

# 2015 Southwestern Regional Potato Variety Trial Report



## New Entries 2016 Southwestern Regional Trial

Entry #	Clone/Cultivar	Parents		Flower Color	Vine Size	Maturity	Tuber Shape	Skin Type	Entered By	Use	Seed Source	2015 Year	2015 Status
		Female	Male										

### Specialty Trial

<b>Yellow Flesh</b>													
1	Yukon Gold	Nogleam	W5279-4	Pink	Medium	Early	Oval	White	Check	Spec	CO	***	***
2	CO05035-1PW/Y	Masquerade	US147-96	Red-Purple	Large	Medium	Oblong	Pur-White	CO	Fresh	CO	1	
<b>Colored Flesh</b>													
3	Purple Majesty	All Blue	ND2008-2	Blue	Medium	Early	Oval	Purple	Check	Spec	CO	***	***
4	CO05028-4P/PY	AC99329-4R/Y	CO97227-2P/PW	Purple	Large	Medium	Oblong	Purple	CO	Dual	CO	1	
5	CO05028-11P/RWP	AC99329-4R/Y	CO97227-2P/PW	Blue-Purple	Med-Large	Medium	Oblong	Purple	CO	Fresh	CO	1	
6	CO05079-4P/PW	CO97216-3P/PW	CO97227-2P/PW	Blue-Purple	Medium	Medium	Oblong	Purple	CO	Fresh	CO	1	
<b>Russet Trial</b>													
7	Russet Norkotah	ND9687-5RU	ND9526-4RU	White	Small	Early	Long	Russet	Check	Fresh	CO	***	***
8	ATX05142-2RU	Rio Grande Russet	A97214-4	White	Large	Early	Oblong	Russet	TX	Fresh	CO	1	
9	AC05039-2RU	A99032-2TE	COA00287-1	White	Med-Small	Early	Oblong	Russet	CO	Dual	CO	1	
10	CO06057-3RU	CO98009-3RU	Premier Russet	White	Med-Large	Medium	Oblong	Russet	CO	Dual	CO	1	

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## Description of Clones - 2015 Southwestern Regional Trial

Entry #	Clone/Cultivar	Parents		Flower Color	Vine Size	Maturity	Tuber Shape	Skin Type	Entered		Seed Source	2015 Year	2016 Status
		Female	Male						By	Use			
<b>Yellow Flesh</b>													
1	Yukon Gold	Norgleam	W5279-4	Pink	Medium	Early	Oval	White	Check	Spec	CO	***	***
2	CO07131-1W/Y	PA4X137-12	4X91E22	Red-purple	Small	Medium	Round	White	CO	Spec	CO	1	
3	CO07370-1W/Y	US147-96	CO01399-10P/Y	White	Very Large	Med-Late	Round	White	CO	Spec	CO	1	
<b>Red Trial</b>													
4	Chieftain	La 1354	Ia 1027-18	Lavender	Med-Large	Medium	Oblong	Lt. Red	Check	Fresh	CO	***	***
5	Red LaSoda	Triumph	Katahdin	Red-purple	Medium	Medium	Oval	Lt. Red	Check	Fresh	CO	***	***
6	CO07102-1R	CO99256-3R	CO99076-6R	Purple	Med-Small	Early	Oval	Red	CO	Fresh	CO	1	
<b>Russet Trial</b>													
7	Russet Norkotah	ND9687-5RU	ND9526-4RU	White	Small	Early	Long	Russet	Check	Fresh	CO	***	***
8	CO07015-4RU	Fortress Russet	AC00033-2RU	White	Med-Small	Early	Oblong	Russet	CO	Fresh	CO	1	
9	CO07049-1RU	AOA95155-7	AC00594-4RU/Y	Light purple	Medium	Medium	Long	Russet	CO	Fresh	CO	1	
<b>Chip Trial</b>													
10	Atlantic	Wauseon	B5141-6	Red-purple	Med	Medium	Oval	Scaley-buff	Check	Chip	CO	***	***
11	Snowden	B5141-6	Wischip	White	Large	Late	Oblong	White	Check	Chip	CO	***	***
12	CO07070-10W	B0766-3T	CO00188-4W	Light purple	Med-Large	Medium	Oval	White	CO	Chip	CO	1	
13	CO07070-13W	B0766-3T	CO00188-4W	White	Med-Small	Early	Oval	White	CO	Chip	CO	1	

