

# 2019 WESTERN REGIONAL POTATO VARIETY TRIAL REPORT

State Experiment Stations and  
USDA-ARS Cooperating

California

Colorado

Idaho

Oregon

Texas

Washington



## 2019 WESTERN REGIONAL POTATO VARIETY TRIAL REPORT

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**Western Regional Potato Variety Trial Reports (1998-2019) can be accessed at the following website.**

[www.ars.usda.gov/main/docs.htm?docid=21888](http://www.ars.usda.gov/main/docs.htm?docid=21888)

Compiled by Brian Schneider

TABLE 1: 2019 Western Regional Potato Variety Trial - LOCATIONS, COOPERATORS, AND CULTURAL INFORMATION

No. Locations	Cooperators	Trial Irrigation	Fertilizer		Planting Date	Harvest Date	Days to Vine Kill	Days to Harvest	Herbicides	Pesticides Applied <sup>1</sup>	
			N-P-K-S(lb/A)							Insecticides	Fungicides
1 Tulelake California <b>(TUL)</b>	R. Wilson D. Culp	Late Sprink.		210-0-150	17-May	27-Sep	116	133	Prowl H20 Eptam 7E Matrix SG	Admire Pro	Quadris
				Seed Spacing: In-Row 10" Rows 36"					Reglone		
2 San Luis Valley Colorado <b>(SLV)</b>	D. Holm, C. Gray K. Gaudreau	Late Pivot		118-62-120-85	15-May	26-Sep	111	134	Tuscany Prowl H20 Dual Magnum	Platinum 75SG Movento HL Pure Spray Green	ChamplON++ Quadris Top Agri Tin Luna Tranquility
				Seed Spacing: In-Row 12" Rows 34"					Reglone		
3 Aberdeen Idaho <b>(AB)</b>	J. Stark R. Novy J. Whitworth C. Lowder	Late Sprink.		315-180-5Zn-5Mn	1-May	24-Sep	127	146	TriCor 4F Matrix Eptam 7E	Admire Pro	
				Seed Spacing: In-Row 10.6" Rows 36"					Mechanical		
4 Kimberly Idaho <b>(KIM)</b>	J. Stark R. Novy J. Whitworth C. Lowder	Late Sprink.		425-300-175-63S-10Zn	24-Apr	30-Sep	141	159	Dimetric Outlook, Eptam Class Act	Rimon Beleaf	Luna Tranquility Bravo Weatherstik Zing, Fulfill
				Seed Spacing: In-Row 10.6" Rows 36"					Mechanical		
5 Parma Idaho <b>(PAR)</b>	M. Thornton O. Morgan R. Portenier	Early Sprink. Late Sprink.		204-100-200+20Mg,11Mn,4B 344-100-200+20Mg,11Mn,4B	24-Apr 25-Apr	13-Aug 20-Sep	98 133	111 148	Sonalan Boundry Reglone Eptam 7E	Adsorb, Liberate Movento	Bravo, Endura Luna T Revus Top Quadris Top
				Seed Spacing: In-Row 10" Rows 36"					Chemical		
6 Hermiston Oregon <b>(HRM)</b>	S. Sathuvalli M. Aguila	Early Pivot Late Pivot		390-170-200-83+10Mg,3.5Zn,2B,96Cl 300-170-200-83+10Mg,3.5Zn,2B,96Cl	28-Mar 12-Apr	16-Aug 10-Sep	126 143	141 151	Dual Magnum Matrix, Prow	Admire Coragen Asana XL	Quadris, Ridomil Omega, Dithane Bravo, Echo
				Seed Spacing: E & L In-Row 9.25" Rows 34"					Reglone/Mechanical		
7 Dalhart <b>(DAL)</b>  Springlake <b>(SPR)</b> Texas	I. Vales J. Koym D. Schuering C. Miller Jr.	Early Pivot Early		119-122-258  72-33-42.5	13-May 21-Mar	20-Sep 12-Aug	114 130	130 144	Matrix SG Reglone TriCor 4F Bronc Triple Dual Magnum Makaze, Eptam 7E	Movento, Fulfill Beleaf 50 SG Transform WG Reaper ClearForm Minecto Pro Sivanto, Wrangler	Echo Zn, Revus Top Luna Tranquility Penncozeb 75DF Scala Miravis Prime Headline NUCOP
				Seed Spacing: DAL / SPR In-Row 10.2" / 9.0" Rows 28" / 36"					Mechanical		
8 Othello <b>(OTH)</b> Othello <b>(OTH)</b> Washington	M. Pavek R. Knowles	Early Linear Late Pivot		200-100-300-20-40+2B 380-250-300-40+2B	4-Apr 3-Apr	5-Aug 9-Sep	109 148	123 159	Outlook Prowl H20 Eptam	Platinum	Omega, Nevado Curzate 60DF Quash, Rovral Ridomil
				Seed Spacing: E & L In-Row 12" / 11" Rows 32" / 32"					Mechanical/Chemical		

<sup>1</sup> Bold indicates use in both location's trials.

**TABLE 2: 2019 Western Regional Potato Variety Trial - CLONE, PARENTAGE, FLOWER COLOR, ENTRY SUBMISSION, USE, TRIAL, YEARS IN TRIAL, SEED SOURCE, STAND, TUBER AND VINE CHARACTERISTICS**

No.	Clone	Parents	Flower Color <sup>1</sup>	Entered by	Use	Year in Trial	Seed Trial	Seed Source	Stand <sup>2</sup>	Tuber and Vine Descriptions from Trial Observations <sup>2</sup>					
										Tuber Shape (1-5) <sup>3</sup>	Tuber Skin (1-5) <sup>4</sup>	Vine Size (1-5) <sup>5</sup>	Vine Maturity (1-5) <sup>6</sup>	Stems/Hill	
1	Ranger Russet	Butte A6595-3	RP	Ck	Dual	E/L	-	OR	98	Long 4.3	Med Russet 3.4	Med-Large 3.6	Med-Late 3.6	2.1	
2	Russet Burbank	Early Rose ?	W	Ck	Dual	E/L	-	OR	99	Obl-Lng 4.0	Med Russet 3.3	Med-Large 3.8	Medium 3.1	2.3	
3	Russet Norkotah	ND9687-5Rus ND9526-4Rus	W	Ck	Fresh	E/L	-	OR	99	Obl-Lng 4.0	Med Hvy Rus 4.2	Med-Large 3.2	Early 2.1	2.2	
4	Shepody	Bake-King F58050	RP	Ck	Proc	E	-	OR	95	Obl-Lng 3.7	White 1.4	Med-Large 3.7	Medium 3.3	1.8	
5	A07061-6	Targhee Russet Clearwater Russet	RP	ID	Dual	E/L	3	OR	98	Oblong 2.7	Light Russet 2.1	Med-Large 3.9	Med-Late 3.7	2.3	
6	A071012-4BF	A85331-7 A01054-4	W	ID	Dual	E/L	2	OR	98	Oblong 3.5	Med Russet 3.4	Med-Large 3.9	Med-Late 3.9	2.2	
7	A07769-4	PA01N32-1 Premier Russet	RP	ID	Dual	E/L	2	OR	95	Oblong 3.4	Light Russet 2.9	Med-Large 3.5	Medium 3.4	2.4	
8	A08422-4sto	A96953-13sto A02618-1adq	W	ID	Dual	E/L	1	OR	98	Oblong 3.1	Light Russet 2.8	Med-Large 3.2	Med Early 2.7	1.9	
9	A08433-4sto	A01667-3 AOND95249-1Russ	W	ID	Dual	E/L	3	OR	94	Obl-Lng 3.6	Med Russet 3.4	Large 4.1	Late 4.5	1.7	
10	A10021-5TE	A03921-2 Mountain Gem Rus	W	ID	Dual	E/L	2	OR	96	Long 4.2	Med Russet 3.3	Med-Large 3.5	Med-Late 4.0	2.3	
11	AO02183-2	A97236-3 Premier Russet	W	OR	Dual	E/L	2	OR	99	Long 4.3	Med Russet 3.9	Med-Large 4.0	Med-Late 3.7	2.3	
12	AOR07781-5	PA92A08-17 PALB03035-6	W	OR	Dual	E/L	3	OR	99	Obl-Lng 4.0	Med Hvy Rus 4.2	Med-Large 3.9	Medium 3.2	3.0	
13	CO09076-3RU	CO03380-2RU CO03202-1RU	W	CO	Fresh	E/L	2	CO	89	Long 4.1	Med Russet 3.7	Medium 2.9	Med Early 2.7	2.5	
14	CO09205-2RU	AOA95154-1 CO95086-8RU	Lt. P	CO	Dual	E/L	2	CO	89	Long 4.1	Med Russet 3.7	Medium 2.6	Med Early 2.9	2.5	
15	CO10087-4RU	CO03367-1RU Mercury Russet	W	CO	Dual	E/L	1	CO	88	Obl-Lng 3.7	Med Russet 3.5	Medium 3.0	Early 2.4	2.6	
16	CO10091-1RU	CO03371-4RU CO98067-7RU	W	CO	Dual	E/L	1	CO	92	Oblong 3.2	Med Hvy Rus 4.1	Med-Large 3.2	Med Early 3.0	2.1	
17	COTX05095-2Ru/Y	CO99045-1W/Y AO96164-1	W	TX	Fresh	E/L	2	CO	96	Oblong 2.8	Light Russet 3.0	Med-Large 3.3	Early 2.4	2.6	
18	OR12133-10	A98345-10 Silverton Russet	W	OR	Dual	E/L	1	OR	99	Obl-Lng 3.6	Light Russet 2.4	Large 4.2	Late 4.3	2.2	
19	POR12NCK50-1	PA99N82-4 Western Russet	P	OR	Dual	E/L	1	OR	98	Obl-Lng 4.0	Med Russet 4.0	Med-Large 3.8	Medium 3.3	2.2	

<sup>1</sup> P=Purple, R=Red, W=White

<sup>2</sup> Numerical values are means of all trial locations at 60 days.

<sup>3</sup> 1.0-2.0=Round, 2.1-2.5=Round-Oblong, 2.6-3.5=Oblong, 3.6-4.0=Oblong-Long, 4.1-5.0=Long

<sup>4</sup> 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

<sup>5</sup> 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

<sup>6</sup> 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: 2019 Western Regional 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)										
	ID	OR	TX		WA	Entry	CA	CO	ID		OR	WA	Entry					
	PAR	HRM	DAL	SPR	OTH	Mean/Rank	TUL	SLV	AB	KIM	PAR	HRM	OTH	Mean/Rank				
1 RANGER R.	378	747	474	227	689	<b>503</b>	<b>9</b>	abc	410	251	487	562	477	788	1051	<b>575</b>	<b>8</b>	ef
2 R. BURBANK	285	683	447	218	734	<b>473</b>	<b>13</b>	abcd	378	298	422	570	569	558	1085	<b>554</b>	<b>10</b>	efg
3 R. NORKOTAH	321	569	637	114	659	<b>460</b>	<b>15</b>	cd	332	305	249	430	407	645	814	<b>455</b>	<b>15</b>	hi
4 SHEPODY	370	729	510	139	788	<b>507</b>	<b>8</b>	abc	.	212	.	.	.	.	.	.	.	.
5 A07061-6	397	814	541	261	782	<b>559</b>	<b>2</b>	a	479	411	533	725	596	757	1167	<b>667</b>	<b>3</b>	bc
6 A071012-4BF	291	842	549	261	730	<b>535</b>	<b>6</b>	abc	453	403	510	691	585	890	1082	<b>659</b>	<b>4</b>	bcd
7 A07769-4	363	822	529	161	767	<b>529</b>	<b>7</b>	abc	420	377	449	568	468	757	1193	<b>605</b>	<b>5</b>	cde
8 A08422-4sto	325	695	589	86	723	<b>483</b>	<b>12</b>	abcd	405	294	342	485	431	634	912	<b>500</b>	<b>13</b>	gh
9 A08433-4sto	299	862	596	141	782	<b>536</b>	<b>5</b>	abc	394	342	446	656	473	761	1117	<b>598</b>	<b>6</b>	de
10 A10021-5TE	372	782	620	172	777	<b>544</b>	<b>4</b>	abc	386	308	405	509	538	834	1011	<b>570</b>	<b>9</b>	ef
11 AO02183-2	351	870	451	332	758	<b>552</b>	<b>3</b>	ab	438	381	487	767	590	978	1218	<b>694</b>	<b>2</b>	b
12 AOR07781-5	382	674	471	225	686	<b>488</b>	<b>11</b>	abcd	339	353	355	510	533	740	950	<b>540</b>	<b>11</b>	efg
13 CO09076-3RU	187	609	334	126	571	<b>365</b>	<b>19</b>	e	341	238	.	402	229	471	743	<b>404</b>	<b>17</b>	i
14 CO09205-2RU	358	562	449	99	544	<b>402</b>	<b>16</b>	de	355	253	383	515	468	633	894	<b>500</b>	<b>13</b>	gh
15 CO10087-4RU	356	473	430	161	588	<b>402</b>	<b>16</b>	de	247	262	246	376	428	516	705	<b>397</b>	<b>18</b>	i
16 CO10091-1RU	252	508	437	93	546	<b>367</b>	<b>18</b>	e	270	281	.	298	325	582	884	<b>440</b>	<b>16</b>	hi
17 COTX05095-2Ru/Y	355	598	547	90	744	<b>467</b>	<b>14</b>	bcd	425	327	361	507	520	727	815	<b>526</b>	<b>12</b>	fg
18 OR12133-10	251	961	489	290	825	<b>563</b>	<b>1</b>	a	510	.	537	864	589	1058	1276	<b>806</b>	<b>1</b>	a
19 POR12NCK50-1	274	778	465	254	703	<b>495</b>	<b>10</b>	abc	405	373	391	583	444	790	1046	<b>576</b>	<b>7</b>	ef
<b>Location Means</b>	<b>324</b>	<b>715</b>	<b>503</b>	<b>182</b>	<b>705</b>	<b>486</b>			<b>388</b>	<b>315</b>	<b>413</b>	<b>556</b>	<b>482</b>	<b>729</b>	<b>998</b>	<b>559</b>		

Means followed by the same letter are not significantly different at the 5% level using Student's t test.

