

2013 TRI-STATE RUSSET POTATO VARIETY TRIAL REPORT



State Experiment Stations and
USDA-ARS Cooperating

Washington

Oregon

Idaho

2013 TRI-STATE POTATO VARIETY TRIAL REPORT

TABLE

- 1 Locations, Cooperators, and Cultural Information
- 2 Clone, Seed Source, Stand, Tuber and Vine Characteristics, Stems per Plant
- 3 Total Yield (CWT/A) - Early & Late Harvest
- 4 Yield of U.S. No. 1's (CWT/A & %) - Early & Late Harvest
- 5 Yield of U.S. No. 1's Over 10 oz. (CWT/A & %) - Early & Late Harvest
- 6 Yield of Tubers Under 4 oz. (CWT/A & %) - Early & Late Harvest
- 7 Specific Gravity - Early & Late Harvest
- 8 Average Tuber Size, and Tuber Shape
- 9 Tubers per Plant and Eye Depth
- 10 Tuber Discriptors
- 11 External Defects - Growth Cracks, 2nd Growth, Shatter Bruise, and Scab
- 12 Internal Defects - Hollow Heart/Brown Center, Internal Brown Spot, Vascular Discoloration, Blackspot Bruise
- 13 French Fry Color and Percent Sugar Ends
- 14 Disease Evaluations - Aberdeen, Hermiston, Corvallis, and Prosser
- 15 Solids, Dextrose, Sucrose, Protein, Vitamin C, and Glycoalkaloids - Aberdeen
- 16 Merit Scores
- 17 Summary of Entries' Performances
- 18 Trial Comments by State
- 19 Washington State Postharvest Evaluations- Early and Late

Compiled by Peggy Bain

Revision - 3/20/2014

TABLE 1: 2013 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	Late	Sprink.	275-240-100	29-Apr	30-Aug	23-Sep	123	147	TriCor 4F Prowl H2O Establish	Admire Pro	Equus 720 SSt Manzate Echo
	J. Whitworth R. Novy P. Bain M. Chappell	Early		Seed spacing: in row 10.6" rows 36"	30-Apr	17-Aug	12-Sep	109	135			
Hermiston Oregon (HOR)	Sagar Sathuvalli	Late	Pivot	400-180-100-70	12-Apr	7-Sep	24-Sep	148	165	Matrix Dual Magnum Reglone	Admire Coragen Agrimek Actara Movento	Maxim 4FS Ridimil Gold Dithane Quardris Omega
Klamath Falls Oregon (KOR)	B. Charlton	Late	solid set	168-100-248-7 ZN 1.7 tons Gypsum	16-May	10-Sep	1-Oct	117	138	Prowl Matrix	Movento Admire Vydate C-LV Telone & Vapam (fall)	Moncut Ridomil/Bravo Luna
	Baley			Seed spacing: in row 9.25" rows 36"	Warmer growing season than past four years - 17 days above 90o F. Quality good, yield good, despite high temperature events.							
Othello (EWA) Washington	M Pavek R. Knowles N. Fuller Z. Holden	Early	Pivot	200-250-300-40	3-Apr	19-Jul	5-Aug	107	124	PreEmerge: Outlook Prowl H2O Metribuzin Post Emerge:	Oberon 2SC	Priaxor Omega Gavel 75DF
Othello (LWA) Washington		Late	Pivot	300-350-400-40	8-Apr	4-Sep	12-Sep	149	157	Eptam		

TABLE 2: 2013 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	4.8	Long	3.5	Med Russet	2.6	Medium	3.3	Medium	2.1
2	Russet Burbank	Early Rose ?	White	Check	Dual	Ck	OR	98	4.3	Long	3.4	Med Russet	2.6	Medium	3.1	Medium	2.1
3	Russet Norkotah	ND9687-5 Ru ND9526-4 Ru	White	Check	Fresh	Ck	OR	99	3.9	Obl-Lng	3.9	Med Russet	.	Very Large	1.3	Early	2.5
4*	Shepody		lt red-purple	Check	process	Ck	OR	89									
5	A0012-5	GemStar R A087077-6	Med Red- purple	ID	Dual	2	OR	89	3.3	Oblong	4.0	Med Russet	4.3	Large	4.1	Late	1.6
6	A0073-2	A9304-3 A95154-1	Med Red- purple	ID	Dual	2	OR	93	3.5	Oblong	3.6	Med Russet	2.8	Medium	3.4	Medium	1.9
7	A03141-6	A98083-9 Premier R	White	ID	Dual	1	ID	98	3.6	Obl-Lng	3.6	Med Russet	1.4	Small	2.8	Med Early	2.6
8	A03921-2	A96953-13 Alpine	Med purple	ID	Dual	2	OR	96	4.0	Obl-Lng	2.9	Light Russet	3.4	Med-large	2.6	Med Early	2.2
9	A05052-3TE	A99133-6 A99032-2TE	White	ID	Dual	2	OR	95	3.3	Oblong	3.3	Med Russet	2.3	Small	2.9	Med Early	2.3
10	A05084-11	A99081-8 A96095-3	White	ID	Dual	1	ID	94	3.2	Oblong	3.6	Med Russet	1.3	Small	1.9	Early	1.5
11	A06003-3TE	A92030-5 A97306-3	White	ID	Dual	2	OR	91	3.5	Oblong	3.8	Med Russet	1.9	Small	1.6	Early	1.7
12	A06021-1T	A99031-1TE A96013-2	White	ID	Dual	1	ID	87	3.5	Oblong	3.9	Med Russet	1.7	Small	1.9	Early	1.6
13	A06029-4T	A99133-6 A99034-2E	White	ID	Dual	1	ID	98	2.8	Oblong	3.4	Med Russet	2.4	Small	2.8	Med Early	1.6
14	A06084-1TE	A98345-1 A972677-1	White	ID	Dual	2	OR	95	4.0	Obl-Lng	3.4	Med Russet	1.8	Small	2.4	Early	2.4
15	A07001-7TE	Classic R A01054-4	White	ID	Dual	1	ID	97	3.7	Obl-Lng	3.5	Med Russet	1.3	Small	1.9	Early	1.7
16	A003123-2	A98082-17 Premier R	White	OR	Dual	2	OR	99	4.1	Long	3.4	Med Russet	2.4	Small	3.4	Medium	2.5
17	AOR06070-1KF			OR	Dual	1	OR	95	4.1	Long	3.5	Med Russet	2.6	Medium	3.1	Medium	2.3