**Table 1. Locations, Cooperators, and Cultural Information**

Locations	Cooperators	Irrigation		Fertilizer N-P-K-S (lb./A)	Vine Kill Method	Planting Date	Vine Kill Date	Harvest Date	Days to Vine Kill	Herbicides	Pesticides Applied Insecticides	Fungicides
1. Kern Co. California (KRN)	J. Nunez J. DuBose	Sprinkler	All Trials									
2. Tulelake California (TUL)	R. Wilson D. Culp K. Nicholson S. Peterson	Solid-set sprinkler	Specialty Russet	205-104-100-36S	Machine Reglone	5/13/2016	9/2/2016	9/30/2016	112	Matrix Outlook Roundup Prowl H2O	Admire Pro Vydate	Bravo WS, Tanos Endura Omega 500 Quadris, Curzate Manzate, Tatoo C
3. San Luis Valley Colorado (SLV)	D. Holm C. Gray K. Zavislan	Pivot	Specialty Russet	120-60-40-25-2.5	Machine	5/15/2015	9/2/2015	9/28/2015	110	Boundary Dual Magnum	Belay Leverage 360	Luna Tranquility Quadris
4. Springlake Texas (SPR )	C. Miller J. Koym D. Scheuring	Pivot	Specialty/Red Russet Chip	155-34-34#	Machine	4/8/2015 4/18/2015 4/8/2015	7/16/2015 8/11/2015 7/22/2015	7/20/2015 8/18/2015 8/4/2015	99 115 105	Sencor, Roundup Dual, Matrix Stealth	Movento, Agrimek, Blackhawk, Transform	Scala, Copper, Tanos
5. Dalhart Texas (Dal )	C. Miller J. Koym D. Scheuring	Pivot	Specialty Russet Chip	171-136-13#	Machine	5/18/2015 5/21/2015 5/18/2015	8/20/2015 9/8/2015 8/20/2015	10/5/2015 10/19/2015 9/21/2015	94 110 94	Select Max, Chateau Brawl, Acumen Tricor, Marix	Beleaf, Fulfill Movento, Reaper Torac, Transform WG	Quadris, Penncozeb Bravo, Revus Top Scala SC, Luna Tranquility Echo, Curzate 60DF, Gavel 75DF

**Table 2. Percent Stand and Stems/Hill for Clones in the Southwestern Regional Trial, 2015**

Clone / Variety	Percent Stand					Stems per Hill			
	California	Colorado	Texas		Mean	Colorado	Texas	Mean	
	TUL	SLV	SPR	Dal		SLV	SPR		
<b>Yellow Flesh</b>									
1	Yukon Gold	91	90	96	100	94	2.6	1.3	2.0
2	CO07131-1W/Y	99	96	100	100	99	4.4	2.1	3.2
3	CO07370-1W/Y	94	93	85	100	93	3.4	2.4	2.9
<b>Red Trial</b>									
4	Chieftain	93	98	95	100	96	3.2	1.7	2.4
5	Red LaSoda	98	95	82	100	94	2.9	2.0	2.5
6	CO07102-1R	89	92	25	100	77	4.0	1.8	2.9
<b>Russet Trial</b>									
7	Russet Norkotah	100	93	100	100	98	2.9	2.2	2.6
8	CO07015-4RU	100	97	100	100	99	3.1	2.5	2.8
9	CO07049-1RU	100	94	98	100	98	2.8	2.1	2.4
<b>Chip Trial</b>									
10	Atlantic	99	92	90	100	95	3.1	1.5	2.3
11	Snowden	98		100	100	99		2.7	2.7
12	CO07070-10W	94	94	97	100	96	3.7	1.8	2.7
13	CO07070-13W	91	87	84	100	90	3.7	2.4	3.0
Mean		96	93	89	100	95	3.3	2.0	2.6

