	1.075	9	.	1.061	1.075	1.067	1.068	12	
4 A01025-4	1.077	8	1.085	1.065	1.081	1.080	1.078	9	
5 A01124-3	1.072	11	1.084	1.069	1.078	1.081	1.078	8	
6 A02060-3TE	1.080	5	1.087	1.075	1.086	1.089	1.084	6	
7 A02062-1TE	1.073	10	1.080	1.065	1.079	1.080	1.076	11	
8 A98134-2	1.071	12	1.079	1.072	1.081	1.076	1.077	10	
9 AO01114-4	1.086	1	1.094	1.079	1.093	1.095	1.090	1	
10 AO02060-3	1.083	2	1.085	1.077	1.090	1.089	1.085	5	
11 AO02183-2	1.080	4	1.089	1.080	1.090	1.095	1.089	3	
12 PA03NM5-1	1.082	3	1.092	1.082	1.091	1.095	1.090	2	
Location Means	1.078		1.086	1.074	1.085	1.085	1.082		
LSD (0.5)							0.004		

TABLE 8: 2010 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 Herm	OR KF	WA L	Entry Late only	WA E	ID L	OR Herm	OR KF	WA L	Entry Means
1 Ranger Russet	8.7	8.0	10.7	7.7	7.8	8.5	1.73	2.11	1.65	2.19	1.57	1.85
2 Russet Burbank	6.5	6.4	9.1	5.4	7.6	7.1	1.65	1.99	1.68	1.82	1.67	1.76
3 Russet Norkotah	6.4	.	6.5	6.8	4.7	6.0	1.65	.	1.72	1.67	1.72	1.69
4 A01025-4	8.5	7.6	9.7	6.6	8.0	8.0	1.87	1.83	1.69	1.77	1.61	1.76
5 A01124-3	7.1	7.0	7.7	6.6	7.8	7.3	1.59	1.82	1.56	1.65	1.51	1.62
6 A02060-3TE	9.3	8.3	9.9	5.7	9.9	8.4	1.74	1.86	1.65	1.76	1.50	1.70
7 A02062-1TE	7.2	7.8	6.4	6.2	6.6	6.7	1.95	2.18	2.04	2.10	2.02	2.06
8 A98134-2	7.3	6.8	6.5	4.3	5.9	5.9	1.43	1.84	1.47	1.56	1.47	1.55
9 AO01114-4	5.6	6.8	10.2	6.8	6.8	7.6	1.50	1.77	1.65	1.57	1.47	1.59
10 AO02060-3	6.3	6.8	8.7	6.4	6.0	7.0	1.60	1.75	1.78	1.85	1.52	1.70
11 AO02183-2	5.9	5.1	8.6	5.2	8.0	6.7	1.83	1.99	1.66	2.26	1.64	1.88
12 PA03NM5-1	7.7	5.9	7.4	5.1	6.3	6.2	1.64	1.68	1.62	1.61	1.51	1.61
Location Means	7.2	7.0	8.5	6.1	7.1	7.1	1.68	1.89	1.68	1.82	1.60	1.73
LSD (0.5)						1.3						