Indicates high or strength

Indicates low or weakness

TABLE 4: 2019 Western Regional Potato Variety Trial - YIELD OF U.S. #1'S [CWT/A (upper) and % (lower)] - EARLY AND LATE HARVEST

No. Clone	U.S. No. 1's - Early Harvest (CWT/A) and %							U.S. No. 1's - Late Harvest (CWT/A) and %										
	ID	OR	TX		WA	Entry		CA	CO	ID		OR	WA	Entry				
	PAR	HRM	DAL	SPR	OTH	Mean/Rank		TUL	SLV	AB	KIM	PAR	HRM	OTH	Mean/Rank			
1 RANGER R.	299	564	222	58	651	359	12	abc	305	192	339	392	410	623	884	449	9	ef
	79	76	47	26	95	64	12		74	76	70	71	86	79	84	77	13	
2 R. BURBANK	232	481	102	3	633	290	16	cde	248	206	298	345	507	380	841	403	12	fg
	82	70	23	2	86	53	18		66	69	71	60	89	68	78	71	17	
3 R. NORKOTAH	280	479	367	43	638	361	11	abc	240	252	184	321	352	513	725	370	14	fg
	87	84	58	38	97	73	4		72	83	73	73	87	80	89	80	10	
4 SHEPODY	336	562	134	27	712	354	13	abc	.	150	.	.	.	.	.	.	.	
	91	77	26	20	90	61	13		.	71	.	.	.	.	.	.	.	
5 A07061-6	303	611	189	41	746	378	9	abc	358	356	415	552	477	604	1088	550	4	bc
	76	75	35	16	95	59	15		75	87	78	76	80	80	93	81	8	
6 A071012-4BF	259	726	250	96	720	410	4	ab	350	341	387	545	538	785	962	558	3	bc
	89	86	46	37	99	71	5		77	85	76	78	92	88	89	84	4	
7 A07769-4	320	740	284	79	754	435	1	a	329	328	391	470	437	661	1040	522	5	cde
	88	90	54	49	98	76	1		78	87	87	83	93	87	87	86	2	
8 A08422-4sto	313	642	310	37	694	399	6	ab	346	244	316	402	411	561	852	447	10	ef
	96	92	53	43	96	76	1		85	83	92	83	95	89	93	89	1	
9 A08433-4sto	263	757	244	43	602	382	7	abc	311	274	339	428	415	633	857	465	8	de
	88	88	41	30	77	65	11		79	80	76	65	88	83	77	78	12	
10 A10021-5TE	348	641	381	68	734	434	2	a	251	269	320	384	509	705	885	475	7	de
	94	82	61	39	95	74	3		65	87	79	76	95	84	88	82	7	
11 AO02183-2	282	727	197	102	693	400	5	ab	334	305	411	615	513	790	1126	585	2	b
	80	84	44	31	91	66	9		76	80	85	80	87	81	92	83	5	
12 AOR07781-5	352	571	219	81	650	375	10	abc	221	302	269	387	500	629	796	443	11	ef
	92	85	47	36	95	71	5		65	86	76	76	94	85	84	81	8	
13 CO09076-3RU	119	405	139	8	481	230	19	e	186	162	.	251	136	274	490	250	18	i
	64	67	42	7	84	53	18		55	68	.	62	59	58	66	61	18	
14 CO09205-2RU	230	381	147	24	514	259	17	de	270	172	285	395	307	453	686	367	15	gh
	64	68	33	24	95	57	16		76	68	74	77	66	72	77	73	15	
15 CO10087-4RU	318	331	207	64	556	295	15	cde	174	220	160	291	363	418	651	325	17	h
	89	70	48	40	95	68	8		71	84	64	78	85	81	92	79	11	
16 CO10091-1RU	165	303	123	30	537	232	18	e	160	196	.	188	253	411	835	341	16	h
	65	60	28	32	98	57	16		59	70	.	63	78	71	95	72	16	
17 COTX05095-2Ru/Y	262	429	233	18	724	333	14	bcd	265	228	263	371	402	472	788	399	13	fg
	74	72	43	20	97	61	13		62	70	73	73	77	65	97	74	14	
18 OR12133-10	187	836	183	121	745	414	3	ab	406	.	447	658	518	833	1176	673	1	a
	75	87	37	42	90	66	9		80	.	83	76	88	79	92	83	5	
19 POR12NCK50-1	246	689	215	67	678	379	8	abc	309	319	317	496	392	659	1011	501	6	cde
	90	89	46	26	96	69	7		76	86	81	85	88	83	97	85	3	
Location Means	269	572	218	53	656	354			281	251	321	416	413	578	872	451		
	82	79	43	29	93	65			72	79	77	74	85	78	87	79		

Means followed by the same letter are not significantly different at the 5% level using Student's t test.

TABLE 5: 2019 Western Regional Potato Variety Trial - YIELD &gt; 10 OZ [CWT/A (upper) &amp; % (lower)] - EARLY AND LATE HARVEST

No. Clone	U.S. No. 1's > 10 OZ - Early Harvest (CWT/A) and %							U.S. No. 1's > 10 OZ - Late Harvest (CWT/A) and %										
	ID	OR	TX		WA	Entry		CA	CO	ID		OR	WA	Entry				
	PAR	HRM	DAL	SPR	OTH	Mean/Rank		TUL	SLV	AB	KIM	PAR	HRM	OTH	Mean/Rank			
1 RANGER R.	45	317	48	9	227	<b>129</b>	<b>7</b>	abcdefg	101	40	203	249	197	300	622	<b>245</b>	<b>5</b>	abcd
	12	42	10	4	33	<b>20</b>	<b>8</b>		25	16	41	45	41	38	59	<b>38</b>	<b>4</b>	
2 R. BURBANK	28	180	0	0	235	<b>89</b>	<b>12</b>	defghij	34	41	95	193	182	149	564	<b>180</b>	<b>12</b>	de
	10	26	0	0	32	<b>14</b>	<b>11</b>		9	14	21	33	32	27	52	<b>27</b>	<b>12</b>	
3 R. NORKOTAH	44	218	94	1	132	<b>98</b>	<b>10</b>	cdefghij	81	87	39	125	94	111	376	<b>130</b>	<b>13</b>	ef
	14	38	15	1	20	<b>18</b>	<b>10</b>		24	29	15	27	23	17	46	<b>26</b>	<b>13</b>	
4 SHEPODY	145	432	11	3	448	<b>208</b>	<b>2</b>	ab	.	70	.	.	.	.	.	.	.	
	39	59	0	2	57	<b>32</b>	<b>2</b>		.	33	.	.	.	.	.	.	.	
5 A07061-6	47	85	18	0	122	<b>54</b>	<b>15</b>	fghij	44	76	153	330	129	110	708	<b>221</b>	<b>8</b>	cd
	12	10	3	0	16	<b>8</b>	<b>16</b>		9	19	28	46	22	14	61	<b>28</b>	<b>11</b>	
6 A071012-4BF	84	363	68	15	213	<b>149</b>	<b>5</b>	abcde	107	160	243	378	296	288	834	<b>330</b>	<b>2</b>	ab
	29	43	12	6	29	<b>24</b>	<b>4</b>		24	40	48	53	51	32	77	<b>46</b>	<b>1</b>	
7 A07769-4	44	300	34	16	308	<b>140</b>	<b>6</b>	abcdef	124	67	252	305	239	132	869	<b>284</b>	<b>4</b>	abc
	12	36	6	10	40	<b>21</b>	<b>7</b>		29	18	56	54	51	17	73	<b>43</b>	<b>2</b>	
8 A08422-4sto	69	189	39	2	303	<b>120</b>	<b>9</b>	bcdefghi	48	0	108	189	215	123	624	<b>187</b>	<b>11</b>	de
	21	27	7	2	42	<b>20</b>	<b>8</b>		12	3	32	39	50	19	68	<b>32</b>	<b>10</b>	
9 A08433-4sto	40	390	75	10	396	<b>182</b>	<b>3</b>	abc	46	43	190	238	171	264	676	<b>233</b>	<b>7</b>	bcd
	14	45	13	7	51	<b>26</b>	<b>3</b>		12	13	43	37	36	35	60	<b>34</b>	<b>8</b>	
10 A10021-5TE	148	438	110	17	384	<b>219</b>	<b>1</b>	a	18	46	146	178	328	344	657	<b>245</b>	<b>5</b>	abcd
	40	56	18	10	50	<b>35</b>	<b>1</b>		5	15	36	35	61	41	65	<b>37</b>	<b>6</b>	
11 AO02183-2	57	442	39	8	296	<b>168</b>	<b>4</b>	abcd	120	42	114	411	238	433	869	<b>318</b>	<b>3</b>	ab
	16	51	9	2	39	<b>23</b>	<b>6</b>		27	11	23	53	40	44	71	<b>39</b>	<b>3</b>	
12 AOR07781-5	144	171	57	26	241	<b>128</b>	<b>8</b>	abcdefgh	79	88	99	226	302	135	614	<b>221</b>	<b>8</b>	cd
	38	25	12	12	35	<b>24</b>	<b>4</b>		23	25	28	44	57	18	65	<b>37</b>	<b>6</b>	
13 CO09076-3RU	17	169	43	0	117	<b>69</b>	<b>14</b>	efghij	75	21	.	116	14	104	198	<b>88</b>	<b>14</b>	f
	9	28	13	0	21	<b>14</b>	<b>11</b>		22	9	.	22	18	10	31	<b>19</b>	<b>14</b>	
14 CO09205-2RU	8	39	29	0	76	<b>30</b>	<b>18</b>	ij	47	8	38	88	41	48	227	<b>71</b>	<b>16</b>	f
	2	7	7	0	14	<b>6</b>	<b>18</b>		13	3	9	22	3	16	22	<b>13</b>	<b>16</b>	
15 CO10087-4RU	95	27	26	3	76	<b>45</b>	<b>16</b>	ghij	23	14	3	48	128	59	224	<b>71</b>	<b>16</b>	f
	27	6	6	2	13	<b>11</b>	<b>15</b>		9	5	1	13	30	11	32	<b>15</b>	<b>15</b>	
16 CO10091-1RU	10	13	7	0	17	<b>9</b>	<b>19</b>	j	8	10	.	14	55	32	236	<b>59</b>	<b>18</b>	g
	4	3	2	0	3	<b>2</b>	<b>19</b>		3	4	.	4	17	6	27	<b>10</b>	<b>18</b>	
17 COTX05095-2Ru/Y	43	57	22	0	60	<b>36</b>	<b>17</b>	hij	33	2	67	108	48	73	180	<b>73</b>	<b>15</b>	f
	12	9	4	0	8	<b>7</b>	<b>17</b>		8	1	18	20	9	10	22	<b>13</b>	<b>16</b>	
18 OR12133-10	22	308	15	7	129	<b>96</b>	<b>11</b>	cdefghij	65	.	150	389	262	343	842	<b>342</b>	<b>1</b>	a
	9	32	3	3	16	<b>12</b>	<b>14</b>		13	.	28	44	44	32	66	<b>38</b>	<b>4</b>	
19 POR12NCK50-1	54	191	18	1	136	<b>80</b>	<b>13</b>	defghij	98	54	107	273	109	268	623	<b>219</b>	<b>10</b>	cde
	20	25	4	1	19	<b>14</b>	<b>11</b>		24	14	27	47	25	34	60	<b>33</b>	<b>9</b>	
<b>Location Means</b>	60	228	40	6	206	<b>108</b>			64	48	125	214	169	184	552	<b>195</b>		
	18	30	8	3	28	<b>17</b>			16	15	28	35	34	24	53	<b>29</b>		

Means followed by the same letter are not significantly different at the 5% level using Student's t test.