**Table 3. Vine Size and Maturity for Clones in the Southwestern Regional Trial, 2015**

Clone / Variety	Vine Size (1-5=largest)				Vine Maturity (1-5=latest)				
	Colorado	Texas		Mean	Colorado	Texas		Mean	
	SLV	SPR	Dal		SLV	SPR	Dal		
<b>Yellow Flesh</b>									
1	Yukon Gold	3.3	3.4	3.9	3.5	2.0	3.4	3.9	3.1
2	CO07131-1W/Y	1.8	1.0	1.0	1.3	1.0	2.0	2.0	1.7
3	CO07370-1W/Y	5.0	4.2	4.5	4.6	4.8	4.5	4.7	4.7
<b>Red Trial</b>									
4	Chieftain	3.8	3.0	3.9	3.6	2.8	3.4	4.3	3.5
5	Red LaSoda	3.0	4.3	4.7	4.0	1.5	4.4	4.8	3.6
6	CO07102-1R	3.0	1.3	3.8	2.7	1.0	4.3	4.0	3.1
<b>Russet Trial</b>									
7	Russet Norkotah	2.3	3.7	3.9	3.3	1.0	3.4	3.7	2.7
8	CO07015-4RU	2.5	3.6	3.8	3.3	1.3	3.5	3.7	2.8
9	CO07049-1RU	3.0	3.7	4.0	3.6	2.3	3.6	4.0	3.3
<b>Chip Trial</b>									
10	Atlantic	4.0	3.5	4.0	3.8	3.0	4.2	4.5	3.9
11	Snowden		4.0	4.2	4.1		4.3	4.0	4.2
12	CO07070-10W	4.0	3.6	4.0	3.9	3.0	3.4	4.0	3.5
13	CO07070-13W	2.5	3.2	4.5	3.4	1.5	3.3	4.0	2.9
<b>Mean</b>		3.2	3.3	3.9	3.5	2.1	3.7	4.0	3.3

**Table 4. Total Yield, Yield Rank Within Type (Specialty, Russet, Red, and Chip), and Merit Score1 (MS), for Clones in the Southwestern Regional Trial, 2015**

Clone / Variety	California					Colorado			Texas						Mean		
	KRN		TUL			SLV			SPR			DAL			Cwt/A	Rank	MS
	Cwt/A	Rank	Cwt/A	Rank	MS <sup>1</sup>	Cwt/A	Rank	MS	Cwt/A	Rank	MS	Cwt/A	Rank	MS			
<b>Yellow Flesh</b>																	
1 Yukon Gold	386	1	435	1		388	1	5.0	207	1	3.8	349	1	3.7	353	1	4.2
2 CO07131-1W/Y	180	3	159	3		134	3	4.0	7	3	2.0	42	3	1.0	104	3	2.3
3 CO07370-1W/Y	378	2	348	2		334	2	5.0	53	2	2.0	59	2	1.0	234	2	2.7
<b>Red Trial</b>																	
4 Chieftain	509	1	611	1		466	1	5.0	175	2	3.7	304	2	3.3	413	1	4.0
5 Red LaSoda	426	2	603	2		393	2	3.0	243	1	3.5	350	1	3.5	403	2	3.3
6 CO07102-1R	324	3	520	3		274	3	1.0	22	3	1.0	281	3	3.0	284	3	1.7
<b>Russet Trial</b>																	
7 Russet Norkotah	333	3	402	2		293	3	1.0	168	2	3.6	513	1	2.9	342	2	2.5
8 CO07015-4RU	338	2	385	3		316	2	5.0	146	3	2.8	450	3	3.2	327	3	3.7
9 CO07049-1RU	351	1	445	1		337	1	5.0	218	1	2.9	462	2	3.6	362	1	3.8
<b>Chip Trial</b>																	
10 Atlantic	429	2	495	1		400	1	4.0	179	1	3.5	361	3	3.9	373	1	3.8
11 Snowden			468	3					134	4	3.7	440	2	3.8	347	3	3.7
12 CO07070-10W	393	3	319	4		367	2	4.0	161	2	3.6	336	4	3.8	315	4	3.8
13 CO07070-13W	460	1	471	2		299	3	1.0	150	3	3.6	443	1	4.0	364	2	2.9
Mean	376		435			333		3.6	143		3.0	338		3.1	325		3.3

<sup>1</sup> 1=very poor to 5= excellent

Indicates high or strength



**Table 5. Yield and Percent of U.S. No. 1's (>4oz.) and Yield Rank Within Type (Specialty, Russet, Red, and Chip) for Clones in the Southwestern Regional Trial, 2015**