TABLE 9: 2010 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	Late
1 Ranger Russet	4.3	4.9	5.0	4.3	5.0	4.2	3.0	5.0	4.5
2 Russet Burbank	4.0	4.0	4.7	3.9	5.0	3.9	2.4	5.0	5.0
3 Russet Norkotah	5.0	5.0	5.0	4.7	4.0	4.5	.	5.0	5.0
4 A01025-4	5.0	4.9	5.0	4.3	2.0	3.1	3.0	5.0	4.4
5 A01124-3	4.7	4.3	5.0	4.6	2.0	3.0	2.1	5.0	5.0
6 A02060-3TE	4.7	4.9	5.0	4.8	4.0	3.7	3.0	5.0	5.0
7 A02062-1TE	5.0	5.0	5.0	4.8	5.0	4.8	3.0	5.0	5.0
8 A98134-2	4.3	4.8	5.0	4.6	5.0	4.1	3.0	5.0	4.6
9 AO01114-4	4.7	4.7	5.0	4.8	3.0	3.5	2.8	5.0	5.0
10 AO02060-3	5.0	4.7	5.0	4.8	4.0	3.3	2.9	5.0	4.9
11 AO02183-2	5.0	4.9	5.0	4.8	4.0	4.4	3.3	5.0	4.8
12 PA03NM5-1	5.0	4.1	5.0	4.8	5.0	4.4	2.7	5.0	4.9
Means	4.7	4.7	5.0	4.6	4.0	3.9	2.8	5.0	4.9
LSD (.05)		0.6		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: 2010 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 Early	Herm Late	KF OR ²	OR ²	AB ³
1	Ranger Russet	0.0	0.0	0.0	1.3	0.0	0.0	4.0	4.0	19.0	0.0	2.6
2	Russet Burbank	46.2	5.5	11.5	3.8	0.0	0.8	4.0	4.0	14.0	0.0	2.7
3	Russet Norkotah	0.0	2.5	0.0	0.8	0.0	0.3	3.0	4.0	14.0	0.0	.
4	A01025-4	0.0	0.6	0.0	0.5	0.0	0.5	3.0	4.0	6.0	0.0	2.0
5	A01124-3	0.0	2.5	0.0	0.3	0.0	0.5	4.0	5.0	7.0	0.0	3.5
6	A02060-3TE	8.0	13.6	0.0	0.8	0.0	0.3	4.0	5.0	8.0	0.0	3.3
7	A02062-1TE	0.0	0.0	0.0	0.8	0.0	0.5	5.0	5.0	1.0	0.0	3.9
8	A98134-2	12.0	0.5	0.0	1.3	0.0	0.3	5.0	5.0	0.0	0.0	4.0
9	AO01114-4	0.0	5.4	0.0	0.9	0.0	0.5	5.0	4.0	0.0	0.0	3.6
10	AO02060-3	0.0	0.6	0.0	1.6	0.0	0.8	4.0	5.0	3.0	0.0	3.3
11	AO02183-2	0.0	1.1	0.0	1.0	0.0	2.3	4.0	4.0	6.0	0.0	3.9
12	PA03NM5-1	11.1	1.4	0.0	13.4	0.0	0.3	5.0	5.0	2.0	0.0	3.4
Means		6.4	2.8	1.0	2.2		0.6	4.2	4.5	6.7	0.0	3.3
LSD (.05)			NS		NS		NS					

¹ Score 1-5, with 1=severe, 5=none.

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

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

TABLE 11: 2009 Tri-State Potato Variety Trial - FRENCH FRY COLOR (00-4.0(darkest)), AND PERCENT SUGAR ENDS

No. Clone	Fry 44 or 45°						Fry 40°				% Sugar Ends		
	ID ¹	HRM ²	LWA ³	Postharvest	Mean	Rank	ID ¹	LWA ³	Mean	Postharvest	ID	HRM	Entry Mean
				3 state avg. ⁴						3 state avg. ⁴			
1 Ranger Russet	0.6	1.0	1.0	1.0	0.9	6	2.6	2.0	2.3	2.7	29	3	16
2 Russet Burbank	0.6	1.9	1.0	1.7	1.3	8	3.8	3.0	3.4	3.7	9	33	21
3 Russet Norkotah	.	2.1					.				.	23	-
4 A01025-4	0.5	1.0	1.0	1.0	0.9	4	1.9	2.0	2.0	2.3	13	0	7
5 A01124-3	0.6	1.8	2.0	2.0	1.6	10	2.2	3.0	2.6	3.0	67	3	35
6 A02060-3TE	0.5	0.9	2.0	2.0	1.4	9	2.6	3.0	2.8	3.0	9	3	6
7 A02062-1TE	0.5	-0.1	0.0	0.7	0.3	3	2.4	1.0	1.7	2.3	21	0	11
8 A98134-2	0.8	2.1	3.0	2.7	2.1	11	4.0	4.0	4.0	4.0	17	23	20
9 AO01114-4	0.8	1.1	1.0	0.7	0.9	5	3.3	2.0	2.7	2.0	0	3	2
10 AO02060-3	0.3	0.5	0.0	0.0	0.2	2	2.4	1.0	1.7	2.0	0	0	0
11 AO02183-2	0.4	0.1	0.0	0.0	0.1	1	1.0	0.0	0.5	0.7	13	0	7
12 PA03NM5-1	0.8	1.0	1.0	1.7	1.1	7	4.0	2.0	3.0	2.7	4	0	2
Location Means	0.6	1.1	1.1	1.2	1.0		2.7	2.1	2.4	2.6	17	8	11.4

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

² Samples held for 1 week cool down period - 7 weeks at storage temperature.