**TABLE 6: 2019 Western Regional Potato Variety Trial - YIELD < 4 OZ [CWT/A (upper) & % (lower)] - EARLY AND LATE HARVEST**

No. Clone	Yield < 4 OZ - Early Harvest (CWT/A) and %							Yield < 4 OZ - Late Harvest (CWT/A) and %										
	ID	OR	TX		WA	Entry		CA	CO	ID		OR	WA	Entry				
	PAR	HRM	DAL	SPR	OTH	Mean/Rank	TUL	SLV	AB	KIM	PAR	HRM	OTH	Mean/Rank				
1 RANGER R.	78	60	169	64	52	85	10	defgh	50	45	20	32	48	46	38	40	14	efg
	21	8	36	28	8	20	10		12	18	4	6	10	6	4	9	10	
2 R. BURBANK	52	83	100	31	49	63	15	fgh	81	83	52	53	54	52	38	59	7	cde
	18	12	22	14	7	15	16		22	28	13	9	9	9	3	13	6	
3 R. NORKOTAH	39	59	180	46	63	78	11	efgh	53	41	46	55	51	89	40	54	9	def
	12	10	28	41	10	20	10		16	14	19	14	13	14	5	13	6	
4 SHEPODY	30	33	168	22	38	58	17	fgh	.	51	.	.	.	.	.	.	.	
	8	4	0	16	5	7	19		.	24	.	.	.	.	.	.	.	
5 A07061-6	85	186	314	166	99	170	1	a	101	51	49	66	104	122	59	79	5	bc
	22	23	58	63	13	36	3		21	12	9	9	17	16	5	13	6	
6 A071012-4BF	31	49	184	80	41	77	12	efgh	58	17	26	22	27	49	15	31	17	g
	11	6	34	31	6	17	14		13	4	5	3	5	5	1	5	18	
7 A07769-4	42	60	175	68	37	76	13	efgh	38	39	23	34	25	73	19	36	16	fg
	11	7	33	42	5	20	10		9	10	5	6	5	10	2	7	16	
8 A08422-4sto	12	38	171	43	18	56	18	gh	49	32	9	24	15	42	29	29	18	g
	4	6	29	50	3	18	13		12	11	3	5	3	7	3	6	17	
9 A08433-4sto	34	49	216	42	29	74	14	efgh	62	62	30	40	37	50	24	43	13	defg
	11	6	36	30	4	17	14		16	18	7	6	8	7	2	9	10	
10 A10021-5TE	24	39	74	52	44	46	19	h	123	35	25	41	19	34	30	44	12	defg
	6	5	12	30	6	12	18		32	11	6	9	3	4	3	10	9	
11 AO02183-2	56	56	147	160	28	89	8	defgh	49	67	53	33	47	46	35	47	10	defg
	16	6	33	48	4	21	9		11	18	11	4	8	5	3	8	13	
12 AOR07781-5	22	72	130	51	35	62	16	fgh	45	42	25	36	20	73	21	37	15	fg
	6	11	28	23	5	14	17		13	12	7	7	4	10	2	8	13	
13 CO09076-3RU	63	149	102	29	91	87	9	defgh	69	67	.	94	53	134	78	82	4	bc
	34	24	31	23	16	26	6		20	28	.	24	23	28	11	22	2	
14 CO09205-2RU	105	158	232	53	86	127	4	bcd	62	77	74	63	140	106	105	90	3	b
	29	28	52	53	16	36	3		17	30	20	12	30	17	12	20	4	
15 CO10087-4RU	36	136	171	76	74	99	7	cdefg	61	40	77	62	54	85	57	62	6	cd
	10	29	40	47	13	28	5		25	15	32	17	13	16	8	18	5	
16 CO10091-1RU	85	192	283	55	180	159	2	ab	107	81	.	96	68	151	131	106	2	a
	34	38	65	60	33	46	1		40	29	.	33	21	26	15	27	1	
17 COTX05095-2Ru/Y	87	155	269	61	118	138	3	abc	111	96	58	85	111	228	105	114	1	a
	25	26	49	67	16	37	2		26	29	16	17	21	31	13	22	2	
18 OR12133-10	59	85	240	116	69	114	5	cde	85	.	40	50	48	82	29	56	8	cde
	24	9	49	40	8	26	6		17	.	7	6	8	8	2	8	13	
19 POR12NCK50-1	28	72	199	119	87	101	6	cdef	56	48	40	39	47	54	40	46	11	defg
	10	9	43	47	12	24	8		14	13	10	7	11	7	4	9	10	
Location Means	51	91	185	70	65	93			70	54	40	52	54	84	50	59		
	16	14	36	40	10	23			19	18	11	11	12	13	5	13		

Means followed by the same letter are not significantly different at the 5% level using Student's t test.



TABLE 7: 2019 Western Regional Potato Variety Trial - SPECIFIC GRAVITY - EARLY AND LATE HARVEST

No. Clone	Specific Gravity - Early Harvest							Specific Gravity - Late Harvest										
	ID	OR	TX		WA	Entry	CA	CO	ID		OR	WA	Entry					
	PAR	HRM	DAL	SPR	OTH	Mean/Rank	TUL	SLV	AB	KIM	PAR	HRM	OTH	Mean/Rank				
1 RANGER R.	1.084	1.082	1.073	1.063	1.080	<b>1.077</b>	<b>5</b>	bc	1.092	1.086	1.090	1.092	1.087	1.087	1.078	<b>1.087</b>	<b>7</b>	cde
2 R. BURBANK	1.084	1.077	1.059	1.062	1.080	<b>1.073</b>	<b>11</b>	defg	1.088	1.082	1.077	1.086	1.078	1.078	1.077	<b>1.081</b>	<b>13</b>	gh
3 R. NORKOTAH	1.074	1.073	1.058	1.060	1.073	<b>1.068</b>	<b>19</b>	h	1.078	1.079	1.068	1.073	1.068	1.073	1.065	<b>1.072</b>	<b>18</b>	j
4 SHEPODY	1.078	1.078	1.074	1.065	1.076	<b>1.074</b>	<b>9</b>	cde	.	1.083	.	.	.	.	.	.	.	.
5 A07061-6	1.078	1.077	1.070	1.062	1.071	<b>1.071</b>	<b>15</b>	efg	1.088	1.082	1.083	1.078	1.083	1.077	1.071	<b>1.080</b>	<b>15</b>	h
6 A071012-4BF	1.093	1.094	1.082	1.075	1.086	<b>1.086</b>	<b>1</b>	a	1.108	1.096	1.097	1.098	1.106	1.095	1.087	<b>1.098</b>	<b>1</b>	a
7 A07769-4	1.083	1.079	1.071	1.065	1.081	<b>1.076</b>	<b>7</b>	cd	1.096	1.086	1.086	1.084	1.094	1.076	1.073	<b>1.085</b>	<b>9</b>	def
8 A08422-4sto	1.083	1.079	1.064	1.066	1.076	<b>1.074</b>	<b>9</b>	cde	1.091	1.086	1.092	1.087	1.073	1.081	1.073	<b>1.083</b>	<b>12</b>	fgh
9 A08433-4sto	1.076	1.079	1.067	1.057	1.070	<b>1.070</b>	<b>16</b>	fgh	1.096	1.083	1.083	1.085	1.087	1.085	1.072	<b>1.084</b>	<b>10</b>	efg
10 A10021-5TE	1.083	1.082	1.071	1.068	1.079	<b>1.077</b>	<b>5</b>	bc	1.097	1.092	1.089	1.095	1.087	1.088	1.076	<b>1.089</b>	<b>5</b>	bcd
11 AO02183-2	1.082	1.082	1.073	1.068	1.077	<b>1.076</b>	<b>7</b>	cd	1.105	1.092	1.093	1.090	1.084	1.093	1.081	<b>1.091</b>	<b>2</b>	bc
12 AOR07781-5	1.088	1.085	1.073	1.070	1.084	<b>1.080</b>	<b>2</b>	b	1.100	1.093	1.091	1.095	1.087	1.088	1.083	<b>1.091</b>	<b>2</b>	bc
13 CO09076-3RU	1.078	1.077	1.061	1.061	1.073	<b>1.070</b>	<b>16</b>	fgh	1.088	1.079	.	1.090	1.076	1.079	1.074	<b>1.081</b>	<b>13</b>	gh
14 CO09205-2RU	1.077	1.067	1.069	1.060	1.079	<b>1.070</b>	<b>16</b>	fgh	1.082	1.080	1.078	1.076	1.079	1.067	1.069	<b>1.076</b>	<b>17</b>	i
15 CO10087-4RU	1.084	1.087	1.075	1.071	1.081	<b>1.080</b>	<b>2</b>	b	1.096	1.089	1.089	1.100	1.086	1.095	1.080	<b>1.091</b>	<b>2</b>	bc
16 CO10091-1RU	1.076	1.074	1.071	1.062	1.075	<b>1.072</b>	<b>13</b>	efg	1.092	1.085	.	1.086	1.087	1.077	1.074	<b>1.084</b>	<b>10</b>	efg
17 COTX05095-2Ru/Y	1.080	1.079	1.065	1.062	1.079	<b>1.073</b>	<b>11</b>	defg	1.087	1.083	1.080	1.082	1.078	1.078	1.074	<b>1.080</b>	<b>15</b>	h
18 OR12133-10	1.079	1.082	1.069	1.058	1.075	<b>1.072</b>	<b>13</b>	efg	1.099	.	1.088	1.093	1.083	1.081	1.076	<b>1.087</b>	<b>7</b>	cde
19 POR12NCK50-1	1.085	1.088	1.073	1.071	1.082	<b>1.080</b>	<b>2</b>	b	1.097	1.092	1.088	1.090	1.089	1.084	1.081	<b>1.089</b>	<b>5</b>	bcd
<b>Mean</b>	1.081	1.080	1.069	1.064	1.078	<b>1.075</b>			1.093	1.086	1.086	1.088	1.084	1.082	1.076	<b>1.085</b>		

Means followed by the same letter are not significantly different at the 5% level using Student's t test.

TABLE 8: 2019 Western Regional Potato Variety Trial - AVERAGE TUBER SIZE, AND TUBER SHAPE