TABLE 3: 2013 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)					
		(EID)	(EWA)	Entry Mean	Rank	(ID)	(OR) Herm KF		(LWA)	Entry Mean	Rank
1	Ranger Russet	404	462	433	2	458	700	540	827	631	6
2	Russet Burbank	323	314	319	13	419	783	598	746	637	4
3	Russet Norkotah	348	425	387	6	231	476	415	663	446	16
4	Shepody	271	301	286	16						
5	A0012-5	303	270	287	15	469	748	443	708	592	8
6	A0073-2	346	178	262	17	449	732	578	663	606	7
7	A03141-6	399	483	441	1	419	642	595	871	632	5
8	A03921-2	417	326	372	10	563	810	664	864	725	2
9	A05052-3TE	348	392	370	11	358	622	457	643	520	12
10	A05084-11	311	522	417	4	310	476	456	643	471	14
11	A06003-3TE	268	356	312	14	418	577	525	517	509	13
12	A06021-1T	382	448	415	5	427	515	537	685	541	11
13	A06029-4T	359	489	424	3	383	623	590	765	590	9
14	A06084-1TE	356	395	376	9	376	654	511	783	581	10
15	A07001-7TE	301	454	378	8	336	410	480	593	455	15
16	AO03123-2	304	343	324	12	388	776	582	941	672	3
17	AOR06070-1KF	423	347	385	7	441	812	673	992	730	1
Location Means		345	383	364		403	647	540	744	584	
LSD (.05)										96.4	

TABLE 4: 2013. 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)/%					
		(EID) (EWA)		Entry Mean	Rank	(ID)	(OR)		(LWA)	Entry Mean	Rank
		(EID)	(EWA)				Herm	KF			
1	Ranger Russet	308	338	323	4	317	603	351	563	459	10
		76	73	75	7	69	86	35	68	65	16
2	Russet Burbank	209	181	195	15	255	649	362	558	456	11
		65	58	62	14	61	83	60	75	70	15
3	Russet Norkotah	262	270	266	9	150	429	324	532	359	15
		75	64	70	10	65	91	78	80	79	12
4	Shepody	167	256	212	12						
		62	85	74	8						
5	A0012-5	181	214	198	14	355	678	256	601	473	9
		60	79	70	10	76	91	58	85	78	14
6	A0073-2	256	39	148	17	373	653	434	570	508	5
		74	22	48	17	83	89	75	86	83	5
7	A03141-6	305	336	321	5	335	538	483	744	525	4
		76	70	73	9	80	84	81	86	83	7
8	A03921-2	333	246	290	7	479	736	527	740	621	1
		80	75	78	5	85	91	79	86	85	3
9	A05052-3TE	252	235	244	10	279	510	344	535	417	13
		72	60	66	12	78	82	75	83	80	10
10	A05084-11	283	480	382	1	286	430	413	573	426	12
		91	92	92	1	92	90	91	89	91	1
11	A06003-3TE	174	236	205	13	341	505	388	380	404	14
		65	66	66	13	82	87	74	74	79	11
12	A06021-1T	334	360	347	3	371	482	436	622	478	8
		87	80	84	3	87	94	81	91	88	2
13	A06029-4T	320	435	378	2	337	560	412	695	501	6
		89	89	89	2	88	90	70	91	85	4
14	A06084-1TE	267	187	227	11	300	580	375	680	484	7
		75	47	61	15	80	89	73	87	82	8
15	A07001-7TE	239	358	299	6	260	307	382	479	357	16
		80	79	80	4	77	75	80	81	78	13
16	A003123-2	231	154	193	16	313	678	457	811	565	3
		76	45	61	16	81	87	79	86	83	5
17	AOR06070-1KF	315	263	289	8	334	710	494	821	590	2
		74	76	75	6	76	87	73	83	80	9
Location Means		261	270	265		318	566	402	619	476	
LSD (.05)		75	68	72		79	87	73	83	80	
										102	

TABLE 5: 2013 Tri-State Potato Variety Trial - YIELD > 10 OZ (CWT/A & %) - EARLY AND LATE HARVEST

No.	Clone	U.S. No. 1's > 10 OZ - Early Harvest (CWT/A)/%				U.S. No. 1's >10 OZ - Late Harvest (CWT/A)/%					
		(EID) (EWA)		Entry Mean	Rank	(ID)	(OR)		(LWA)	Entry Mean	Rank
		(EID)	(EWA)				Herm	KF			
1	Ranger Russet	118	12	65	7	190	378	169	278	254	4
		29	3	16	9	42	54	31	34	40	6
2	Russet Burbank	79	9	44	11	97	254	126	231	177	12
		25	3	14	11	23	32	21	31	27	13
3	Russet Norkotah	94	8	51	9	28	121	126	85	90	15
		27	2	15	10	12	25	30	13	20	15
4	Shepody	40	61	51	10						
		15	20	18	7						
5	A0012-5	80	6	43	12	200	448	155	378	295	3
		26	2	14	11	43	60	35	53	48	1
6	A0073-2	113	0	57	8	211	278	160	228	219	7
		33	0	17	8	47	38	28	34	37	9
7	A03141-6	74	0	37	15	68	152	161	261	161	13
		19	0	10	16	16	24	27	30	24	14
8	A03921-2	186	27	107	2	272	359	289	460	345	1
		45	8	27	2	48	44	44	53	47	2
9	A05052-3TE	72	0	36	16	117	156	131	182	147	14
		21	0	11	15	33	25	29	28	29	12
10	A05084-11	189	78	134	1	161	183	220	241	201	10
		61	15	38	1	52	38	48	38	44	5
11	A06003-3TE	122	25	74	6	220	297	214	163	224	6
		46	7	27	2	53	52	41	32	45	4
12	A06021-1T	122	34	78	5	128	177	223	325	213	9
		32	8	20	6	30	34	42	47	38	8
13	A06029-4T	113	97	105	3	128	285	222	319	239	5
		32	20	26	4	33	46	38	42	40	7
14	A06084-1TE	77	0	39	14	99	224	156	233	178	11
		22	0	11	14	26	34	31	30	30	11
15	A07001-7TE	31	24	28	17	36	55	152	96	85	16
		10	5	8	17	11	13	32	16	18	16
16	A003123-2	69	10	40	13	60	256	251	298	216	8
		23	3	13	13	15	33	43	32	31	10
17	AOR06070-1KF	197	10	104	4	211	302	281	543	334	2
		47	3	25	5	48	37	42	55	46	3
Location Means		104	24	64		139	245	190	270	211	
LSD (.05)		30	6	18		33	37	35	36	35	
										87	