Clone / Variety	California						Colorado <sup>1</sup>			Texas <sup>2</sup>						Mean			
	KRN			TUL			SLV			SPR			DAL			Cwt/A	Rank	%	
	Cwt/A	Rank	%	Cwt/A	Rank	%	Cwt/A	Rank	%	Cwt/A	Rank	%	Cwt/A	Rank	%				
<b>Yellow Flesh</b>																			
1	Yukon Gold	383	1	99	376	1	87	348	1	90	121	1	58	294	1	84	304	1	84
2	CO07131-1W/Y	180	2	100	0	3	0	1	3	1	0	3	0	0	3	0	36	3	20
3	CO07370-1W/Y	149	3	39	172	2	50	221	2	66	1	2	2	1	2	2	109	2	32
<b>Red Trial</b>																			
4	Chieftain	505	1	99	461	1	75	402	1	86	95	2	54	245	2	81	341	1	79
5	Red LaSoda	426	2	100	375	2	62	321	2	82	171	1	70	274	1	78	313	2	79
6	CO07102-1R	322	3	99	357	3	69	173	3	63	7	3	33	204	3	73	213	3	67
<b>Russet Trial</b>																			
7	Russet Norkotah	333	3	100	331	2	82	226	3	77	110	1	66	287	3	56	258	2	76
8	CO07015-4RU	336	2	99	292	3	76	273	1	86	25	3	17	320	1	71	249	3	70
9	CO07049-1RU	351	1	100	345	1	78	272	2	81	64	2	30	300	2	65	267	1	71
<b>Chip Trial</b>																			
10	Atlantic	428	2	100	403	1	81	325	1	81	91	1	51	319	3	88	313	1	80
11	Snowden				354	2	76				56	3	42	378	1	86	263	3	68
12	CO07070-10W	393	3	100	180	4	56	293	2	80	51	4	32	237	4	71	231	4	68
13	CO07070-13W	456	1	99	323	3	69	177	3	59	60	2	40	372	2	84	278	2	70
Mean		355		95	305		66	253		71	66		38	249		65	244		66

**Table 6. Yield and Percent of U.S. No. 1's (>10oz.) for Clones in the Southwestern Regional Trial, 2015**

Clone / Variety	California				Colorado <sup>3</sup>		Texas				Mean		
	KRN <sup>1</sup>		TUL <sup>2</sup>		SLV		SPR <sup>4</sup>		DAL		Mean		
	Cwt/A	%	Cwt/A	%	Cwt/A	%	Cwt/A	%	Cwt/A	%	Cwt/A	%	
<b>Yellow Flesh</b>													
1	Yukon Gold	20	5	170	39	152	39	8	4	90	26	88	23
2	CO07131-1W/Y	0	0	0	0	0	0	0	0	0	0	0	0
3	CO07370-1W/Y	0	0	5	2	24	7	0	0	0	0	6	2
<b>Red Trial</b>													
4	Chieftain	4	1	217	35	147	31	3	2	47	15	84	17
5	Red LaSoda	9	2	132	22	59	15	28	11	72	20	60	14
6	CO07102-1R	0	0	48	9	3	1	1	6	25	9	16	5
<b>Russet Trial</b>													
7	Russet Norkotah	4	1	177	44	83	28	17	10	78	15	72	20
8	CO07015-4RU	0	0	66	17	70	22	0	0	38	8	35	10
9	CO07049-1RU	7	2	137	31	76	23	0	0	34	7	51	13
<b>Chip Trial</b>													
10	Atlantic	11	3	135	27	130	32	3	2	63	17	68	16
11	Snowden			38	8			0	0	58	13	32	7
12	CO07070-10W	2	1	13	4	68	19	0	0	1	0	17	5
13	CO07070-13W	3	1	19	4	33	11	0	0	14	3	14	4
<b>Mean</b>		5	1	89	19	70	19	5	3	40	10	42	10