No. Clone	Average Tuber Size (oz)													Tuber Shape (1-5 length/width ratio:1=round,5=long)										Length/Width Ratio Location Means <sup>1</sup>										
	Early Trial						Late Trial							Early Trial					Late Trial					CA	CO	TX		ID			OR	WA <sup>2</sup>		
	ID	OR	TX	WA	CA	Mean	TUL	AB	KIM	PAR	HRM	OTH	Mean	HRM	DAL	SPR	OTH	Mean	TUL	SLV	AB	KIM	HRM			OTH	Mean	TUL	SLV	DAL			SPR	AB
1 RANGER R.	5.2	7.3	7.4	3.1	7.4	<b>6.1</b>	6.2	9.5	9.4	7.2	7.4	11.5	<b>8.5</b>	4.5	5.0	4.5	3.3	<b>4.3</b>	4.3	5.0	5.0	4.8	5.0	4.0	<b>4.7</b>	2.03	2.11	2.18	1.99	2.16	2.15	2.01	2.22	1.80
2 R. BURBANK	5.1	6.2	7.0	3.0	7.9	<b>5.8</b>	5.2	6.5	8.0	6.7	6.2	11.4	<b>7.3</b>	5.0	5.0	4.0	3.0	<b>4.2</b>	4.0	4.0	4.0	4.0	4.3	4.0	<b>4.0</b>	1.86	1.88	2.59	1.45	1.97	2.08	2.00	2.20	1.58
3 R. NORKOTAH	5.5	6.7	8.4	3.3	6.7	<b>6.1</b>	5.9	5.4	6.3	6.0	5.0	9.0	<b>6.3</b>	3.8	5.0	3.5	4.0	<b>4.1</b>	4.1	3.0	3.9	3.9	3.5	3.0	<b>3.6</b>	1.79	1.74	2.07	1.54	2.03	1.88	1.82	1.89	1.82
4 SHEPODY	7.1	9.4	4.6	4.5	9.8	<b>7.1</b>	.	.	.	.	.	.	.	4.8	4.1	4.0	3.0	<b>4.0</b>	.	4.0	.	.	.	.	<b>4.0</b>	.	1.87	1.71	1.49	.	.	1.73	1.91	.
5 A07061-6	4.7	4.6	12.0	2.2	6.0	<b>5.9</b>	4.9	7.0	7.9	5.3	5.0	9.7	<b>6.6</b>	2.3	3.4	2.0	2.0	<b>2.4</b>	3.6	3.0	3.6	3.5	2.5	2.0	<b>3.0</b>	1.67	1.64	1.52	1.36	1.85	1.73	1.60	1.56	1.77
6 A071012-4BF	6.0	8.1	7.0	4.6	7.4	<b>6.7</b>	5.9	8.9	10.4	8.7	7.3	14.6	<b>9.3</b>	4.0	4.1	4.0	2.3	<b>3.6</b>	3.8	3.0	3.6	3.3	4.5	3.0	<b>3.5</b>	1.70	1.72	1.70	1.62	1.78	1.73	1.64	1.89	1.58
7 A07769-4	5.6	7.2	7.6	3.9	8.2	<b>6.5</b>	6.8	9.1	9.1	8.2	6.1	13.7	<b>8.8</b>	2.8	3.8	3.7	2.3	<b>3.2</b>	4.0	4.0	3.6	3.5	3.3	3.0	<b>3.6</b>	1.72	1.82	1.72	1.45	1.73	1.71	1.58	1.63	1.47
8 A08422-4sto	6.2	8.7	8.1	3.1	8.9	<b>7.0</b>	5.7	8.0	8.2	8.8	6.7	11.2	<b>8.1</b>	3.0	5.0	1.0	2.3	<b>2.8</b>	3.6	3.0	3.1	3.5	2.5	3.0	<b>3.1</b>	1.64	1.79	1.97	1.46	1.66	1.69	1.72	1.55	1.73
9 A08433-4sto	5.5	7.5	9.0	3.7	10.7	<b>7.3</b>	5.1	8.3	8.9	7.9	7.2	13.6	<b>8.5</b>	3.8	4.8	3.8	2.7	<b>3.8</b>	3.9	3.0	3.6	3.6	3.3	3.0	<b>3.4</b>	1.56	1.59	1.73	1.64	1.70	1.60	1.47	1.77	1.72
10 A10021-5TE	7.3	8.4	6.7	4.0	8.9	<b>7.1</b>	4.4	7.9	7.5	9.6	7.8	11.8	<b>8.2</b>	4.0	5.0	4.6	4.0	<b>4.4</b>	4.1	5.0	4.4	4.3	4.3	3.0	<b>4.2</b>	1.83	2.18	2.18	2.10	2.15	1.91	2.12	1.99	1.95
11 AO02183-2	5.4	8.0	7.4	2.6	8.7	<b>6.4</b>	6.4	6.3	9.5	7.2	8.2	11.9	<b>8.2</b>	5.0	5.0	3.8	4.0	<b>4.5</b>	4.6	5.0	4.4	4.1	4.8	3.0	<b>4.3</b>	2.15	2.00	2.31	1.66	2.10	2.05	2.05	2.21	1.65
12 AOR07781-5	7.3	6.2	6.0	4.8	8.1	<b>6.5</b>	6.4	7.2	8.2	9.2	5.9	12.7	<b>8.3</b>	4.0	5.0	4.0	3.0	<b>4.0</b>	4.0	4.0	3.9	3.9	3.8	3.0	<b>3.8</b>	1.83	1.88	1.95	1.69	2.03	1.74	1.87	1.83	1.66
13 CO09076-3RU	4.3	4.8	8.0	2.9	6.4	<b>5.3</b>	5.4	.	5.1	4.9	3.9	8.1	<b>5.5</b>	4.3	4.8	3.5	4.0	<b>4.1</b>	4.1	5.0	.	3.9	4.8	3.8	<b>4.3</b>	1.98	2.14	2.18	1.99	.	1.96	2.04	2.14	1.94
14 CO09205-2RU	3.8	4.1	8.8	2.7	6.0	<b>5.1</b>	5.3	5.2	6.3	4.5	5.3	7.0	<b>5.6</b>	4.5	4.5	3.0	3.5	<b>3.9</b>	4.9	4.0	4.0	4.4	4.8	4.0	<b>4.3</b>	2.12	1.89	1.96	1.62	1.87	2.07	1.92	2.04	1.96
15 CO10087-4RU	6.4	4.3	7.3	3.6	6.1	<b>5.6</b>	4.6	4.4	5.6	6.3	5.2	7.4	<b>5.6</b>	3.0	4.7	3.8	3.0	<b>3.6</b>	4.5	4.0	3.9	3.6	4.0	3.0	<b>3.8</b>	1.99	1.84	1.98	1.71	1.86	1.74	1.84	1.83	1.77
16 CO10091-1RU	3.5	3.7	10.5	2.9	4.5	<b>5.0</b>	4.0	.	4.2	5.1	4.3	6.5	<b>4.8</b>	2.8	3.5	3.5	2.0	<b>2.9</b>	3.3	3.0	.	2.3	3.0	2.0	<b>2.7</b>	1.49	1.71	1.62	1.44	.	1.46	1.54	1.61	1.43
17 CO TX05095-2Ru/Y	4.4	4.2	9.9	2.4	5.7	<b>5.3</b>	4.7	5.9	5.9	4.7	3.9	6.4	<b>5.2</b>	1.5	4.4	1.9	2.0	<b>2.4</b>	3.8	2.0	3.0	3.4	1.8	2.3	<b>2.7</b>	1.67	1.47	1.87	1.33	1.73	1.64	1.49	1.36	1.49
18 OR12133-10	4.6	6.6	8.9	3.1	6.7	<b>6.0</b>	5.5	7.1	9.1	7.2	7.0	11.2	<b>7.8</b>	3.8	4.9	4.8	3.0	<b>4.1</b>	4.1	.	3.8	3.4	4.0	2.3	<b>3.5</b>	1.77	.	2.17	2.18	1.81	1.80	1.70	1.83	1.61
19 POR12NCK50-1	6.4	6.4	8.2	3.2	6.4	<b>6.1</b>	5.9	6.6	8.2	6.3	7.0	9.9	<b>7.3</b>	4.3	5.0	3.3	3.0	<b>3.9</b>	4.3	5.0	4.1	4.0	4.0	3.0	<b>4.1</b>	2.02	2.00	2.19	1.55	1.93	2.00	1.70	1.92	1.68
<b>Mean</b>	5.5	6.4	8.1	3.3	7.4	<b>6.1</b>	5.5	7.1	7.6	6.9	6.1	10.4	<b>7.2</b>	3.7	4.6	3.5	3.0	<b>3.7</b>	4.0	3.8	3.9	3.7	3.8	3.0	<b>3.7</b>	1.82	1.85	1.98	1.65	1.90	1.83	1.78	1.86	1.70

<sup>1</sup>Parma and Hermiston; combined means of Early Harvest and Later Harvest Trials.

<sup>2</sup>Washington reported means of 2.15 for Idaho samples and 2.03 for Oregon samples.

**TABLE 9: 2019 Western Regional Potato Variety Trial - EXTERNAL DEFECTS MEANS OF LOCATIONS - GROWTH CRACKS, SECOND GROWTH, SHATTER BRUISE, AND SCAB<sup>1</sup>**

No. Clone	Growth Cracks		Second Growth		Shatter Bruise			Scab	
	Early Trial	Late Trial	Early Trial	Late Trial	Early Trial	Late Trial	Ab <sup>2</sup>	Early Trial	Late Trial
1 RANGER R.	4.7	4.6	3.9	4.8	4.9	4.6	3.5	4.9	4.8
2 R. BURBANK	4.6 OTH 3.7	4.0 KIM 3.1	3.0	4.0 KIM 3.1	5.0	3.9 OTH 2.0	4.0	4.9	5.0
3 R. NORKOTAH	5.0	4.9	4.5	4.8	5.0	4.8	3.0	4.9	4.6
4 SHEPODY	4.8	.	3.8	.	5.0	.	.	4.8	.
5 A07061-6	5.0	4.9	4.4	5.0	5.0	4.2	3.4	4.5	4.7
6 A071012-4BF	5.0	4.8	4.2	4.4	5.0	4.1	2.9	4.9	4.9
7 A07769-4	4.9	4.8	4.6	5.0	4.7	3.1	3.7	4.9	4.7
8 A08422-4sto	4.6	4.9	4.7	5.0	4.6	3.2	3.6	5.0	4.8
9 A08433-4sto	4.5 OTH 2.5	4.4	4.1	4.4	5.0	4.0	2.6	5.0	4.7
10 A10021-5TE	4.9	4.8	4.3	4.9	4.9	4.0	3.0	4.7	4.4 OTH 2.8
11 AO02183-2	4.9	4.6	3.8	4.6	5.0	3.9	2.6	4.9	4.9
12 AOR07781-5	4.8	4.6	4.0	4.7	4.9	3.3	3.7	4.9	5.0
13 CO09076-3RU	4.6	3.7	3.9	4.6	4.7	3.6	.	4.9	4.9
14 CO09205-2RU	4.6	4.7	4.4	4.9	5.0	4.5	3.3	4.9	4.9
15 CO10087-4RU	4.6 OTH 3.0	4.7	4.5	4.9	4.7	3.5	3.0	4.8	5.0
16 CO10091-1RU	4.8	4.6	4.7	5.0	5.0	4.2	.	5.0	4.9
17 COTX05095-2Ru/Y	5.0	4.8	4.6	5.0	4.9	4.2	3.4	4.9	4.9
18 OR12133-10	4.8	4.9	4.4	4.6	4.7	3.3	3.3	4.9	4.5
19 POR12NCK50-1	4.9	4.8	4.3	4.8	5.0	4.2	3.7	4.9	5.0
<b>Mean</b>	4.8	4.6	4.2	4.7	4.9	3.9	3.3	4.9	4.8

<sup>1</sup>All scores [1-5(none)]. Individual trial sites with relatively extreme values are listed to the right of the entry means.

<sup>2</sup>Aberdeen shatter scores reflect dropping from shatter chamber [1-5(none)].

**TABLE 10: 2019 Western Regional Potato Variety Trial - INTERNAL DEFECTS MEANS OF LOCATIONS - HOLLOW HEART/BROWN CENTER, INTERNAL BROWN SPOT, VASCULAR DISCOLORATION/NET NECROSIS, AND BLACKSPOT<sup>1</sup>**

No. Clone	Percent Hollow Heart Plus Brown Center		Percent Internal Brown Spot		Percent Net Necrosis/Vascular Discoloration		Blackspot Bruise [(1-5(NONE))]			ID <sup>2</sup>
	Early Trial	Late Trial	Early Trial	Late Trial	Early Trial	Late Trial	Early Trial	Late Trial		
1 RANGER R.	0	0	1	0	9 DAL 15	13 TUL 25 PAR 27	4.3	4.1	HRM 2.9	4.2
2 R. BURBANK	3	0	2	3 OTH 12	1	3	4.7	4.1		3.6
3 R. NORKOTAH	3 DAL 15	0	1	0	3	3	4.8	4.8		4.1
4 SHEPODY	0	.	2	.	10 DAL 18 SPR 20	.	4.8	5.0		.
5 A07061-6	0	0	3 PAR 13	1	4	10 TUL 30	4.8	4.7		3.9
6 A071012-4BF	4 DAL 20	0	2	0	0	3	4.6	4.1	HRM 2.8	3.4
7 A07769-4	0	1	2 DAL 10	0	11 DAL 20	9 PAR 23	4.7	4.5		3.4
8 A08422-4sto	0	2	5 HRM 13 SPR13	1	0	3	4.3	4.4	HRM 2.3	2.4
9 A08433-4sto	1	0	0	0	5 SPR 15	9 PAR 20	4.9	4.7		2.6
10 A10021-5TE	0	0	2	1	10 DAL 15 SPR 25	8 TUL 33	4.9	4.4		3.2
11 AO02183-2	0	1	5 PAR 27	1	56 HRM 55 DAL 58 SPR 43	27 TUL 58 PAR 33 HRM 43	4.9	4.7		2.2
12 AOR07781-5	0	1	1	0	11 DAL 23	4 TU 20	4.8	4.2	HRM 2.1	2.1
13 CO09076-3RU	3 DAL 13	2	0	1	0	8 TUL 20	4.8	4.7		3.9
14 CO09205-2RU	3 DAL 13	0	2 DAL 10	1	1 SPR 15	12 TUL 48	4.9	4.8		3.5
15 CO10087-4RU	1	8 TUL 40 KIM 10	1	0	3	3	4.8	4.4	HRM 2.3	4.3
16 CO10091-1RU	0	1	1	0	3	4	4.8	5.0		2.3
17 COTX05095-2Ru/Y	0	0	0	0	3	13 TUL 38	4.7	4.7		4.3
18 OR12133-10	0	0	2	2 HRM 10	8 SPR 15	16 TUL 48	4.6	4.1		4.7
19 POR12NCK50-1	0	0	0	0	3 SPR 15	10 TUL 38	4.6	4.5	HRM 2.8	2.5
<b>Entry Means</b>	1	1	2	0	7	9	4.7	4.5		3.3

<sup>1</sup>All scores [1-5(none)]. Individual trial sites with relatively extreme values are listed to the right of the entry means.