TABLE 6: 2013 Tri-State Potato Variety Trial - YIELD < 4 OZ (CWT/A & %) - EARLY AND LATE HARVEST

No.	Clone	Yield < 4 OZ - Early Harvest (CWT/A)/%				Yield < 4 OZ - Late Harvest (CWT/A)/%					
		(EID)	(EWA)	Entry Mean	Rank	(ID)	(OR)		(LWA)	Entry Mean	Rank
							Herm	KF			
1	Ranger Russet	39	80	60	9	25	42	63	79	52	8
		10	17	14	12	5	6	12	10	8	8
2	Russet Burbank	51	70	61	8	66	60	80	76	71	2
		16	22	19	7	16	8	13	10	12	4
3	Russet Norkotah	61	114	88	6	60	44	42	113	65	4
		18	27	23	5	26	9	10	17	16	2
4	Shepody	57	31	44	14						
		21	10	16	9						
5	A0012-5	17	50	34	16	22	16	25	45	27	15
		6	19	13	15	5	2	6	6	5	15
6	A0073-2	55	127	91	5	27	38	53	55	43	9
		16	71	44	1	6	5	9	8	7	10
7	A03141-6	64	133	99	4	67	78	55	77	69	3
		16	28	22	6	16	12	9	9	12	5
8	A03921-2	32	64	48	12	39	28	27	27	30	14
		8	20	14	10	7	3	4	3	4	16
9	A05052-3TE	52	152	102	3	41	98	53	63	64	5
		15	39	27	4	12	16	11	10	12	3
10	A05084-11	13	34	24	17	14	35	16	32	24	16
		4	6	5	17	5	7	3	5	5	14
11	A06003-3TE	16	74	45	13	17	41	23	55	34	12
		6	21	14	12	4	7	4	11	7	11
12	A06021-1T	35	79	57	10	46	26	29	31	33	13
		9	18	14	12	11	5	5	5	7	11
13	A06029-4T	35	47	41	15	42	49	28	39	40	11
		10	10	10	16	11	8	5	5	7	9
14	A06084-1TE	44	190	117	1	49	58	54	72	58	7
		12	48	30	3	13	9	10	9	10	6
15	A07001-7TE	55	82	69	7	75	93	54	95	79	1
		18	18	18	8	22	23	11	16	18	1
16	A003123-2	47	185	116	2	53	76	43	75	62	6
		16	54	35	2	14	10	7	8	10	7
17	AOR06070-1KF	38	65	52	11	35	40	38	54	42	10
		9	19	14	10	8	5	6	5	6	13
Location Means		42	93	67		42	51	43	62	50	
LSD (.05)		12	26	19		11	8	8	9	9	20

TABLE 7: 2013 Tri-State Potato Variety Trial - SPECIFIC GRAVITY - EARLY AND LATE HARVEST

No.	Clone	Specific Gravity - Early Harvest				Specific Gravity - Late Harvest					
		EID	EWA	Entry Mean	Rank	ID	Herm	KF	LWA	Entry Mean	Rank
1	Ranger Russet	1.082	1.071	1.077	7	1.086	1.085	1.082	1.083	1.084	8
2	Russet Burbank	1.070	1.068	1.069	16	1.075	1.077	1.086	1.074	1.078	11
3	Russet Norkotah	1.072	1.071	1.072	13	1.074	1.066	1.069	1.069	1.070	16
4	Shepody	1.067	1.060	1.064	17	.	.	.	.
5	A0012-5	1.074	1.066	1.070	14	1.076	1.083	1.083	1.071	1.078	10
6	A0073-2	1.081	1.070	1.075	8	1.083	1.087	1.091	1.085	1.087	6
7	A03141-6	1.094	1.073	1.084	2	1.092	1.083	1.090	1.084	1.087	5
8	A03921-2	1.090	1.084	1.087	1	1.095	1.092	1.105	1.094	1.097	1
9	A05052-3TE	1.089	1.078	1.083	3	1.093	1.092	1.096	1.087	1.092	3
10	A05084-11	1.077	1.070	1.073	11	1.083	1.068	1.079	1.079	1.077	14
11	A06003-3TE	1.075	1.064	1.070	15	1.084	1.072	1.087	1.068	1.078	12
12	A06021-1T	1.086	1.073	1.079	5	1.087	1.076	1.087	1.080	1.082	9
13	A06029-4T	1.086	1.072	1.079	6	1.091	1.081	1.097	1.087	1.089	4
14	A06084-1TE	1.075	1.074	1.075	9	1.079	1.074	1.081	1.077	1.078	13
15	A07001-7TE	1.076	1.068	1.072	12	1.077	1.066	1.077	1.073	1.073	15
16	AO03123-2	1.078	1.070	1.074	10	1.081	1.084	1.087	1.085	1.084	7
17	AOR06070-1KF	1.086	1.077	1.082	4	1.087	1.095	1.099	1.091	1.093	2
Location Means		1.080	1.071			1.084	1.080	1.087	1.080	1.083	
LSD (0.5)										0.006	