³ Samples held for 60 days at 44 or 40°F

⁴ Three state average processed at Washington - For complete postharvest results see <http://www.potatoes.wsu.edu/>

TABLE 12: 2010 Tri-State Potato Variety Trial - DISEASE EVALUATIONS

No. Clone	Vert. Wilt/ Early Dying		Early Blight AB ¹			Late Blight Corvallis ³			Common Scab AB ¹		% Net Necrosis/ vascular discoloration ¹		Root- knot Prosser ⁴	Klamath OR	Pecto- bacterium Soft Rot ¹	Metr. Reaction AB ⁶	
	AB ¹		HRM ² (0-9)	Foliar		Tuber		Incidence	Defect	% Serious	Serious			Rhizoc. ⁵	AB		
	(0-9)	AUDPC		Foliar	Tuber	Foliar	Tuber				Incidence	Defect	AB	AB	0-5(none)	0-5	
1 Ranger Russet	2.3	65	6.9	3.0	221	5	9.0	1302	23.0	85.0	27.0	80	11.0	S	4.0	2.3	--
2 Russet Burbank	5.8	525	8.9	4.3	606	2	9.0	1226	3.0	14.0	0.0	63	17.0	S	4.1	2.5	MR
3 Russet Norkotah	8.8	980	--	8.8	1085	0	9.0	1346	23.0	16.0	6.0	63	9.0	S	4.3	3.8	--
4 A01025-4	4.0	131	8.0	3.5	340	17	9.0	1339	8.0	83.0	31.0	63	3.0	S	3.3	3.9	R
5 A01124-3	3.8	132	7.4	4.7	543	19	9.0	1346	35.0	12.0	1.0	45	21.0	S	4.0	3.1	S
6 A02060-3TE	3.8	132	7.1	3.3	392	0	--	--	--	32.0	3.0	80	6.0	S	3.9	0.6	MS
7 A02062-1TE	4.7	298	8.3	5.2	725	4	--	--	--	25.0	7.0	68	0.0	S	4.5	2.7	R
8 A98134-2	3.8	172	8.3	3.8	448	3	9.0	1300	0.0	57.0	18.0	59	4.0	S	3.9	1.9	S
9 AO01114-4	4.0	119	9.0	4.2	441	5	9.0	1262	15.0	12.0	0.0	72	4.0	S	3.5	2.9	R
10 AO02060-3	4.7	781	8.0	5.8	875	9	9.0	1300	20.0	40.0	9.0	79	36.0	S	4.0	4.3	R
11 AO02183-2	2.2	28	5.0	3.2	235	3	9.0	1194	13.0	56.0	4.0	89	7.0	S	3.9	2.0	R
12 PA03NM5-1	3.0	74	6.1	3.7	228	5	9.0	1265	0.0	61.0	12.0	77	11.0	S	3.8	3.3	R
MEANS	4.2	286		4.5	512	6	9.0	1288	14.0	41.1	9.8	61	8.6	--	3.9	2.8	--
LSD @ .05	1.2	--		1.0	--	10	0.5	114	16	24.0	13.0	21	17.0		1.6		

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.

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 Hermiston, Oregon by Dan Hane; scale as indicated, highest number being most severe

³ 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%.

Tuber % based on examination at harvest and showing any tuber late blight symptoms. AUDPC = Area Under the Disease Progress Curve.

⁴ Evaluations made at Prosser, Washington by Chuck Brown: S=susceptible, VR= very resistant

⁵ Evaluations made at Klamath Falls, Oregon by Brian Charlton. Seed treated with thiophanate-methyl (Tops MZ®) and Azoxystrobin (Quadris®)

⁶ Metribuzin Reaction measured at Aberdeen, ID

VR=very resistant, R=Resistant, MR=Moderately resistant, MS=moderately susceptible, S=susceptible VS=very susceptible.