<sup>2</sup>Aberdeen and Kimberly Idaho; blackspot scores reflect abrasive peel test [1-5(none)].

TABLE 11: 2019 Western Regional Potato Variety Trial - FRENCH FRY COLOR (00-4.0(darkest)) AND PERCENT SUGAR ENDS

No. Clone	Field Fry				Fry 45						Fry 40				% Sugar Ends <sup>1</sup>				
	CO		OR		WA		Entry Mean	CO	ID		OR	WA	Entry Mean	ID		OR		Entry Mean	
	SLV	HRM	OTH	L	E	L			L	L				L	L	L	L		L
1 RANGER R.	0.0	0.0	0.0	<b>0.0</b>	1.0	0.7	0.6	2.0	0.0	<b>0.8</b>	2.9	3.2	3.0	<b>3.0</b>	29	17	4	4	<b>14</b>
2 R. BURBANK	1.0	1.0	0.0	<b>0.7</b>	2.0	1.4	1.1	2.0	3.0	<b>1.9</b>	3.8	3.8	4.0	<b>3.9</b>	13	17	0	17	<b>11</b>
3 R. NORKOTAH	3.0	1.0	.	<b>2.0</b>	3.0	1.6	0.8	1.0	.	<b>1.6</b>	4.0	3.8	.	<b>3.9</b>	4	4	0	4	<b>3</b>
4 SHEPODY	2.0	0.0	.	<b>1.0</b>	2.0	.	.	.	.	<b>2.0</b>	.	.	.	.	.	.	8	.	<b>8</b>
5 A07061-6	1.0	1.0	0.0	<b>0.7</b>	1.0	0.6	1.2	1.0	1.0	<b>1.0</b>	1.9	2.8	4.0	<b>2.9</b>	0	0	0	21	<b>5</b>
6 A071012-4BF	1.0	1.0	0.0	<b>0.7</b>	1.0	0.7	1.0	2.0	3.0	<b>1.5</b>	2.7	3.2	4.0	<b>3.3</b>	25	4	4	25	<b>15</b>
7 A07769-4	1.0	0.0	0.0	<b>0.3</b>	2.0	0.4	0.5	2.0	1.0	<b>1.2</b>	1.2	1.3	2.0	<b>1.5</b>	0	8	0	17	<b>6</b>
8 A08422-4sto	2.0	1.0	0.0	<b>1.0</b>	3.0	1.8	1.3	2.0	4.0	<b>2.4</b>	3.9	4.0	4.0	<b>4.0</b>	42	21	8	21	<b>23</b>
9 A08433-4sto	2.0	1.0	0.0	<b>1.0</b>	2.0	0.6	1.5	1.0	2.0	<b>1.4</b>	3.4	4.0	4.0	<b>3.8</b>	0	4	0	8	<b>3</b>
10 A10021-5TE	0.0	0.0	0.0	<b>0.0</b>	1.0	0.6	0.6	1.0	0.0	<b>0.6</b>	2.6	2.7	3.0	<b>2.8</b>	4	0	0	13	<b>4</b>
11 AO02183-2	0.0	0.0	0.0	<b>0.0</b>	0.0	0.3	0.8	1.0	0.0	<b>0.4</b>	0.8	1.0	1.0	<b>0.9</b>	0	13	0	4	<b>4</b>
12 AOR07781-5	0.0	1.0	0.0	<b>0.3</b>	0.0	0.4	0.5	1.0	0.0	<b>0.4</b>	1.5	1.1	2.0	<b>1.5</b>	21	4	4	0	<b>7</b>
13 CO09076-3RU	1.0	1.0	.	<b>1.0</b>	2.0	.	1.7	1.0	.	<b>1.6</b>	.	3.8	.	<b>3.8</b>	.	0	4	13	<b>6</b>
14 CO09205-2RU	0.0	1.0	0.0	<b>0.3</b>	0.0	0.5	1.0	1.0	0.0	<b>0.5</b>	1.8	2.4	2.0	<b>2.1</b>	4	0	4	21	<b>7</b>
15 CO10087-4RU	1.0	1.0	0.0	<b>0.7</b>	1.0	0.6	0.8	1.0	2.0	<b>1.1</b>	3.3	3.0	3.0	<b>3.1</b>	13	13	8	25	<b>15</b>
16 CO10091-1RU	1.0	1.0	0.0	<b>0.7</b>	1.0	.	0.7	1.0	1.0	<b>0.9</b>	.	2.8	3.0	<b>2.9</b>	.	8	4	17	<b>10</b>
17 COTX05095-2Ru/Y	2.0	1.0	.	<b>1.5</b>	2.0	0.9	0.7	1.0	.	<b>1.1</b>	3.0	3.1	.	<b>3.0</b>	13	0	13	0	<b>6</b>
18 OR12133-10	.	1.0	0.0	<b>0.5</b>	.	0.6	1.2	2.0	2.0	<b>1.4</b>	2.0	2.7	4.0	<b>2.9</b>	4	13	8	8	<b>8</b>
19 POR12NCK50-1	0.0	1.0	0.0	<b>0.3</b>	0.0	0.9	0.8	1.0	0.0	<b>0.5</b>	2.2	2.2	3.0	<b>2.5</b>	13	8	4	17	<b>10</b>
<b>Mean</b>	1.0		0.0	<b>0.7</b>	1.3	0.8	0.9	1.3	1.3	<b>1.2</b>	2.5	2.8	3.1	<b>2.9</b>	11	7	4	13	<b>9</b>

<sup>1</sup> Evaluations from 45F.

Storage protocol prior to frying

**Aberdeen** - 1 week from 50F to 45F; 2 weeks from 50F to 40F; and 6 weeks @ 45F and 8 weeks @ 40F.

**Hermiston** - 2 weeks from 55F to 47 F, and 8 weeks @ 47F.

**Kimberly** - 1 week from 50F to 45F; 2 weeks from 50F to 40F; and 6 weeks @ 45F and 8 weeks @ 40F.

**Othello** - 3 weeks from 55F to 44F and 60 days @ 44F and 40F.

**San Luis Valley** - 3 weeks from 55F to 45F, and 8 weeks @ 45.

\* Comprehensive post harvest evaluations of entries can be found in the 2019 Potato Cultivar Yield & Post Harvest Quality Evaluations - Washington State University. Contact: Rick Knowles. [www.potatoes.wsu.edu](http://www.potatoes.wsu.edu)

TABLE 12: 2019 Western Regional Potato Variety Trial - Washington State Univeristy Postharvest Storage Trials - FRENCH FRY COLOR

No. Clone	PRIOR TO STORAGE*				48°F, 60 days*				44°F, 60 days*				40°F, 60 days*				RECONDITIONED*			
	WA	ID	OR	Mean	WA	ID	OR	Mean	WA	ID	OR	Mean	WA	ID	OR	Mean	WA	ID	OR	Mean
1 RANGER R.	0	0	0	0.0	0	0	0	0.0	0	0	0	0.0	3	3	3	3.0	2	1	2	1.7
2 R. BURBANK	0	0	0	0.0	2	0	1	1.0	3	1	2	2.0	4	3	4	3.7	3	2	3	2.7
3 R. NORKOTAH	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
4 SHEPODY	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
5 A07061-6	0	0	0	0.0	1	0	0	0.3	1	1	0	0.7	4	3	2	3.0	3	3	2	2.7
6 A071012-4BF	0	0	0	0.0	1	0	0	0.3	3	2	2	2.3	4	3	4	3.7	2	3	2	2.3
7 A07769-4	0	0	0	0.0	0	0	0	0.0	1	0	0	0.3	2	2	2	2.0	2	1	2	1.7
8 A08422-4sto	0	0	0	0.0	2	0	0	0.7	4	1	1	2.0	4	4	4	4.0	4	3	4	3.7
9 A08433-4sto	0	0	0	0.0	2	0	0	0.7	2	1	1	1.3	4	3	3	3.3	2	2	1	1.7
10 A10021-5TE	0	0	0	0.0	0	0	0	0.0	0	0	0	0.0	3	2	0	1.7	2	2	0	1.3
11 AO02183-2	0	0	0	0.0	0	0	0	0.0	0	0	0	0.0	1	0	0	0.3	0	0	0	0.0
12 AOR07781-5	0	0	0	0.0	0	0	0	0.0	0	0	0	0.0	2	1	1	1.3	1	0	0	0.3
13 CO09076-3RU	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
14 CO09205-2RU	0	0	0	0.0	1	0	0	0.3	0	0	1	0.3	2	1	2	1.7	2	1	2	1.7
15 CO10087-4RU	0	0	0	0.0	1	0	0	0.3	2	0	0	0.7	3	2	2	2.3	2	2	2	2.0
16 CO10091-1RU	0	.	0	0.0	0	.	0	0.0	1	.	0	0.5	3	.	3	3.0	1	.	2	1.5
17 COTX05095-2Ru/Y	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
18 OR12133-10	0	0	0	0.0	1	0	0	0.3	2	0	0	0.7	4	3	2	3.0	2	1	1	1.3
19 POR12NCK50-1	0	0	0	0.0	0	0	0	0.0	0	0	1	0.3	3	2	2	2.3	2	2	2	2.0
<b>Mean</b>	0.0	0.0	0.0	<b>0.0</b>	0.7	0.0	0.1	<b>0.3</b>	1.3	0.4	0.5	<b>0.7</b>	3.1	2.3	2.3	<b>2.6</b>	2.0	1.6	1.7	<b>1.8</b>

\*Reconditioned - 21 days at 60 F following 60 days at 40 F; Samples from all states stored together at WSU

\*USDA values - 1 (light) to 4 (dark); 12 tubers per sample

TABLE 13: 2019 Western Regional Potato Variety Trial - DISEASE EVALUATION AND METRIBUZIN REACTION