TABLE 8: 2013 Tri-State Potato Variety Trial - AVERAGE TUBER SIZE, AND TUBER SHAPE

No. Clone	Average Tuber Size (oz)							Tuber Shape (Length/Width Ratio)						
	ID E	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	7.1	5.1	9.1	9.0	6.0	8.1	8.1	1.88	2.26	2.06	2.21	2.00	2.08	
2 Russet Burbank	6.4	4.8	6.4	7.6	5.6	7.6	6.8	1.72	1.98	1.88	1.86	1.88	1.86	
3 Russet Norkotah	5.8	4.6	4.7	7.5	6.0	5.7	6.0	2.03	1.98	1.84	1.89	1.69	1.89	
4 Shepody	5.2	6.6	.	.	.	.		1.80	.	.	.	.	1.80
5 A0012-5	8.0	5.2	8.7	10.3	8.4	10.1	9.4	1.59	1.59	1.58	1.62	1.55	1.58	
6 A0073-2	6.3	2.7	8.4	8.0	6.2	7.6	7.6	1.76	1.72	1.59	1.68	1.65	1.68	
7 A03141-6	5.7	4.5	5.3	6.4	6.7	7.7	6.5	1.73	1.97	1.75	1.94	1.65	1.81	
8 A03921-2	8.0	5.2	8.5	8.7	8.5	10.8	9.1	1.82	1.79	1.65	1.74	1.69	1.74	
9 A05052-3TE	5.7	4.0	6.5	6.1	5.8	7.0	6.4	1.74	1.83	1.67	1.81	1.72	1.75	
10 A05084-11	9.1	7.2	8.5	7.8	8.1	8.6	8.3	1.52	1.64	1.58	1.72	1.39	1.57	
11 A06003-3TE	9.0	5.1	9.9	8.2	8.4	7.3	8.4	1.77	1.73	1.79	1.69	1.67	1.73	
12 A06021-1T	6.5	5.5	6.7	7.4	7.3	9.2	7.7	1.68	1.77	1.79	1.72	1.71	1.73	
13 A06029-4T	6.8	6.9	6.8	7.8	8.3	8.9	7.9	1.35	1.63	1.39	1.32	1.29	1.40	
14 A06084-1TE	6.4	3.8	6.3	7.2	6.2	7.4	6.8	1.90	2.06	1.82	1.95	1.79	1.90	
15 A07001-7TE	5.3	5.3	4.8	5.1	6.0	5.6	5.4	1.90	1.79	1.84	1.87	1.85	1.85	
16 AO03123-2	5.8	3.3	5.9	6.9	7.0	7.5	6.9	1.81	1.90	1.95	1.89	1.97	1.90	
17 AOR06070-1KF	7.7	5.2	8.8	8.1	7.7	10.5	8.8	1.91	1.81	1.67	1.83	1.59	1.76	
Location Means	6.8	5.0	7.2	7.6	7.0	8.1	7.5	1.76	1.84	1.74	1.80	1.69	1.77	
LSD (0.5)							1.2							

TABLE 10: 2013 Tri-State Potato Variety Trial - TUBER DISCRIPTORS

No. Clone	Tuber Uniformity ¹					Shatter ¹		Greening ¹				
	WA E	OR Herm	OR KF	WA L	Entry Means	OR KF	WA L	WA E	OR Herm	OR KF	WA L	Entry Means
1 Ranger Russet	2.7	2.9	3.1	1.3	2.5	4.4	5.0	5.0	4.3	4.0	4.0	4.3
2 Russet Burbank	2.0	1.8	3.8	1.3	2.2	4.5	3.0	5.0	4.0	4.4	4.0	4.3
3 Russet Norkotah	2.7	4.4	4.0	3.8	3.7	4.8	4.0	5.0	4.9	4.3	4.3	4.6
4 Shepody	2.0	.	.	.	2.0	.	.	5.0	.	.	.	5.0
5 A0012-5	3.0	3.3	2.9	1.8	2.7	4.1	2.0	5.0	4.4	4.5	4.0	4.5
6 A0073-2	3.0	3.9	4.0	2.5	3.3	3.9	2.0	5.0	4.5	4.4	4.0	4.5
7 A03141-6	3.7	3.8	4.3	3.0	3.7	4.4	3.0	5.0	4.6	4.4	4.0	4.5
8 A03921-2	2.5	4.0	4.1	3.0	3.4	4.0	2.0	5.0	4.0	3.4	3.8	4.0
9 A05052-3TE	3.0	4.0	4.3	3.3	3.6	4.0	3.0	5.0	4.1	3.3	4.0	4.1
10 A05084-11	4.0	4.0	4.3	3.8	4.0	4.4	4.0	5.0	4.8	4.4	4.0	4.5
11 A06003-3TE	2.7	4.1	4.0	2.5	3.3	4.3	4.0	5.0	4.6	4.3	4.3	4.5
12 A06021-1T	4.0	4.1	4.3	3.5	4.0	4.5	4.0	5.0	5.0	3.9	4.0	4.5
13 A06029-4T	4.0	3.5	3.5	3.3	3.6	4.3	3.0	5.0	4.6	3.9	3.8	4.3
14 A06084-1TE	4.0	3.8	4.1	3.3	3.8	4.0	3.0	5.0	5.0	4.4	4.8	4.8
15 A07001-7TE	3.0	4.3	4.0	3.3	3.6	4.1	3.0	4.7	5.0	3.9	4.3	4.4
16 AO03123-2	3.0	3.6	4.0	2.8	3.3	4.5	3.0	5.0	4.5	4.0	4.0	4.4
17 AOR06070-1KF	2.3	4.0	3.9	1.5	2.9	3.8	1.0	5.0	4.3	3.5	4.0	4.2
Location Means	3.0	3.7	3.9	2.7	3.4	4.2	3.1	5.0	4.5	4.0	4.1	4.4

¹ Score 1-5, with 5=Best.