TABLE 13: 2010 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	22.5	0.08	0.16	4.83	33.0	5.5
2 Russet Burbank	21.2	0.05	0.14	4.18	22.3	7.8
3 Russet Norkotah						
4 A01025-4	21.0	0.07	0.14	4.62	21.3	7.1
5 A01124-3	21.6	0.05	0.16	5.58	29.4	4.3
6 A02060-3TE	22.1	0.05	0.13	5.70	32.6	1.9
7 A02062-1TE	21.8	0.03	0.15	5.89	38.7	1.3
8 A98134-2	21.6	0.09	0.15	5.49	21.7	4.5
9 AO01114-4	23.9	0.10	0.21	5.25	26.9	1.4
10 AO02060-3	22.3	0.01	0.18	6.04	25.7	6.1
11 AO02183-2	23.2	0.03	0.18	5.33	23.0	13.8
12 PA03NM5-1	23.5	0.10	0.17	5.65	28.3	13.3
Means	22.2	0.06	0.16	5.32	27.5	6.1

FWB = fresh weight basis DWB = dry weight basis

Glycoalkaloids: The 2009 Lenape check from Aberdeen was 42.6 mg/100g

TABLE 14: 2010 Tri-State Potato Variety Trial - MERIT SCORES (1-5(best))

No.	Clone	Process						Postharvest Merit * 3 State Avg.	Fresh					
		Early WA	ID	OR	WA	MEANS	RANK		Early WA	ID	OR	WA	MEANS	RANK
1	Ranger Russet	N/A	3.5	4.0	3.2	3.6	7	3.1	3.3	3.3	2.0	3.7	3.1	7
2	Russet Burbank	N/A	3.5	2.5	3.2	3.1	8	2.6	2.7	2.5	1.0	3.0	2.3	11
3	Russet Norkotah	N/A	.	1.5	N/A	1.5	12		4.0	.	3.5	4.0	3.8	1
4	A01025-4	N/A	4.2	3.5	3.2	3.6	6	3.0	2.0	3.3	1.5	2.7	2.4	10
5	A01124-3	N/A	3.8	2.0	2.9	2.9	9	2.4	3.0	3.3	1.0	2.7	2.5	9
6	A02060-3TE	N/A	4.5	4.0	3.1	3.9	4	3.0	3.0	4.3	3.0	2.0	3.1	6
7	A02062-1TE	N/A	4.2	3.0	3.9	3.7	5	3.3	3.3	4.0	2.0	3.7	3.3	5
8	A98134-2	N/A	3.0	1.0	1.5	1.8	11	1.6	3.3	3.5	1.0	4.0	3.0	8
9	AO01114-4	N/A	4.2	4.5	3.5	4.1	3	3.9	4.0	3.3	4.0	4.0	3.8	2
10	AO02060-3	N/A	4.8	4.5	4.1	4.5	1	4.0	4.0	3.3	4.0	4.0	3.8	2
11	AO02183-2	N/A	4.5	4.0	4.3	4.3	2	4.5	4.0	3.5	3.5	3.0	3.5	4
12	PA03NM5-1	N/A	3.0	1.0	2.9	2.3	10	2.7	2.3	2.8	1.0	2.3	2.1	12
Location Means			3.9	3.0	3.3	3.3			3.3	3.4	2.3	3.3	3.1	