No.	Clone	Vert. Wilt/ Early Dying			Early Blight			Late Blight			Common Scab % Virus			Hermiston		Pectobacterium								
		AB <sup>1</sup>		HRM <sup>2</sup>	TUL <sup>3</sup>		AB <sup>1</sup>		Corvallis <sup>4</sup>		AB <sup>1</sup>		Infect.	Corky Ringspot		Prosser		Fusarium		Soft	Metribuz.			
		(0-9) <sub>AUDPC</sub>	(0-9) <sub>AUDPC</sub>	(0-9) <sub>AUDPC</sub>	(0-9) <sub>AUDPC</sub>	(0-9) <sub>AUDPC</sub>	(0-9) <sub>AUDPC</sub>	(1-9) <sub>AUDPC</sub>	%	%	Serious	PVY	Nematode	% Incid.	DSI <sup>5</sup>	% Incid.	DSI <sup>5</sup>	Dry Rot <sup>1</sup> (0-5) F(sam) F(sol)	Rot <sup>1</sup> (0-5)	React. <sup>6</sup> AB				
1	RANGER R.	6.0	379	7.7	1443	5.3	230	4.0	78	8.5	1515	0	12	6	95	25.5	S	63	42	S	4.1	2.1	2.3	MR
2	R. BURBANK	6.0	426	9.0	1519	7.0	584	3.7	61	8.8	1809	0	0	0	90	33.9	S	38	26	S	3.9	3.8	2.6	MR
3	R. NORKOTAH	9.0	1208	9.0	2493	9.0	1951	3.3	117	9.0	1918	3	5	2	90	13.4	MS	9	5	MS	1.9	2.1	2.3	MR
4	SHEPODY	4.7	210	.	.	.	.	3.7	76	9.0	1895	3	10	5	.	.	.	19	11	S	1.8	3.6	1.9	.
5	A07061-6	4.3	137	7.3	1232	5.0	167	5.3	177	8.0	1432	0	20	1	95	39.4	S	56	37	S	3.7	2.3	1.3	MR
6	A071012-4BF	2.3	23	5.7	576	5.3	232	3.7	83	8.0	1550	0	11	1	100	25.4	S	36	19	S	5.0	2.5	1.5	MR
7	A07769-4	3.7	90	7.0	994	6.3	387	4.3	156	8.3	1579	0	12	0	35	42.4	S	3	1	R	3.5	2.8	1.8	MR
8	A08422-4sto	4.7	168	7.7	1424	7.5	942	5.7	385	8.5	1765	3	21	4	0	16.7	S	46	27	S	4.5	4.1	2.5	R
9	A08433-4sto	3.3	55	5.7	888	4.5	118	3.0	43	7.0	1207	3	15	6	0	48.9	S	17	7	MS	3.7	2.6	1.4	MR
10	A10021-5TE	7.0	613	7.7	1079	6.8	526	5.3	168	8.5	1744	3	6	3	0	19.3	S	48	31	S	3.8	2.7	2.0	MS
11	AO02183-2	3.0	50	5.7	833	3.8	92	4.0	117	7.3	1113	3	20	1	70	42.2	S	16	8	MS	3.7	2.2	1.1	MR
12	AOR07781-5	6.3	333	9.0	1613	7.0	485	4.7	148	9.0	1812	0	2	0	0	24.8	S	17	8	MS	4.1	2.8	2.7	R
13	CO09076-3RU	.	.	9.0	1883	7.8	1033	.	.	9.0	1897	0	.	.	95	15.1	S	22	12	S	5.0	3.9	2.2	MR
14	CO09205-2RU	6.0	333	6.7	919	6.5	406	5.7	242	9.0	1886	3	5	2	100	12.0	MS	20	11	S	2.6	3.5	0.9	MS
15	CO10087-4RU	8.3	957	9.0	1677	9.0	1483	4.0	125	9.0	1918	0	4	0	0	13.0	MS	17	11	S	4.3	3.9	2.2	MS
16	CO10091-1RU	1.5	19	8.3	1592	7.3	714	1.5	16	8.0	1528	0	.	.	0	11.6	MS	21	10	MS	2.7	1.7	1.8	MR
17	COTX05095-2Ru/Y	9.0	1120	9.0	2248	8.8	1683	3.7	152	8.8	1883	3	13	3	90	7.9	MR	41	26	S	3.5	4.1	2.5	MR
18	OR12133-10	4.0	148	7.3	1307	6.0	399	4.0	86	7.8	1679	5	34	3	100	31.3	S	59	40	S	4.8	3.8	2.3	MS
19	POR12NCK50-1	6.7	368	8.7	1755	6.5	593	4.0	85	7.8	1589	3	6	3	100	32.8	S	46	27	S	3.7	2.2	1.7	MS
<b>Entry Means</b>		5.3	369	7.7	1415	6.6	668	4.1	129	8.4	1669	1	11	2	59	25.3		31	19		3.7	3.0	1.9	
<b>LSD (.05)</b>		1.3						1.3		0.6	204	NS	22	9							n.s.	n.s.	1.3	

<sup>1</sup> 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.

AUDPC: Area Under the Disease Progress curve based on foliar readings taken 112, 119, and 126 days after planting.

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

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

<sup>2</sup> Evaluations made at Hermiston, Oregon; scale as indicated with highest number being most severe. Readings 120 days after planting. AUDPC based on

foliar readings taken 91, 106, and 121 days after planting. PVY readings Hermiston, OR Elisa test of tuber bud end by Sagar Sathavali.

<sup>3</sup> Evaluations made at Tulelake, California; AUDPC based on foliar early-dying rating taken 77, 83, 89, 96, 104 and 110 days after planting.

<sup>4</sup> Evaluations made at Corvallis, Oregon by Solomon Yi Ratings are averages for 4 reps: 1 = no foliar injury; 2 = 1-5% injury; 3 = 5-10% injury; 4 = 10-20%; 5 = 25-40%; 6 = 40-60%; 7 = 60-75%; 8 = 75-90%; 9 = 90-100% injury. Percent of late blight infected tubers at harvest based on 10 randomly selected tubers per replication.

<sup>5</sup> Visual readings made at Prosser, Washington by Rich Quick and Launa Cimrhakl: tubers cut lengthwise, quartered and scored (0-8) based on the number of wedge sides affected. Disease Severity Index (DSI) was calculated for each replication by summing the scores (S) of each tuber evaluated (T) and dividing that number by the number of tubers evaluated multiplied by the worst possible score (8) and multiplying |DSI = (∑ S)/(T\*8)\*100

TRV Disease Rating Based on %DSI:R=Extreme Resistance (0-1%);MR=Moderate Resistance (1.1-5%);MS=Moderately Susceptible (5.1-10%);S=Susceptible (10.1+%)

<sup>6</sup> Evaluations made at Aberdeen, Idaho; R=Resistant, MR=Moderately Resistant, S=Susceptible, MS=Moderately Susceptible, VS=Very Susceptible

TABLE 14: 2019 Western Regional Potato Variety Trial - SOLIDS, DEXTROSE, SUCROSE, PROTEIN, VITAMIN C,  
AND GLYCOALKALOIDS - ABERDEEN

No. Clone	Solids Oven Dry %	Sugars		Protein (%DWB) <sup>1</sup>	Vitamin C (mg/100g FWB) <sup>1</sup>	Texas <sup>2</sup>		Glycoalkaloids <sup>5</sup> (mg/100g FWB) <sup>1</sup>
		Dextrose (%FWB) <sup>1</sup>	Sucrose (%FWB) <sup>1</sup>			µg Trolox equivalents/gfw <sup>3</sup>	AOA Levels <sup>4</sup>	
1 RANGER R.	24.5	0.07	0.19	5.6	38.2	98.6	M	4.1
2 R. BURBANK	21.0	0.06	0.14	5.6	24.8	90.5	M	2.6
3 R. NORKOTAH	22.1	0.09	0.13	5.0	27.0	120.5	M	2.7
4 SHEPODY	.	.	.	.	.	18.8	L	.
5 A07061-6	23.6	0.04	0.16	5.4	39.4	79.4	M	3.8
6 A071012-4BF	26.5	0.02	0.28	6.1	25.0	71.6	L	6.4
7 A07769-4	23.0	0.03	0.18	5.8	22.8	56.8	L	3.2
8 A08422-4sto	24.1	0.05	0.20	7.3	25.1	45.6	L	4.2
9 A08433-4sto	22.6	0.05	0.17	6.4	21.2	109.5	M	1.9
10 A10021-5TE	24.0	0.04	0.18	6.6	39.3	86.6	M	4.5
11 AO02183-2	26.2	0.01	0.22	6.7	27.8	157.3	M	13.7
12 AOR07781-5	25.6	0.02	0.14	5.9	26.0	190.0	H	7.1
13 CO09076-3RU	.	.	.	.	.	176.0	H	.
14 CO09205-2RU	23.0	0.03	0.11	6.0	34.0	164.6	M	5.1
15 CO10087-4RU	26.2	0.04	0.13	6.1	37.8	174.6	H	3.4
16 CO10091-1RU	.	.	.	.	.	129.6	M	.
17 COTX05095-2Ru/Y	22.5	0.08	0.11	5.6	39.0	231.5	H	3.4
18 OR12133-10	24.1	0.03	0.18	5.9	40.0	375.6	VH	1.8
19 POR12NCK50-1	24.4	0.02	0.14	6.6	29.0	125.7	M	1.7
<b>Mean</b>	<b>24.0</b>	<b>0.04</b>	<b>0.17</b>	<b>6.0</b>	<b>31.0</b>	<b>131.7</b>		<b>4.3</b>

<sup>1</sup> DWB = Dry Weight Basis; FWB = Fresh Weight Basis

<sup>2</sup> The assay used at Texas A&M University was based on "Use of a Free Radical Method to Evaluate Antioxidant Activity" by Brand-Williams, et al. 1995, Lebensm. Wiss. Technol. 28:25-30. Antioxidants soluble in methonal were extracted and allowed to react with the stable radical, 2,2,-Diphenyl-1-picrylhydrazyl (DPPH). This provided a rapid evaluation of the antioxidant properties of the potato extracts based on absorbance.

<sup>3</sup> µg Trolox equivalents/gfw - Absorbance was converted to trolox equivalents based on a standard curve using the following equation:  $y = .00382x + .0341$

<sup>4</sup> VH=very high (>310), H=high (174-309), M=medium (79-173), L=low (18-78), VL=very low (<17) n=50 including nine check varieties

<sup>5</sup> Glycoalkaloids: The 2019 Lenape check grown at Aberdeen was 34.3 mg/100g



**TABLE 15: 2019 Western Regional Potato Variety Trial - MERIT SCORES [1-5(best)]**

No. Clone	Post-Harvest																									
	Field Performance Process Merit											Fresh Merit														
	CO		ID		OR		WA		Early	Late	Process WA <sup>1</sup> 3 State Mean	CA	CO		ID		OR		TX		WA		Early	Late		
	SLV	AB	KIM	HRM	OTH	E	L	Mean(Rnk)	Mean(Rnk)	TUL		SLV	AB	KIM	HRM	DAL	SPR	E	L	E	E	E	L	Mean(Rnk)	Mean(Rnk)	
L	L	L	E	L	E	L				L	L	L	L	E	L	E	E	E	E	L						
1 RANGER R.	3.0	2.5	2.5	3.0	3.0	3.4	3.2	<b>3.2</b>	9	<b>2.8</b>	6	3.4	3.5	2.0	2.4	2.4	2.0	2.0	3.6	3.5	1.7	1.4	<b>2.4</b>	16	<b>2.3</b>	13
2 R. BURBANK	3.0	2.0	2.0	2.0	2.0	3.3	2.5	<b>2.7</b>	12	<b>2.3</b>	12	2.1	3.4	1.0	2.0	1.8	1.0	1.0	3.1	3.4	1.6	1.3	<b>1.9</b>	19	<b>1.7</b>	18
3 R. NORKOTAH	1.0	2.0	2.5	2.0	2.0	2.7	2.2	<b>2.4</b>	16	<b>1.9</b>	15	.	3.9	2.0	2.8	2.8	2.5	2.5	4.2	3.7	3.4	2.6	<b>3.4</b>	1	<b>2.8</b>	6
4 SHEPODY	3.0	.	.	2.0	.	3.9	.	<b>3.0</b>	11	.	.	.	.	2.0	.	.	2.0	.	3.6	3.3	.	.	<b>2.8</b>	9	.	.
5 A07061-6	3.0	3.5	2.5	2.0	2.5	2.9	1.2	<b>2.5</b>	15	<b>2.5</b>	9	2.9	2.3	1.0	2.8	2.8	2.0	2.0	3.6	3.4	1.9	2.2	<b>2.5</b>	15	<b>2.2</b>	16
6 A071012-4BF	4.0	2.5	2.0	4.0	3.5	4.4	4.8	<b>4.2</b>	1	<b>3.4</b>	5	2.8	3.4	5.0	2.4	2.1	3.0	2.5	3.6	4.0	3.4	1.6	<b>3.3</b>	2	<b>2.8</b>	6
7 A07769-4	5.0	3.5	4.0	3.0	3.0	3.9	3.0	<b>3.4</b>	6	<b>3.7</b>	2	3.1	3.4	5.0	3.9	3.4	2.5	3.0	3.8	4.0	3.0	1.8	<b>3.1</b>	4	<b>3.4</b>	1
8 A08422-4sto	5.0	1.0	1.5	3.0	2.5	3.1	2.5	<b>3.1</b>	10	<b>2.5</b>	9	.	2.9	3.0	2.4	2.6	2.5	2.5	3.6	3.4	1.9	1.9	<b>2.7</b>	12	<b>2.5</b>	10
9 A08433-4sto	1.0	2.5	1.5	3.5	3.0	3.1	1.4	<b>3.3</b>	8	<b>1.9</b>	15	3.0	3.4	3.0	2.0	2.0	2.5	2.0	3.7	3.4	2.0	1.3	<b>2.7</b>	12	<b>2.3</b>	13
10 A10021-5TE	5.0	3.0	3.5	3.0	3.5	4.0	2.5	<b>3.5</b>	5	<b>3.5</b>	3	3.9	3.4	4.0	3.1	2.8	2.5	3.0	3.8	3.7	2.3	1.5	<b>2.9</b>	6	<b>3.0</b>	2
11 AO02183-2	5.0	4.0	3.5	2.5	3.0	4.3	4.5	<b>3.4</b>	6	<b>4.0</b>	1	4.1	3.4	3.0	3.8	3.0	2.0	2.5	3.5	3.8	3.4	2.3	<b>3.0</b>	5	<b>3.0</b>	2
12 AOR07781-5	4.0	3.0	4.0	3.0	3.5	4.9	3.2	<b>3.9</b>	2	<b>3.5</b>	3	4.1	3.1	3.0	2.1	2.4	2.5	3.0	3.5	3.9	2.0	1.6	<b>2.7</b>	12	<b>2.5</b>	10
13 CO09076-3RU	2.0	.	1.0	2.0	2.5	1.3	1.5	<b>1.7</b>	17	<b>1.8</b>	17	.	3.1	4.0	.	2.0	2.5	2.5	3.1	3.1	1.1	0.9	<b>2.2</b>	18	<b>2.5</b>	10
14 CO09205-2RU	3.0	3.5	2.0	1.0	3.0	2.3	1.6	<b>1.7</b>	17	<b>2.6</b>	7	.	3.5	2.0	3.4	3.6	2.5	2.5	3.7	3.1	2.1	0.9	<b>2.8</b>	9	<b>2.6</b>	8
15 CO10087-4RU	1.0	2.5	2.5	3.0	3.0	2.2	1.7	<b>2.6</b>	13	<b>2.1</b>	14	.	3.8	3.0	2.5	3.0	3.0	3.5	3.7	3.7	1.9	1.5	<b>2.9</b>	6	<b>2.9</b>	4
16 CO10091-1RU	2.0	.	2.5	1.0	2.5	1.0	1.6	<b>1.0</b>	19	<b>2.2</b>	13	2.7	3.1	1.0	.	2.1	2.5	2.5	3.5	3.4	1.3	1.4	<b>2.4</b>	16	<b>2.0</b>	17
17 COTX05095-2Ru/Y	4.0	2.5	2.5	2.0	2.5	3.2	1.4	<b>2.6</b>	13	<b>2.6</b>	7	.	3.4	2.0	2.8	2.3	2.5	2.0	3.8	3.2	2.1	1.3	<b>2.8</b>	9	<b>2.3</b>	13
18 OR12133-10	.	3.0	2.5	4.0	3.0	3.8	1.2	<b>3.9</b>	2	<b>2.4</b>	11	3.2	3.1	.	3.4	2.3	3.0	2.5	3.8	3.8	1.9	1.8	<b>2.9</b>	6	<b>2.6</b>	8
19 POR12NCK50-1	4.0	2.5	3.0	3.0	3.5	4.2	4.5	<b>3.6</b>	4	<b>3.5</b>	3	3.4	3.8	2.0	2.9	3.0	3.5	3.5	3.7	3.6	2.6	2.3	<b>3.3</b>	2	<b>2.9</b>	4
<b>Mean</b>	3.2	2.7	2.5	2.6	2.9	3.3	2.5	2.9	10	2.7	8.4	3.2	3.3	2.7	2.8	2.6	2.4	2.5	3.6	3.5	2.2	1.6	2.8	9.4	2.6	