TABLE 11: 2013 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	5.0	4.0	5.0	4.4	5.0	4.5	3.0	5.0	4.5
2	Russet Burbank	4.0	4.0	3.0	3.9	5.0	4.0	2.4	5.0	4.8
3	Russet Norkotah	5.0	5.0	5.0	4.4	4.0	4.5	3.2	5.0	4.6
4	Shepody	5.0		5.0		5.0		.	5.0	
5	A0012-5	4.0	4.7	5.0	4.8	5.0	3.5	4.0	5.0	4.7
6	A0073-2	5.0	4.7	5.0	4.7	4.0	3.1	2.0	5.0	4.8
7	A03141-6	5.0	4.7	4.7	5.0	5.0	3.9	3.0	5.0	4.6
8	A03921-2	4.5	4.7	4.5	4.7	5.0	3.2	2.8	5.0	4.2
9	A05052-3TE	5.0	4.8	5.0	4.8	5.0	3.7	3.1	5.0	4.4
10	A05084-11	5.0	4.8	5.0	5.0	5.0	4.4	3.2	5.0	4.8
11	A06003-3TE	3.7	4.2	5.0	4.7	5.0	4.0	2.7	5.0	4.8
12	A06021-1T	5.0	4.8	5.0	4.9	4.0	4.3	2.7	5.0	4.9
13	A06029-4T	5.0	4.7	5.0	4.7	5.0	3.7	2.5	5.0	4.5
14	A06084-1TE	5.0	4.8	5.0	4.6	5.0	3.5	3.1	5.0	4.4
15	A07001-7TE	5.0	4.9	5.0	4.8	4.0	3.9	2.2	5.0	4.8
16	AO03123-2	5.0	4.8	5.0	4.8	5.0	4.0	2.9	5.0	4.5
17	AOR06070-1KF	5.0	4.5	5.0	4.2	4.0	2.6	2.2	5.0	4.3
Means		4.8	4.6	4.8	4.7	4.7	3.8	2.8	5.0	4.6
LSD (.05)										

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 12: 2013 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 ²	OR ²	
1	Ranger Russet	0.0	0.0	0.0	2.5	-n/a-	10.0	5.0	4.0	63	13	2.0
2	Russet Burbank	10.0	8.8	0.0	0.6	-n/a-	5.8	4.0	4.0	43	15	2.7
3	Russet Norkotah	0.0	4.4	0.0	0.0	-n/a-	7.5	5.0	5.0	13	20	2.6
4	Shepody	0.0		0.0		-n/a-		5.0	.	.	.	.
5	A0012-5	0.0	45.1	0.0	3.1	-n/a-	8.3	5.0	5.0	13	8	3.8
6	A0073-2	0.0	1.9	0.0	2.5	-n/a-	0.8	5.0	5.0	45	30	2.3
7	A03141-6	13.3	22.1	0.0	0.6	-n/a-	5.0	5.0	4.0	8	15	2.4
8	A03921-2	0.0	2.5	0.0	14.6	-n/a-	10.0	5.0	4.0	35	13	2.2
9	A05052-3TE	0.0	1.9	0.0	0.0	-n/a-	6.7	5.0	5.0	43	28	2.0
10	A05084-11	0.0	0.0	0.0	0.0	-n/a-	2.5	5.0	5.0	18	15	2.4
11	A06003-3TE	0.0	0.6	3.3	9.5	-n/a-	8.3	5.0	4.0	25	35	2.1
12	A06021-1T	0.0	4.4	0.0	0.0	-n/a-	10.0	5.0	5.0	25	13	2.6
13	A06029-4T	0.0	1.3	0.0	0.6	-n/a-	5.8	5.0	3.0	48	20	3.0
14	A06084-1TE	0.0	6.3	0.0	1.9	-n/a-	3.3	5.0	4.0	68	20	3.0
15	A07001-7TE	0.0	1.9	0.0	2.5	-n/a-	5.0	5.0	5.0	13	10	3.0
16	AO03123-2	0.0	3.8	0.0	0.0	-n/a-	12.5	5.0	5.0	5	3	3.9
17	AOR06070-1KF	0.0	17.2	0.0	0.0	-n/a-	4.2	5.0	4.0	20	30	2.5
Means		1.4	7.6	0.2	2.4		6.6	4.9	4.4	30	18	2.7
LSD (.05)			14.4									

¹ Score 1-5, with 1=severe, 5=none.

² Oregon is percentage of tuber showing impact bruising.