<sup>1</sup> > 11oz

<sup>2</sup> >12 oz on Russets >10 oz on red/specialty and Chip

**Table 7. Yield and Percent of U.S. No. 1's (6 - 10oz.) for Clones in the Southwestern Regional Trial, 2015**

Clone / Variety	California				Colorado		Texas				Mean		
	KRN		TUL <sup>1</sup>		SLV <sup>2</sup>		SPR		DAL		Mean		
	Cwt/A	%	Cwt/A	%	Cwt/A	%	Cwt/A	%	Cwt/A	%	Cwt/A	%	
<b>Yellow Flesh</b>													
1	Yukon Gold	89	23	142	33	197	51	63	30	106	30	119	33
2	CO07131-1W/Y	0	0	0	0	1	1	0	0	0	0	0	0
3	CO07370-1W/Y	3	1	68	20	197	59	0	0	0	0	54	16
<b>Red Trial</b>													
4	Chieftain	97	19	149	24	256	55	41	23	122	40	133	32
5	Red LaSoda	62	15	174	29	262	67	94	38	112	32	141	36
6	CO07102-1R	18	6	177	34	170	62	4	17	78	28	89	29
<b>Russet Trial</b>													
7	Russet Norkotah	49	15	108	27	144	49	49	29	101	20	90	28
8	CO07015-4RU	16	5	126	33	203	64	0	0	111	25	91	25
9	CO07049-1RU	51	14	134	30	196	58	13	6	107	23	100	26
<b>Chip Trial</b>													
10	Atlantic	105	24	171	35	196	49	46	26	115	32	126	33
11	Snowden			160	34			18	13	151	34	110	27
12	CO07070-10W	39	10	72	22	224	61	17	11	39	12	78	23
13	CO07070-13W	107	23	158	34	144	48	14	9	68	15	98	26
Mean		53	13	126	27	183	52	27	16	85	22	95	26

<sup>1</sup> 8-12 oz on Russets

<sup>2</sup> 4-10 oz

**Table 8. Yield and Percent of U.S. No. 1's (4 - 6 oz.) for Clones in the Southwestern Regional Trial, 2015**

Clone / Variety	California				Texas				Mean		
	KRN		TUL <sup>1</sup>		SPR		DAL		Cwt/A	%	
	Cwt/A	%	Cwt/A	%	Cwt/A	%	Cwt/A	%			
<b>Yellow Flesh</b>											
1 Yukon Gold	251	65	65	15	50	24	98	28	116	33	
2 CO07131-1W/Y	0	0	0	0	0	0	0	0	0	0	
3 CO07370-1W/Y	81	22	99	28	1	2	1	2	45	13	
<b>Red Trial</b>											
4 Chieftain	369	73	95	15	50	29	77	25	148	36	
5 Red LaSoda	328	77	69	11	50	20	91	26	134	34	
6 CO07102-1R	251	77	132	25	2	10	101	36	121	37	
<b>Russet Trial</b>											
7 Russet Norkotah	251	75	45	11	44	26	130	25	118	35	
8 CO07015-4RU	247	73	99	26	25	17	170	38	135	38	
9 CO07049-1RU	242	69	74	17	51	23	159	34	132	36	
<b>Chip Trial</b>											
10 Atlantic	285	66	97	20	42	23	141	39	141	37	
11 Snowden			155	33	38	28	174	39	122	34	
12 CO07070-10W	326	83	96	30	34	21	197	59	163	48	
13 CO07070-13W	327	71	147	31	46	31	292	66	203	50	
Mean	246	63	90	20	33	20	125	32	121	33	

<sup>1</sup> 4-8oz for russets

**Table 9. Yield and Percent B (<4 oz.) Tubers for Clones in the Southwestern Regional Trial, 2015**

Clone / Variety	California				Colorado <sup>1</sup>		Texas				Mean		
	KRN		TUL		SLV		SPR		DAL		Mean		
	Cwt/A	%	Cwt/A	%	Cwt/A	%	Cwt/A	%	Cwt/A	%	Cwt/A	%	
<b>Yellow Flesh</b>													
1	Yukon Gold	21	6	38	9	36	9	86	42	37	11	44	15
2	CO07131-1W/Y	180	100	159	100	133	99	7	100	42	100	104	100
3	CO07370-1W/Y	65	17	143	41	105	32	52	98	56	95	84	57
<b>Red Trial</b>													
4	Chieftain	34	7	81	13	46	10	80	46	38	12	56	18
5	Red LaSoda	27	6	63	10	49	13	58	24	51	15	50	14
6	CO07102-1R	53	16	109	21	99	36	15	67	48	17	65	32
<b>Russet Trial</b>													
7	Russet Norkotah	29	9	41	10	39	13	57	34	48	9	43	15
8	CO07015-4RU	73	21	82	21	32	10	120	82	97	22	81	31
9	CO07049-1RU	51	15	62	14	60	18	149	68	134	29	91	29
<b>Chip Trial</b>													
10	Atlantic	28	6	67	13	61	15	88	49	42	12	57	19
11	Snowden			102	22			78	58	57	13	79	31
12	CO07070-10W	26	7	133	42	65	18	110	68	99	29	87	33
13	CO07070-13W	20	4	132	28	116	39	90	60	69	16	85	29
Mean		51	18	93	27	70	26	76	61	63	29	71	32