<sup>1</sup> Score based upon Idaho, Oregon, and Washington Late Trial samples evaluated postharvest at Washington State University. ([www.potatoes.wsu.edu](http://www.potatoes.wsu.edu)) Scale [1-5(best)]

TABLE 16: 2019 Western Regional Potato Variety Trial - ENTRY SUMMARY1

Entry No. Clone	Year		US Total Yield <sup>2</sup>	US #1's Yield <sup>2</sup>	US % #1's <sup>2</sup>	Tuber Size (oz)		Specific Gravity <sup>2</sup>	Combine(E&L)		Observations	Disp. 2020	
	In Use Trial					Early	Late		Fry45	Merit Score <sup>3</sup>			
1 RANGER R.	-	Dual	575	449	77	8.5	8.5	1.087	0.8	2.9	2.3	Check	
2 R. BURBANK	-	Dual	554	403	71	7.3	7.3	1.081	1.9	2.4	1.8	Check	
3 R. NORKOTAH	-	Fresh	455	370	80	6.3	6.3	1.072	1.6	2.1	2.9	Check	
4 SHEPODY	-	Proc	507	354	61	7.1	.	1.074	2.0	3.0	2.7	Check	
5 A07061-6	3	Dual	667	550	81	6.6	6.6	1.080	1.0	2.5	2.4	High Total Yield (E&L); Susceptible to scab; higher Vitamin C; Lower Fresh merit (L)	GRAD
6 A071012-4BF	2	Dual	659	558	84	9.3	9.3	1.098	1.5	3.6	3.1	High US No. 1 yield (L); Larger tuber size with high % and yield of oversize (L); Higher Specific Gravity (E&L); Resistant to Vert/Early Die; High Process and Fresh merit (E)	RIRN
7 A07769-4	2	Dual	605	522	86	8.8	8.8	1.085	1.2	3.6	3.4	High US Yield (E) and % of US (E &L); Larger tuber size with % oversize (L); Shatter bruise (L); Cold-sweetening resistant; Resistant to corky ringspot and MR PVY; High Process and Fresh Merit (L)	RIRN
8 A08422-4sto	1	Dual	500	447	89	8.1	8.1	1.083	2.4	2.7	2.6	High % of US (E&L); shatter bruise (L); Poorer processing from 45F-CO & WA and higher sugar ends; Resistant to PVY; Susceptible to early blight and scab; Higher protein;	DISC.
9 A08433-4sto	3	Dual	598	465	78	8.5	8.5	1.084	1.4	2.3	2.4	Larger tuber size (E); Resistant to Vert/Early Die & PVY; Lower Process merit (L)	GRAD
10 A10021-5TE	2	Dual	570	475	82	8.2	8.2	1.089	0.6	3.5	3.0	High US Yield and % of US (E); higher Vitamin C; Resistant to PVY; High process merit (E&L);	RTRN
11 AO02183-2	2	Dual	694	585	83	8.2	8.2	1.091	0.4	3.8	3.0	High Total Yield (E&L) and US Yield (L); High % and yield of oversize (L); Cold-sweetening resistant; Resistant to Vert/Early Die; Susc. to scab and net necrosis/vascular discoloration; Higher TGA; High Process merit (L)	DISC.
12 AOR07781-5	3	Dual	540	443	81	8.3	8.3	1.091	0.4	3.6	2.7	Higher SG (E&L); shatter bruise (L); Cold-sweetening resistant; Resistant to PVY; High Process merit (E)	GRAD
13 CO09076-3RU	2	Fresh	404	250	61	5.5	5.5	1.081	1.6	1.7	2.4	Low Total & US Yield (E&L); Low % of US (E&L); Smaller tuber size with high % undersize (L); Growth cracks (L); Lower Process merit (E &L)	DISC.
14 CO09205-2RU	2	Dual	500	367	73	5.6	5.6	1.076	0.5	2.3	2.6	Low Total & US Yield (E); Smaller tuber size with high % undersize (E) and yield of undersize (L); Lower SG (E&L); lower Process merit (E)	DISC.
15 CO10087-4RU	1	Dual	397	325	79	5.6	5.6	1.091	1.1	2.3	2.9	Low Total Yield (E&L) and US (L); Higher Specific Gravity (E&L); Resistant to PVY; Susceptible to Vert/Early Die; Hgher Vitamin C	RTRN
16 CO10091-1RU	1	Dual	440	341	72	4.8	4.8	1.084	0.9	1.8	2.2	Low Total & US Yield (E&L); Low % of US (E&L); Smaller tuber size with high % and yield of undersize (E &L); Resistant to early blight and PVY; Lower Process (E) and Fresh (L)	RTRN
17 COTX05095-2Ru/Y	2	Fresh	526	399	74	5.2	5.2	1.080	1.1	2.6	2.4	Smaller tuber size with high % and yield of undersize (E &L); Rounded tuber shape (E&L); Mod. Resistance to Columbia Root- Knot nematode; Susceptible to Vert/Early Die; Higher Vitamin C	DISC.
18 OR12133-10	1	Dual	806	673	83	6.0	7.8	1.087	1.4	2.9	2.8	High Total & US Yield (E&L); Larger tuber size with high % and yield of oversize (L); Shatter bruise (L); Higher Net Necrosis/Vascular Discoloration (L); Susceptible to scab; Higher Vitamin C; Higher Process merit (E)	RTRN
19 POR12NCK50-1	1	Dual	576	501	85	6.1	7.3	1.089	0.5	3.5	3.0	Higher Fresh merit (E)	RTRN
<b>Mean</b>			<b>555</b>	<b>443</b>	<b>77</b>	<b>7.1</b>	<b>7.2</b>	<b>1.084</b>	<b>1.2</b>	<b>2.8</b>	<b>2.6</b>		

<sup>1</sup> Numeric values represent means across all trial locations.

<sup>2</sup> Data shown from late trial results unless early trial entry only. (Entry 4)

<sup>3</sup> Data shown from combined early & late trial results.

TABLE 17: 2019 Western Regional Potato Variety Trial - 3 YEAR SUMMARY OF GRADUATING ENTRIES - LATE TRIAL LOCATION MEANS

Clone	2017						2018						2019					
	Total Yield <sup>1</sup> &(rank)	US #1 Yield <sup>1</sup> & %	SG	Fry 45	Merit Score		Total Yield <sup>1</sup> &(rank)	US #1 Yield <sup>1</sup> & %	SG	Fry 45	Merit Score		Total Yield <sup>1</sup> &(rank)	US #1 Yield <sup>1</sup> & %	SG	Fry 45	Merit Score	
					Fresh	Proc					Fresh	Proc					Fresh	Proc
A07061-6	615 (1/17)	517 83	1.080	1.1	2.3	3.4	685 (2/20)	577 83	1.083	1.1	3.1	3.3	667 (3/18)	550 81	1.080	1.0	2.0	2.5
A08433-4sto	594 (2/17)	495 83	1.084	1.5	2.9	2.8	684 (3/20)	584 85	1.086	1.7	2.8	2.6	598 (6/18)	465 78	1.084	1.4	2.3	1.9
A0R07781-5	518 (8/17)	431 83	1.093	0.1	2.2	3.4	551 (13/20)	471 85	1.091	0.2	2.5	3.7	540 (11/18)	443 81	1.091	0.4	2.8	3.5
RANGER R.	544 (7/17)	441 81	1.089	0.7	1.9	2.8	652 (7/20)	556 84	1.091	0.9	3.0	2.4	575 (8/18)	449 77	1.087	0.8	2.6	2.8
R. NORKOTAH	413 (16/17)	338 79	1.071	1.4	2.9	1.6	480 (20/20)	402 82	1.076	1.9	1.5	3.1	455 (15/18)	370 80	1.072	1.6	2.7	1.9
R. BURBANK	510 (9/17)	369 71	1.080	1.8	1.8	2.3	592 (12/20)	449 75	1.084	1.3	2.3	2.0	554 (10/18)	403 71	1.081	1.9	1.9	2.3
<b>Trial Mean</b>	513	422 82	1.086	1.0	2.6	2.9	606	507 83	1.087	1.0	3.1	2.7	559	451 79	1.085	1.2	2.7	2.7

## 3 Year Average (2017-2019)

Clone	Total Yield <sup>1</sup> &(%) <sup>2</sup>	US #1 Yld <sup>1</sup> %	SG	FRY 45	Merit Score		Noted Weaknesses		Noted Strengths	
					Fresh	Proc				
A07061-6	656 (89)	548 82	1.081	1.1	2.5	3.1	lower SG-Early (3/3 years);	High total yield-Late (3/3 years) and Early (2/3); Moderate Resistance to PVY (2/3); Resistant to Verticillium/Early Die @ AB & Tulelake (3/3); Higher Vitamin C (2/3)		
A08433-4sto	625 (80)	515 82	1.085	1.5	2.7	2.4	None consistently noted over years	High Total and US Yields-Late (2/3 years); Extreme Resistance to PVY (3/3); Resistant to Verticillium/Early Die (3/3) and Late Blight (2/3);		
A0R07781-5	536 (42)	448 83	1.092	0.2	2.5	3.5	None consistently noted over years	Higher Specific Gravity (Early & Late)- (3/3 years); Extreme Resistance to PVY (3/3); High Process Merit-Early (3/3) and Late (2/3);Cold-sweetening Resistance (2/3)		
RANGER R.	590 (60)	482 81	1.089	0.8	2.5	2.7				
R. NORKOTAH	449 (.07)	370 80	1.073	1.6	2.4	2.2				
R. BURBANK	552 (44)	407 72	1.082	1.7	2.0	2.2				
<b>Trial Mean<sup>3</sup></b>	559	460 81	1.086	1.1	2.8	2.8				

<sup>1</sup> (CWT/A)<sup>2</sup> Percent of entries with lower yields; e.g. 89% of all late trial entries over three years yielded lower than A07061-6<sup>3</sup>Late Trial means of all trial entries 2017 - 2019.