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

TABLE 13: 2013 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	HRM	LWA ²	Postharvest	All Entries		Mean	Rank	ID ¹	LWA ²	Mean	Postharvest	ID	HRM	Entry Mean
				3 state avg. ³	Mean	Rank						3 state avg. ³			
1 Ranger Russet	0.8	0.4	0.3	1.0	0.6	10	0.6	11	4.0	4.0	4.0	3.3	8	0	4
2 Russet Burbank	1.1	1.3	2.0	3.0	1.9	16	1.9	16	4.0	4.0	4.0	4.0	33	23	28
3 Russet Norkotah	1.1	0.7			0.9	14		1	4.0				29	3	-
4 Shepody	.	.					0.0	1	.				.	.	
5 A0012-5	0.4	0.2	0.0	0.3	0.2	2	0.2	3	1.4	1.0	1.2	0.3	8	0	4
6 A0073-2	0.4	0.7	0.3	0.7	0.5	8	0.5	9	2.8	2.0	2.4	1.3	8	3	5
7 A03141-6	0.6	0.2	0.0	0.3	0.3	5	0.3	6	3.5	2.0	2.8	2.0	25	0	13
8 A03921-2	0.5	0.5	0.0	0.3	0.3	6	0.3	7	1.8	1.0	1.4	0.7	50	3	26
9 A05052-3TE	0.5	0.7	0.3	0.3	0.5	7	0.5	8	2.7	3.0	2.8	1.7	29	3	16
10 A05084-11	0.5	1.1	0.5	1.0	0.8	13	0.8	14	3.8	3.0	3.4	3.0	13	13	13
11 A06003-3TE	1.2	1.3	1.0	1.3	1.2	15	1.2	15	4.0	3.0	3.5	3.3	17	18	17
12 A06021-1T	0.6	0.9	0.3	0.7	0.6	9	0.6	10	3.6	3.0	3.3	3.0	4	0	2
13 A06029-4T	0.6	0.7	1.0	0.7	0.7	12	0.7	13	4.0	3.0	3.5	3.3	46	8	27
14 A06084-1TE	0.3	0.6	0.0	0.0	0.2	3	0.2	4	1.0	3.0	2.0	1.3	0	0	0
15 A07001-7TE	0.5	1.3	0.3	0.7	0.7	11	0.7	12	2.8	3.0	2.9	3.0	21	8	14
16 A003123-2	0.4	0.3	0.0	0.0	0.2	1	0.2	2	2.3	2.0	2.1	2.3	50	0	25
17 AOR06070-1KF	0.4	0.7	0.0	0.0	0.3	4	0.3	5	2.3	1.0	1.6	1.3	29	3	16
Location Means	0.6	0.7	0.4	0.7	0.6		0.6		3.0	2.5	2.7	2.3	23	5	14.0

¹ Samples held for 4 week cool down period - 7 weeks at storage temperature.² Samples held for 60 days at 44 or 40°F³ Three state average processed at Washington - For complete postharvest results see <http://www.potatoes.wsu.edu/>

TABLE 12: 2013 Tri-State Potato Variety Trial - DISEASE EVALUATIONS

No. Clone	Vert. Wilt/ Early Dying		Early Blight AB ¹					Late Blight CORV ²			Common Scab AB ¹		% Net Necrosis/ vascular discoloration ¹		Pecto- bacterium Soft Rot ¹	Metr.
	AB ¹		HERM	Foliar		% Incidence	% Serious Defect	Foliar		Tuber	AB ¹		AB1		AB	Reaction AB ³
	(0-9)	AUDPC	(0-9)	(0-9)	AUDPC			0-9	AUDPC		%	% Incidence	% Serious Defect	% Incidence	% Serious Defect		0-5
1 Russet Burbank	8.3	741	6.5	4.0	98	1.6	0.0	9	1357	13	3.0	0.0	50.6	0.0	2.9	--
2 Russet Norkotah	9.0	-- ⁴	5.5	2.7	49	0.0	0.0	9	1424	80	37.0	3.0	68.3	6.7	1.9	--
3 Shepody	7.3	393	6.5	7.7	469	--	--	--	--	--	80.0	30.0	--	--	--	VS
4 A0012-5	2.3	28	2.5	3.7	56	7.5	0.0	9	1337	28	82.5	49.3	58.1	20.7	1.2	MS
5 A0073-2	6.0	204	5.0	7.3	390	0.0	0.0	9	1383	23	23.8	2.8	70.2	27.5	3.0	R
6 A03141-6	8.7	537	6.0	7.0	414	20.1	7.5	9	1404	38	0.0	0.0	60.0	3.3	2.9	MS
7 A03921-2	7.3	502	5.5	6.7	279	11.4	0.0	9	1350	55	35.4	11.4	93.3	31.9	3.4	R
8 A05052-3TE	5.7	235	6.5	7.3	350	13.5	0.0	9	1355	0	82.9	21.3	78.5	25.6	3.6	R
9 A05084-11	9.0	858	8.0	5.3	251	24.7	8.8	9	1424	50	34.7	7.6	38.4	20.7	2.7	S
10 A06003-3TE	8.0	525	9.0	6.0	222	0.0	0.0	9	1363	60	46.7	14.6	67.4	22.8	4.0	R
11 A06021-1T	9.0	928	7.0	6.3	508	24.8	16.2	9	1424	58	27.4	1.1	72.9	34.6	2.1	R
12 A06029-4T	6.7	299	6.0	4.3	105	0.0	0.0	9	1363	18	84.7	38.3	64.6	38.3	2.6	R
13 A06084-1TE	9.0	811	6.5	7.7	648	2.1	0.0	--	--	--	33.1	6.9	66.6	14.5	2.8	R
14 A07001-7TE	9.0	910	7.5	5.7	268	10.3	0.0	9	1445	63	52.2	11.0	6.3	0.0	3.8	MS
15 AO03123-2	5.0	153	4.5	8.0	537	0.0	0.0	9	1357	38	81.5	38.5	59.0	11.3	1.5	MS
16 AOR06070-1KF	5.7	186	3.5	7.3	343	2.4	0.0	9	1355	8	11.0	0.0	50.8	19.2	2.1	R
MEANS	7.3	487	6.0	6.1	312	7.9	2.2	8.9	1382	37.7	44.8	14.7	60.3	18.5	2.7	
LSD @ .05	1.4			1.6		14.0	6	1	100	29	28.0	22.0	19.0	23.0	ns	

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, Net Necrosis, and Early Blight 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

⁴ Russet Norkotah AUDPC not recorded as plots were dead at last reading

TABLE 15: Solids, Dextrose and Sucrose, Protein, Vitamin C and Glycoalkaloids
- Tubers Grown at Aberdeen, Idaho