<sup>1</sup>Fingerling=< 6 inch

**Table 10. Yield and Percent Culls/No. 2s for Clones in the Southwestern Regional Trial, 2015**

Clone / Variety	California				Colorado		Texas				Mean		
	KRN		TUL <sup>1</sup>		SLV		SPR		DAL		Mean		
	Cwt/A	%	Cwt/A	%	Cwt/A	%	Cwt/A	%	Cwt/A	%	Cwt/A	%	
<b>Yellow Flesh</b>													
1	Yukon Gold	3	1	20	5	3	1	0	0	18	5	9	2
2	CO07131-1W/Y	0	0	0	0	0	0	0	0	0	0	0	0
3	CO07370-1W/Y	229	61	32	9	8	2	0	0	2	3	54	15
<b>Red Trial</b>													
4	Chieftain	4	1	70	11	18	4	0	0	21	7	23	5
5	Red LaSoda	0	0	165	27	22	6	15	6	25	7	45	9
6	CO07102-1R	2	1	53	10	2	1	0	0	28	10	17	4
<b>Russet Trial</b>													
7	Russet Norkotah	0	0	30	8	27	9	1	1	156	30	43	10
8	CO07015-4RU	2	1	11	3	11	4	1	1	33	7	12	3
9	CO07049-1RU	0	0	38	8	5	2	5	2	27	6	15	4
<b>Chip Trial</b>													
10	Atlantic	1	0	25	5	14	4	0	0	0	0	8	2
11	Snowden			12	3			0	0	0	0	4	1
12	CO07070-10W	0	0	6	2	10	3	0	0	0	0	3	1
13	CO07070-13W	4	1	16	3	6	2	0	0	0	0	5	1
Mean		20	5	37	7	11	3	2	1	24	6	18	4

<sup>1</sup> includes over 16 oz tubers

**Table 11. Specific Gravity for Clones in the Southwestern Regional Trial, 2015**

Clone / Variety	California	Colorado	Texas		Mean
	TUL	SLV	SPR	DAL	
<b>Yellow Flesh</b>					
1 Yukon Gold	1.076	1.089	1.073	1.069	1.077
2 CO07131-1W/Y		1.063	ND	ND	1.063
3 CO07370-1W/Y	1.075	1.080	ND	ND	1.077
<b>Red Trial</b>					
4 Chieftain	1.068	1.079	1.068	1.055	1.068
5 Red LaSoda	1.073	1.079	1.062	1.052	1.066
6 CO07102-1R	1.077	1.083	1.055	1.059	1.069
<b>Russet Trial</b>					
7 Russet Norkotah	1.068	1.079	1.066	1.069	1.070
8 CO07015-4RU	1.075	1.083	1.073	1.070	1.075
9 CO07049-1RU	1.080	1.082	1.065	1.068	1.074
<b>Chip Trial</b>					
10 Atlantic	1.095	1.109	1.085	1.079	1.092
11 Snowden	1.091		1.071	1.068	1.077
12 CO07070-10W	1.108	1.107	1.087	1.088	1.098
13 CO07070-13W	1.092	1.096	1.068	1.078	1.083
Mean	1.082	1.086	1.070	1.069	1.076