TABLE 18: 2019 Western Regional Potato Variety Trial - ENTRY COMMENTS - EARLY HARVEST

Entry Comments - Early Harvest						
No. Clone	ID PAR	TX DAL	TX SPR	OR' HRM	WA OTH	
1	Ranger Russet	curved, skinning	deep eyes, rugged+, high tuber number, pointed	knobs+++ heat sprouts and chain tubers++, good tuber number skinny tubers and rots, irregular shape, rough, moon shapes	4 curvy, 2 bottle, 2 deep eyes, 3 snakey, 2 sticky, 2 rot	Many irregular tuber shapes, ok skin and length.
2	Russet Burbank	blocky	dislike shape, many knobs+, terrible shape, misshapen	skinny, heat sprouts++ and knobs++, skin set, chain tubers++, shape issues and pointy, all culls, high tuber number+, deformed tubers++	3 bottle, 3 curvy, 4 db, 3 sticky, 2 pty, 2 irregular, 2 rot	Mix of shapes, cracks, #2's, some typy, smaller.
3	Russet Norkotah	blocky	good skin, good shape+, some misshapen+, many eyes, impressive high tuber number	small, pointy, heat sprouts++, good tuber number chain tubers+ knobs, nice shape and size+	4 pty, 4 typy, 2 tuberworm	Typy, smaller, nice skin, good length.
4	Shepody	irregular	several rotten, very long, curved, pointed, light skin+, high tuber number+, large, ZC 10%, bad shape, angular,	smooth skin, rotten++, long tubers, heat sprouts++ and pointy+, light skin, sprouting, poor shape, low tuber number, knobs++ round+++ , heat sprouts+++ , chain tubers++ , knobs++ , different shapes, light skin, high tuber number+, buff skin, flat, small++, light russet, attached stolons	2 spr, 2 curvy, 2 bottle, 3 irregular	Round, long, light skin, some large.
5	A07061-6	small, SED	non-uniform shape+, round+, oval+, oblong, nonuniform skin, buff skin, light skin+++, high tuber number, misshapen	long chain tubers+, heat sprouts++, shape ok, knobs++, pointy+, but good number+, rots, bad shape, non-uniform russet skin, ROT	4 lenticels, 2 flakey, 3 round, 4 short, 2 dotty, 2 sticky	Spotty, scabby skin, round not a dual variety.
6	A071012-4BF	irregular	non-uniform shape, oval to very long, heals dark, knobs, pointed, light skin	nice skin, lower yield, round tubers, heat sprouts+, knobs, chain tubers, smaller shape, nice shape, bulky, excellent size, shape nice russet skin, soft rots stolon ends, BOT	3 blocky, 4 flakey, 2 nice, 2 dotty, 2 patchy	Smaller, round, elephant hide on several, not early.
7	A07769-4	blocky	non-uniform skin, nice shape, blocky+, nice skin	low tuber number++, heat sprouts, rot, chain tubers+, knobs, shriveled soft tubers, non-uniform russet skin	3 blocky, 3 sticky, 3 short	Smaller, round, not early.
8	A08422-4sto	blocky	rot, very long, curved, pointed, light skin+, high tuber number+, large, ZC 10%, bad shape, angular	heat sprouts++, chain tubers++, deformed, fat, poor skin, lower number of tubers+ and good size+, moon shape, light skin, non-uniform russet skin, flat, rotten tubers, pointy, shriveled tubers	4 flakey, 2 lenticels, 2 pty, 2 short, 3 triangular	Very short, feathery skin, small. Not an early variety.
9	A08433-4sto	round	non-uniform shape, oval to very long, it heals dark, pointed+, some very large, large number of smalls, very high tuber number, knobs, a little flat	long moon shape+, skinny and pointed++, heat sprouts++, knobs+, nice tuber size, shriveled	3 flat, 2 thin, 2 dotty, 2 flakey, 3 pty, 2 sticky	Large, nonuniform shape, lots of pears. Discard.
10	A10021-5TE	pointed ends	very long+, many eyes, high tuber number+, pointed++, large, light skin	high tuber number+++, knobs+++ non uniform shape++, good skin, heat sprouts++ chain tubers+, non-uniform size+, many eyes, many smalls, nice russet skin	3 cracked skin, 3 flakey, 2 blocky, 2 rot, 3 pty, 2 twins	Typy, good length, bad skin.
11	AO02183-2	curved, SED	skinny+, many eyes, light eyes, very long, knobs+, pointed	long high tuber number++, heat sprouts+, moon shaped++, pointed++, good skin, lower number and knobs++, good yield, lighter eye area many eyes bowling pin	4 pty, 4 pr eyes, 2 bottle	Very large, typy, skin rough, lots of lenticels.
12	AOR07781-5	blocky, yellow flesh	very large+, very long+, many eyes+, light eyes+, pointed+, knobs+, high tuber number, deep eyes, like Russet Norkotah	long, deformed, pointed++, knobs+, thin tubers, heat sprouts+ chain tubers, bad shape but good number+, mostly culls, bottle shaped, many rotten+	4 pty, 3 pixel, 2 pr eyes	Some typy, deep eyes, short.
13	CO09076-3RU	small	few tuber number, misshapen, knobs, skinny+, pointed, knobs, heat sprouts	smaller, heat sprouts+ chain tubers+, few tubers+, nice russet skin, knobs	2 dotty, 3 curvy, 2 patchy, 2 bottle, 2 smooth, 3 pty, 2 thin	Somewhat typy, larger, some curves.
14	CO09205-2RU	pointed, curved	few tubers, nice skin, small	chain tubers, heat sprouts+, knobs, good tuber number+, sprouts, light skin, a little flat, nice shape, nice russet skin+	2 smooth, 4 pty, 2 pixel, 3 thin, 2 strippey	Typy, small, good skin, not early.
15	CO10087-4RU	blocky, sprouted	nice skin, good shape+, very few tubers, golden russet skin	very low yield, small shape, knobs with chain tubers, roundish, good tuber number, different shapes and rots, alligator skin,	2 typy, 3 sticky, 4 short, 2 pty	Small, typy, good skin, not early.
16	CO10091-1RU	round	.	heat sprouts+, smaller, rotten, roundish++, yellow flesh, low tuber number+, irregular shape, alligator skin+, drop	4 short, 2 pixel, 2 sticky, 2 triangular, 2 pty	Small, round, typy, but not early.
17	COTX05095-2Ru/Y	round, small, yellow flesh	non-uniform shape, knobs, very nice shape, blocky, light skin, small-medium, yellow flesh+, golden skin	skinny++, long heat sprouts+++, light russet, too light, pointed++, curvy shape, high tuber number+ uneven shape, nice long+	3 cracky, 3 flakey, 4 round, 2 short	Not early, short and round with feathery skin.
18	OR12133-10	pointed	nice, very light skin+++, skinny+, misshapen, ZC 20%	high tuber number+++, chain tubers++, knobs++, heat sprouts++, good russet skin, irregular shape, angular+	3 pty, 2 flakey	Not early, small, lots of points, pears, discard.
19	POR12NCK50-1	irregular	medium, good shape, high tuber number, skinny		4 typy, 4 pixel, 4 sticky	Dark skin, mostly typy, not early.

TABLE 19: 2019 Western Regional Potato Variety Trial - ENTRY COMMENTS - LATE HARVEST

		Entry Comments - Late Harvest						
No.	Clone	CA	CO	ID <sup>1</sup>			OR <sup>1</sup>	WA
		TUL	SLV	AB	KIM	PAR	HRM	OTH
1	Ranger Russet	Check	.	MHR: misshapen, curves (3)	MHR: curves (3); few points/misshpen (2)	curved	2 deep eyes, 3 snakey, 2 pty, 3 curvy, 2 sticky	Long, skinny, lot of typy ones, some not so much.
2	Russet Burbank	Check	.	MHR: bumps (3); bulging eyes, not uniform (2)	MHR: misshapen (3); not uniform (2)	few point, blocky, pointed	3 rot, 4 db, 3 curvy, 4 pty, 3 bottle, 2 rot	Non uniform shape, some typy.
3	Russet Norkotah	Check	.	HR: low yeild, nice shape (4); small, uniform (3)	HR: uniform (3); points, curves (2)	smooth	2 typy, 4 tuberworm, 3 greening	Mostly typy, with nice skin, medium dark russet.
4	Shepody	.	pointed	.	.	.	.	.
5	A07061-6	high tubers per plant, little russeting	V. light russet, lumpy	LR: few misshapen (2); little flat, deep eyes, patchy skin	LR: brow, blocky, few points, deep eyes (2)	sprouts, deep bud end	4 spr, 3 pty, 2 short, 2 round, 2 flat, 2 triangular	Spotty skin, short and round.
6	A071012-4BF	block, pink eyes	Deep eyes, dry rot	MHR: deep eyes (4); flakey skin, few misshapen/bumps (2)	HR: few bumps (3); few bulging eyes, short (2)	course Russet	3 flakey, 2 deep eyes, 4 sticky, 2 nice, 2 skinning, 3 blocky	Large, blocky, bad skin, typy shape.
7	A07769-4	high incidence of shatter bruise	Light russet	MLR: shatter, uniform (4); nice shape (3)	MR: blocky (4); uniform (2)	pear shape, non uniform	3 short, 2 rot	Large and blocky, but bad skin.
8	A08422-4sto	high %1's	Flat, light russet	MR: rot (4); shatter, fairly uniform (2)	LR: few bumps, shatter, flat (2)	blocky, non uniform	3 flat, 3 short, 4 skinning, 3 pty, 2 triangular	Larger, plump, pear shaped, with light skin.
9	A08433-4sto	lumpy	Flat, light russet	MR: not uniform (3); points, bumps, flat	MHR: flat (4); not uniform (3)	blocky, pear shape	4 flat, 3 pty, 2 stripey, 3 pty, 2 cracky, 2 sticky, 2 lenticels, 2 rot, 2 triangular	Large, flat, ugly, nonuniform shape.
10	A10021-5TE	more <4 oz tubers than most	.	MR: fairly uniform (3); some shatter, few curves (2)	MHR: curves (3); flakey skin (2)	curved	4 pty, 4 flakey, 2 bottle, 2 nipple, 3 cracky	Bad scab, bad skin, ok shape.
11	AO02183-2	.	Deep eyes	MHR: uniform, deep eyes (4); nice shape, few ats (2)	MHR: deep eyes, uniform, curves (2)	non uniform	3 pty, 2 lenticels, 4 greening, 4 sticky, 2 folded	Larger, bad lenticils, mostly typy.
12	AOR07781-5	lumpy shape	Yellow flesh	HR: misshapen, curves (3); not uniform, some shatter (2)	HR: points, shatter, curves, brow (2)	pointed, pear shape, dark yellow flesh	2 pixel, 4 rot, 2 dry rot, 4 pty, 4 pr eyes	Nice skin, bright deep eyes, some points, nonuniform shanes
13	CO09076-3RU	low %1s, high % culls	.	.	HR: low yield (3); not uniform (2)	dumbbells	3 spr, 2 ugly, 3 pty, 2 thin, 2 nipple	Ugly, a lot of greens, #2's and cracks.
14	CO09205-2RU	long and narrow	.	MHR: uniform, small (3)	MHR: uniform (4); curves (2)	small, curved, sprouts	3 bottle, 3 pty, 3 thin, 2 dotty- pixel, 3 curvy, 2 pr eyes, 3 spr	Some typy, skinny, long, non uniform shape.
15	CO10087-4RU	lowest total yield in trial	Nice	HR: small, low yield (4); nice shape, shatter (2)	MHR: uniform (4); small, low yield (3); nice skin (2)	small	4 pixel, 4 typy, 3 pty, 3 sticky	Too small, smooth shape, discard.
16	CO10091-1RU	round, small average tuber size	.	.	HR: low yield, round (4); small (3); nice skin (2)	round, small	4 pixel, 3 pty, 2 alligator, 4 short, 2 flat	Small river rocks with nice skin, discard.
17	COTX05095-2Ru/Y	block shape, susceptible to early dying	Some round	MLR: green, deep eyes (3); already peeping, blocky (2)	MHR: bumps, few points curves, small, low yield, ugly skin	round, small, varied	4 round, 3 sticky, 2 short, 3 spr	Too small, short and round. Discard.
18	OR12133-10	very light russet	.	MR: few points (3); fairly uniform, little short (2)	MLR: not uniform, few bumps (2)	average	3 pty, 3 curvy, 3 sticky, 3 spr, 2 skinning	Light spotty, ugly skin, oval shaped.
19	POR12NCK50-1	long, similar to Norkotah	.	MHR: few bumps (3); fairly uniform, few curves	MHR: skinning (4); uniform, few bumps (3);	pear shape, blocky	4 typy, 3 pixel, 3 sticky, 4 FBE, 3 skinning	Prescab, lenticils, bumpy, poor skin set.