Clone	Solids Oven Dry (%)	Sugars		Protein (%DWB)	Vitamin C (mg/100g FWB)	Glycoalkaloids (mg/100gFWB)
		Dextrose (%FWB)	Sucrose (%FWB)			
1 Ranger Russet	22.8	0.082	0.169	4.92	33.8	5.0
2 Russet Burbank	20.0	0.097	0.164	4.77	23.5	4.0
3 Russet Norkotah	20.6	0.133	0.222	5.22	29.1	6.1
4 A0012-5	22.5	0.088	0.237	5.58	27.5	2.4
5 A0073-2	22.0	0.028	0.140	5.36	27.3	3.7
6 A03141-6	24.1	0.067	0.140	5.52	30.9	7.6
7 A03921-2	25.2	0.042	0.167	5.26	35.4	9.8
8 A05052-3TE	23.9	0.098	0.237	4.91	31.8	4.4
9 A05084-11	21.4	0.053	0.110	5.66	27.4	3.4
10 A06003-3TE	21.0	0.083	0.158	5.26	36.3	2.0
11 A06021-1T	22.5	0.046	0.151	5.21	24.4	3.1
12 A06029-4T	23.4	0.088	0.176	5.39	35.3	3.2
13 A06084-1TE	22.2	0.008	0.152	5.89	28.0	2.3
14 A07001-7TE	20.2	0.058	0.121	5.15	28.4	6.7
15 A003123-2	21.7	0.026	0.191	5.44	19.7	2.8
16 AOR06070-1KF	21.7	0.055	0.168	5.68	32.0	9.1
Means	22.2	0.066	0.169	5.33	29.4	4.7

FWB = fresh weight basis DWB = dry weight basis

Glycoalkaloids: The 2013 Lenape check from Aberdeen was 29.84 mg/100g

TABLE 16: 2013 Tri-State Potato Variety Trial - MERIT SCORES (1-5(best))

No.	Clone	Process						Postharvest Merit * 3 State Avg.	Fresh							
		Early WA	ID	HOR	WA	MEANS	RANK		Early ID	Early WA	ID	HOR	KFOR	WA	MEANS	RANK
1	Ranger Russet	2.7	3.5	3.0	3.7	3.4	5	3.6	2.5	1.3	2.5	2.0	2.3	1.1	1.8	15
2	Russet Burbank	1.6	2.5	2.0	2.5	2.3	13	1.6	2.3	0.9	3.3	2.0	3.4	1.1	2.1	12
3	Russet Norkotah	na	2.0	2.0	na	2.0	16	na	3.0	1.7	3.0	4.0	4.1	2.0	3.0	5
4	Shepody	na	.	.	.			.	2.3	1.8	.	.	.	.	1.8	16
5	A0012-5	1.6	2.0	3.0	1.4	2.1	14	4.1	1.5	1.7	1.8	2.5	2.1	0.5	1.7	17
6	A0073-2	1.5	4.0	2.5	3.5	3.3	6	3.9	2.5	1.3	2.5	2.5	3.8	1.5	2.3	11
7	A03141-6	2.4	3.0	3.0	4.6	3.5	2	4.4	3.5	2.8	4.3	3.0	4.5	2.1	3.3	2
8	A03921-2	3.7	3.5	3.5	3.3	3.4	4	4.2	3.3	1.3	3.5	3.5	2.0	1.6	2.4	10
9	A05052-3TE	3.0	3.5	3.0	3.4	3.3	7	3.6	3.3	1.3	3.0	2.5	2.5	1.1	2.1	13
10	A05084-11	3.4	3.5	2.5	1.6	2.5	12	2.8	4.0	3.3	4.0	2.5	3.3	1.2	2.9	7
11	A06003-3TE	3.0	3.0	3.5	1.4	2.6	11	2.4	2.0	1.3	2.8	2.0	3.5	0.8	2.1	14
12	A06021-1T	3.2	4.0	2.5	3.2	3.2	9	3.4	4.1	3.9	3.9	2.5	4.4	3.5	3.6	1
13	A06029-4T	3.5	3.0	3.0	2.0	2.7	10	3.3	3.5	3.5	3.8	2.0	2.5	1.3	2.6	8
14	A06084-1TE	2.2	3.5	3.0	3.3	3.3	8	4.0	2.8	2.3	3.7	3.0	3.8	3.4	3.2	3
15	A07001-7TE	3.1	2.5	2.5	1.4	2.1	14	3.0	3.5	2.8	3.5	3.5	3.6	1.2	2.9	6
16	AO03123-2	2.2	2.5	3.5	4.7	3.6	1	4.2	3.0	1.5	4.0	2.5	3.8	3.5	3.1	4
17	AOR06070-1KF	2.7	3.0	3.5	4.0	3.5	3	4.2	2.7	1.4	2.8	3.0	3.5	1.4	2.4	9
Location Means		2.7	3.1	2.9	2.9	2.9			2.9	2.0	3.3	2.7	3.3	1.7	2.5	

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

TABLE 17: 2013 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	631	459 65	8.1	84	0.6	3.4 1.8			
2 R. Burbank	Ck	Dual	637	456 70	6.8	78	1.9	2.3 2.1			
E* Norkotah	Ck	Fresh	497	359 79	6.0	70		2.0 3.0			
4 Shepody	1	Proc									
5 A0012-5	ID	Dual	592	473 78	9.4 large	78	0.2	2.1 1.7		Hollow heart	drop
6 A0073-2	ID	Dual	606	508 83	7.6	87	0.5	3.3 2.3			return
7 A03141-6	ID	Dual	632	525 83	6.5	87	0.3	3.5 3.3		internals	return
8 A03921-2	ID	Dual	725 high	621 85 high	9.1	97	0.3	3.4 2.4			advance
9 A05052-3TE	ID	Dual	520	417 80	6.4	92	0.5	3.3 2.1			drop
10 A05084-11	ID	Dual	471	426 91 high %	8.3	77	0.8	2.5 2.9			early only
11 A06003-3TE	ID	Dual	509	404 79	8.4	78	1.2	2.6 2.1			drop
12 A06021-1T	ID	Dual	541	478 88	7.7	82	0.6	3.2 best 3.6 fresh			advance
13 A06029-4T	ID	Dual	590	501 85	7.9	89	0.7	2.7 2.6			early only
14 A06084-1TE	ID	Dual	581	484 82	6.8	78	0.2	3.3 3.2			advance
15 A07001-7TE	ID	Dual	455 low	357 78	5.4 small	73	0.7	2.1 2.9			drop
16 AO03123-2	OR	Dual	672	565 83	6.9	84	0.2	3.6 3.1 best			return
17 AOR06070-1KF	OR	Dual	730 high	590 80	8.8	93	0.3	3.5 2.4		externals	return