**Table 12. Average Tuber Weight (Size) and Shape for Clones in the Southwestern Regional Trial, 2015**

Clone / Variety	Weight (oz.)				Shape <sup>1</sup>					Length	Width	
	California	Texas		Mean	California	Colorado	Texas		Mean	Colorado	Colorado	
	TUL	SPR	DAL		TUL	SLV	SPR	DAL		SLV	SLV	
<b>Yellow Flesh</b>												
1 Yukon Gold	7.3	3.2	5.0	5.2	3.0	2.0	3.0	3.0	2.8	1.3	1.2	
2 CO07131-1W/Y		0.9	0.4	0.6		1.0	1.0	1.0	1.0	1.1	1.1	
3 CO07370-1W/Y	3.8	0.5	3.3	2.5	2.9	1.0	1.0	1.0	1.5	1.1	1.1	
<b>Red Trial</b>												
4 Chieftain	7.0	2.8	4.5	4.7	3.1	2.0	3.0	3.0	2.8	1.3	1.2	
5 Red LaSoda	7.1	4.2	4.5	5.3	3.0	1.0	3.0	3.0	2.5	1.1	1.2	
6 CO07102-1R	5.1	1.8	3.7	3.5	2.9	1.0	3.0	3.0	2.5	1.1	1.2	
<b>Russet Trial</b>												
7 Russet Norkotah	7.3	3.9	5.4	5.5	4.0	4.0	4.0	4.0	4.0	1.9	1.2	
8 CO07015-4RU	5.1	1.9	4.4	3.8	4.0	3.0	3.5	4.0	3.6	1.7	1.2	
9 CO07049-1RU	6.3	2.7	3.6	4.2	3.6	3.0	3.5	4.0	3.5	1.8	1.3	
<b>Chip Trial</b>												
10 Atlantic	6.3	3.2	4.3	4.6	1.0	1.0	2.0	2.5	1.6	1.1	1.2	
11 Snowden	5.1	2.6	4.7	4.1	1.0	2.0	2.0	3.0	2.0			
12 CO07070-10W	4.0	2.0	2.8	2.9	1.0	1.0	2.3	2.0	1.6	1.1	1.2	
13 CO07070-13W	4.6	2.6	3.4	3.5	1.0	1.0	2.3	2.0	1.6	1.0	1.1	
Mean	6.1	2.5	3.8	3.9	2.5	1.8	2.6	2.7	2.4	1.3	1.2	

<sup>1</sup> 1=round to 5 =long



**Table 13. Eye Depth and Growth Cracks for Clones in the Southwestern Regional Trial, 2015**

Clone / Variety	Eye Depth <sup>1</sup>				Growth Cracks <sup>2</sup>					
	California	Texas		Mean	California	Colorado	Texas		Mean	
	TUL	SPR	DAL		TUL <sup>3</sup>	SLV	SPR	DAL		
<b>Yellow Flesh</b>										
1 Yukon Gold	3.6	4.0	4.0	3.9	0.8	4.0	5.0	5.0	4.7	
2 CO07131-1W/Y		4.0	4.0	4.0		5.0	5.0	5.0	5.0	
3 CO07370-1W/Y	3.6	4.0	4.0	3.9	1.4	5.0	5.0	5.0	5.0	
<b>Red Trial</b>										
4 Chieftain	3.0	4.0	3.5	3.5	3.4	5.0	5.0	5.0	5.0	
5 Red LaSoda	2.4	2.0	2.0	2.1	11.0	3.0	5.0	5.0	4.3	
6 CO07102-1R	3.5	4.0	3.3	3.6	1.3	5.0	5.0	5.0	5.0	
<b>Russet Trial</b>										
7 Russet Norkotah	3.5	3.5	3.5	3.5	0.2	4.0	5.0	5.0	4.7	
8 CO07015-4RU	3.8	4.0	4.0	3.9	0.3	4.0	5.0	5.0	4.7	
9 CO07049-1RU	3.9	4.0	4.0	4.0	1.5	4.0	5.0	5.0	4.7	
<b>Chip Trial</b>										
10 Atlantic	3.5	4.0	4.0	3.8	0.6	4.0	5.0	5.0	4.7	
11 Snowden	3.1	4.0	3.0	3.4	0.3		5.0	5.0	5.0	
12 CO07070-10W	3.6	4.0	4.0	3.9	0.0	4.0	5.0	5.0	4.7	
13 CO07070-13W	3.8	4.0	4.0	3.9	1.0	4.0	5.0	5.0	4.7	
Mean	3.4	3.8	3.6	3.6	1.8	4.3	5.0	5.0	4.8	

<sup>1</sup> 1=deep to 5=shallow

<sup>2</sup> 1 to 5=none

<sup>3</sup> % of total count

**Table 14. Percent Hollow Heart/Brown Center, Blackspot Bruising, and Fry Results for Clones in the Southwestern Regional Trial, 2015**