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

TABLE 15: 2010 Tri-State Potato Variety Trial - SUMMARY

Clone	Year in		Yield		% US#1's		Tuber Size		Specific Gravity		Fry Color		P F	Merit Score	Comments	Dis
	Trial	Use	Late													
1 Ranger	CK	Dual	689	high	589 84		8.5	large	86	good	0.9		3.5 3.1			Check
2 R. Burbank	Ck	Dual	713	high	541 75	low	7.1	medium	83	medium	1.3		3.1 2.3			Check
E* Norkotah	Ck	Fresh	568	medium	499 80		6.0	small	68	low						Check
4 A01025-4	1	Dual	766	v. high	633 81		8.0	large	78		0.9		3.6 2.4	blackspot		adv WRR
5 A01124-3	1	Dual	557	medium	481 86		7.3	med-large	78		1.6		2.9 2.5	GC, shatter		dropped
6 A02060-3TE	1	Dual	763	v. high	666 86	high	8.4	large	84		1.4		3.9 3.1	Vit C high, internals		adv WRR
7 A02062-1TE	1	Dual	464	low	403 87		6.7	medium	76	low	0.3	excellent	3.7 3.3	Vit C high, low yield		retained
8 A98134-2	1	Dual	631	high	518 82		5.9	small	77		2.1	darkest	1.8 3.0	poor internals, small size		dropped
9 AO01114-4	1	Dual	571	med-high	426 86		7.6	large	90	highest	0.9		4.1 3.8	good		retained
10 AO02060-3	1	Dual	633	high	464 85		7.0	medium	85		0.2		4.5 3.8	best		retained
11 AO02183-2	2	Dual	751	v. high	558 84		6.7	medium	89		0.1	excellent	4.3 3.5		high TGA	adv WRR
12 PA03NM5-1	1	Dual	619	high	413 77	low	6.2	small	90	high	1.1		2.3 2.1	poor internals,		dropped

90% very high
85 high
80 med-high

TABLE 16: 2010 Tri-State Potato Variety Trial - LATE HARVEST TRIAL COMMENTS AND INFORMATION BY STATE

Entry	Clone	Comments from Hermiston	tubers/ plant	width/depth ratio	eye depth	shape unif.	Photovolt fry color
1	Ranger Russet	Soft rot,	7.1	1.3	3.9	4	36.3
2	Russet Burbank	Misshapen(4), soft rot,	8.8	1.23	3.7	3	29.3
4	A01025-4	large(2), OK(2),	8.1	1.14	4.5	4.3	35.9
5	A01124-3	short/too short(3), pear,	6.9	1.17	4.3	4.5	28.8
6	A02060-3TE	Coarse russet(3),large(2), greens(2),	8.4	1.18	3.6	4.8	36.7
7	A02062-1TE	too thin(4),	6.4	1.15	4	5	46.2
8	A98134-2	short/too short(2), pear, too small/round,	8.8	1.21	4	4.5	25.9
9	AO01114-4	little flat, nice/very nice(3), good, blocky(2), Best of bunch,	6.3	1.2	3.9	5	35.4
10	AO02060-3	OK(3), eyes?, nice shape/rus,	8.2	1.11	3.8	5	40.1
11	AO02183-2	eyes?(2), lots of size variation, good,	9.9	1.16	3.5	3.9	44.4
12	PA03NM5-1	blocky/very blocky(3), OK, nice,	9.8	1.21	3.6	4.5	35.8
Comments from Idaho							
1	Ranger Russet	fairly smooth, few Jelly ends, few curves					
2	Russet Burbank	smaller than norm, smoother					
3	A01025-4	nice, few misshaped, some shatter					
4	A01124-3	shatter, rot					
5	A02060-3TE	big, nice, oblong					
6	A02062-1TE	long, MHR, few points					
7	A98134-2	crooks and folding, lumps					
8	AO01114-4	nice shape and skin, some shatter					
9	AO02060-3	short, shatter					
10	AO02183-2	Med light russet, bright eyes, stolons attached					
11	PA03NM5-1	med russet, long, GC and folds					
Entry	Clone	Comments from Kalamath Falls	tubers/ plant	Rizoc. (1-5 none)			
1	Ranger Russet	Long, bumpy, crooks, fair	5.7	4.0			
2	Russet Burbank	Typy, smallish, ok	7.7	4.1			
4	A01025-4	Light, plump, irregular, not fresh	7.6	3.3			
5	A01124-3	Flat, lumpy, not fresh, drop	6.1	4.0			
6	A02060-3TE	Blocky, typy, nice, keep	8.0	3.9			
7	A02062-1TE	Some pointy, typy, bright eye, keep	5.7	4.5			
8	A98134-2	Blocky, skinning, round, drop	10.0	3.9			
9	AO01114-4	Thumb nail cracks, blocky, fresh?, ok	5.30125	3.5			
10	AO02060-3	Real nice, typy, keep	6.7	4.0			
11	AO02183-2	Typy, uniform, long?, smallish, keep	8.2	3.9			
12	PA03NM5-1	Blocky/round, process	7.9	3.8			