TABLE 18: 2013 Tri-State Potato Variety Trial - COMMENTS BY STATE

Entry	Clone	Early Idaho	Comments from Idaho Late	Comments from Klamath Falls
1	Ranger Russet	typical	thin, smaller, crooks	Hooky Crooky, mis-shaped, poor, process
2	Russet Burbank	rough	Few knobs and jelly ends	Small, typy, erratic size, not bad, knobby, mis-shaped
3	Russet Norkotah	typy	typical, small	Typy, nice, low yield, skinned, few mis-shaped
4	Shepody	typical		.
5	A0012-5	HR, lumps	heavy russ, curves, lumps, HH	Round, Dents, 2's, poor, flat, skinned, junk
6	A0073-2	MHR, misshaped	big, blocky, some curves	Some pointy, flat, shatter bruised, small, few mis-shaped, ok
7	A03141-6	MHR, nice	MLR, nice size and shape	Really nice, typy, blocky, fresh, keep
8	A03921-2	long, MR	long, LR, green, shatter, stolons attached	Flat, blotchy skin, process, ugly, large, fair lumpy, rhizoc
9	A05052-3TE	MR, oblong	MR, blocky, poor skin	Rhizoc, shatter bruise, lt. skin, flattish, ugly, process only
10	A05084-11	skin checking	HR, Big, few	Blotchy skin, process, typy, lt. skin,
11	A06003-3TE	MHR, lumpy	MHR, big, curved, lumps	Dents, poor skin, pears, not bad, not fresh, skinned, poor
12	A06021-1T	MHR, blocky, nice	MR, short, uniform Size and shape	Typy, nice skin, keep really nice
13	A06029-4T	MR, short, shatter	MR. Blocky, stolons attached, uniform	Round, 2's, fair, dents, flat, poor, skinned, drop
14	A06084-1TE	MR, some knobs	MR, nice, uniform size and shape	Flat, few mis-shaped, knobs, low yield, bright eyes, impact bruise with fus., heavy net, typy, keep
15	A07001-7TE	MLR, some points	MR, short, uniform Size and shape	Light net, too light for fresh, pointy, really typy, blocky
16	AO03123-2	long, MR	MR, stolons attached, scab	Lumpy, rhizoc, process, lumpy eyes, some mis-shaped, maybe fresh
17	AOR06070-1KF	MR, lumps, shatter	nice, MHR, long, poor skin	Long, typy, not bad, some mis-shaped, fair, fresh

TABLE 19: 2013 Tri-State Harvest Potato Variety Trials - WASHINGTON STATE POSTHARVEST EVALUATIONS

Entry	Clone	Comments from Washington Early Trial	Carton Yield		Process Yield	
			100-50 count (US 1's 7-18 oz)		US 1's and 2's > 6 oz	
			% of Total Yield	Tons/A	% of Total Yield	Tons/A
1	Ranger Russet	Pointy ends, irregular shape.	30	6	48	10
2	Russet Burbank	Some rot, a bit rough.	26	4	41	6
3	Russet Norkotah	Lots of 2's, shape a bit irregular.	20	4	39	8
4	Shepody	White skin, irregular shape.	57	8	73	11
5	A0012-5	Short, plump, some skinny.	42	5	50	6
6	A0073-2	Not an early variety, small.	4	0	9	1
7	A03141-6	Typy, good skin set, some pointy, smaller.	24	5	38	9
8	A03921-2	Good length, some a bit pointy, spotty russetting, low yield.	33	5	50	8
9	A05052-3TE	Smaller, ugly skin.	18	3	29	5
10	A05084-11	Plump, short, spotty russetting.	64	16	76	19
11	A06003-3TE	Irregular shapes, rough, some cracks.	35	6	48	8
12	A06021-1T	Typy, great skin set. Uniform shape and size.	44	9	58	12
13	A06029-4T	Round, plump, a lot of skinning.	60	14	70	16
14	A06084-1TE	Smaller, typy.	11	2	20	4
15	A07001-7TE	Long and skinny, spotty russetting.	45	10	56	12
16	AO03123-2	Not an early variety. Small.	12	2	20	3
17	AOR06070-1KF	Bad skin, spotty russetting, irregular shape. DISCARD!	36	6	52	9
Entry	Clone		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 Russet	Long, skinny, irregular shapes.	55	16	77	32
2	Russet Burbank	Irregular shapes, irregular russetting.	64	18	72	27
3	Russet Norkotah	typy, uniform shape, nice skin	55	15	59	20
5	A0012-5	Plump, short, irregular shapes, poor skin set.	51	15	83	29
6	A0073-2	Shape a bit irregular, spotty russetting, prescab.	69	20	75	25
7	A03141-6	Long, deep eyes, irregular shapes, some points.	73	27	80	35
8	A03921-2	Ugly skin, good shape, prescab.	61	23	81	35
9	A05052-3TE	Irregular shapes, bad skin, prescab.	63	17	69	22
10	A05084-11	Too round, plump, DISCARD!!	71	20	81	26
11	A06003-3TE	Short, round, plump, cracks.	73	14	66	17
12	A06021-1T	Flat, long, some irregular shape, typy.	76	23	87	30
13	A06029-4T	Round and ugly, DISCARD!	67	23	84	32
14	A06084-1TE	Long, flat, and mostly typy.	67	23	77	30
15	A07001-7TE	Irregular shape, smaller.	57	14	58	18
16	AO03123-2	Long, skinny, light skin.	67	27	78	37
17	AOR06070-1KF	Irregular shape, bad shape, DISCARD!	45	18	81	40