TABLE 17: 2010 Tri-State Harvest Potato Variety Trials - WASHINGTON STATE POSTHARVEST EVALUATIONS

Entry	Clone	Comments from Washington Early Trial	Fresh - Visual	30 day	Tubers	Carton Yield	Process	Fresh Mkt	Shape
			Appearance	Stand %	per plant	CWT/A 100 to 50 Count	Value \$/A	Value \$/A	Uniformity
1	Ranger	Large, mostly typy, some with irreg. shape	3.3	0.0	7.5	523.4	4729.3	6288.8	3.3
2	R. Burbank	Shape a bit irregular	2.7	0.0	10.8	459.7	4782.5	5398.7	3.0
E*	Norkotah	typy, nice.	4.0	0.0	9.4	382.2	4136.5	4387.4	4.3
4	A01025-4	Typy, smaller, deep eyes.	4.0	0.0	11.8	421.1	4797.0	4996.5	4.0
5	A01124-3	Pointy, smaller, a bit flat.	3.0	0.0	6.2	300.8	3079.6	3661.4	3.0
6	A02060-3TE	Large, mostly typy, some with irreg. shape	3.0	0.0	5.8	451.8	3915.1	4806.5	2.7
7	A02062-1TE	Looks like skinny Norkotah with pointy ends.	3.3	0.0	6.4	342.6	3258.1	4077.5	3.7
8	A98134-2	Variation in size, irregular shape.	3.3	0.0	6.5	338.3	3320.6	3935.2	3.0
9	AO01114-4	Large, ugly skin, irregular shape.	2.0	0.0	7.3	492.5	4380.4	5233.8	1.7
10	AO02060-3	Irregular shape.	2.3	0.0	5.2	298.8	2872.0	3667.6	2.3
11	AO02183-2	Many small, typy, fresh standout.	4.0	0.0	10.8	302.2	4076.9	3912.7	3.7
12	PA03NM5-1	Typy, a bit round.	4.0	0.0	10.1	422.2	4475.5	4937.0	4.0

Entry	Clone	Comments from Washington Late Trial	Fresh - Visual	30 day	Tubers	Carton Yield	Process	Fresh Mkt	Shape
			Appearance	Stand %	per plant	CWT/A 100 to 50 Count	Value \$/A	Value \$/A	Uniformity
1	Ranger	Typy, small for Ranger.	3.7	0.0	9.0	509.9	5765.0	7535.4	3.7
2	R. Burbank	Typy, a bit rough, irregular shapes.	3.0	0.0	10.2	482.2	5881.5	7043.5	2.5
E*	Norkotah	Typy, small.	4.0	0.0	9.8	152.3	2429.8	2952.0	4.0
4	A01025-4	Deep eyes, blocky, some irregular shapes.	3.0	0.0	10.8	619.4	7083.9	8937.0	3.0
5	A01124-3	Folded ends, deep eyes on bud ends	2.7	0.0	7.5	478.6	4686.5	6595.8	2.0
6	A02060-3TE	Bumpy tubers, shatter, irregular shape.	2.0	0.0	8.9	592.5	7104.8	8717.5	2.0
7	A02062-1TE	Looks like a skinny Norkotah, dark russeting, typy.	3.7	0.0	8.0	372.8	4190.4	5258.8	4.0
8	A98134-2	Typy, plump, a few round ones.	4.0	0.0	11.8	407.8	5159.1	6226.9	4.0
9	AO01114-4	Large, non-uniform shape, spotty russeting.	2.7	0.0	10.8	537.9	7050.3	8102.9	2.7
10	AO02060-3	Irregular shape, bumpy tubers, deep eyes.	2.3	0.0	9.5	387.0	4923.8	5625.6	2.7
11	AO02183-2	Typy, nice, looks like R. Norkotah.	4.0	0.0	8.6	367.2	4573.3	5405.2	4.3
12	PA03NM5-1	Smaller round tubers.	4.0	0.0	10.4	394.4	5064.9	5813.1	3.0

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