Clone / Variety	Hollow Heart/Brown Center (%)					Blackspot Bruising		Fry Data <sup>5</sup>			
	California	Colorado	Texas		Mean	California	Colorado	Colorado			
	TUL	SLV	SPR	DAL		TUL <sup>1</sup>	SLV <sup>2</sup>	SLV <sup>3</sup>	SLV <sup>4</sup>	MS <sup>5</sup>	
<b>Yellow Flesh</b>											
1 Yukon Gold	8	1	0	0	2	0.0	4.5	1.0	3.0	2.0	
2 CO07131-1W/Y		0	0	0	0		4.8	1.0	3.0	2.0	
3 CO07370-1W/Y	0	0	0	0	0	0.0	3.8	1.0	1.0	5.0	
<b>Red Trial</b>											
4 Chieftain	0	1	0	0	0	0.0	4.2	2.0	2.0	3.0	
5 Red LaSoda	5	3	0	0	2	0.0	4.4	3.0	3.0	1.0	
6 CO07102-1R	0	0	0	0	0	2.5	3.8	1.0	3.0	2.0	
<b>Russet Trial</b>											
7 Russet Norkotah	23	0	0	10	8		4.5	1.0	2.0	2.0	
8 CO07015-4RU	0	1	0	0	0		4.6	1.0	3.0	3.0	
9 CO07049-1RU	0	0	0	0			4.9	1.0	2.0	5.0	
<b>Chip Trial</b>											
10 Atlantic	0	2	0	45	12	0.0	2.7			1.0	
11 Snowden	0		0	30	10	0.0					
12 CO07070-10W	0	1	0	0	0	0.3	3.0			2.0	
13 CO07070-13W	0	2	0	0	1	0.3	3.7			3.0	
Mean	3	1	0	7	3	0	4.1	1.3	2.4	2.6	

<sup>1</sup> Percent

<sup>2</sup> 1 to 5=none

<sup>3</sup> 0=light, 5= dark

<sup>4</sup> at harvest

<sup>5</sup> 1-5=excellent

**Table 15. Vigor and Flesh Color for Clones in the Southwestern Regional Trial, 2015**

Clone / Variety	Vigor <sup>1</sup>					Flesh Color <sup>2</sup>				
	California KRN	Colorado SLV	Texas		Mean	California TUL	Colorado SLV	Texas		Mean
			SPR	DAL				SPR	DAL	
<b>Yellow Flesh</b>										
1 Yukon Gold	2.3	3.5	3.4	3.9	3.3	3.0	3.0	2.5	2.5	2.8
2 CO07131-1W/Y	2.0	2.3	1.0	1.0	1.6		5.0	3.5	3.5	4.0
3 CO07370-1W/Y	3.8	2.8	4.4	4.7	3.9	3.6	4.0	2.0	3.0	3.2
<b>Red Trial</b>										
			3.2							
4 Chieftain	3.8	3.3	4.3	4.0	3.8	1.0	1.0	1.0	1.0	1.0
5 Red LaSoda	2.5	3.3	1.0	4.7	2.9	1.5	1.0	1.0	1.0	1.1
6 CO07102-1R	2.0	3.3		3.9	3.1	0.8	1.0	1.0	1.0	0.9
<b>Russet Trial</b>										
7 Russet Norkotah	2.5	2.8	3.8	4.0	3.3	1.0	1.0	1.0	1.0	1.0
8 CO07015-4RU	2.8	3.0	3.6	3.8	3.3	1.0	1.0	1.0	1.0	1.0
9 CO07049-1RU	2.5	3.0	3.8	4.0	3.3	1.0	1.0	1.0	1.0	1.0
<b>Chip Trial</b>										
10 Atlantic	3.3	4.0	3.3	4.0	3.6	1.0	1.0	1.0	1.0	1.0
11 Snowden			4.1	4.2	4.1	1.0		1.0	1.0	1.0
12 CO07070-10W	2.8	3.3	3.6	4.0	3.4	1.0	1.0	1.0	1.0	1.0
13 CO07070-13W	2.5	3.3	3.0	4.5	3.3	1.0	1.0	1.0	1.0	1.0
Mean	3	3.1	3.3	3.9	3.3	1.4	1.8	1.4	1.5	1.5

<sup>1</sup> 1= poor, 2= fair, 3= medium, 4= vigorous, 5= very vigorous

<sup>2</sup> 1=light to 5=dark

**Table 16. Antioxidant Equivalents, Springlake, TX**

Entry	Clone/Variety	Antioxidant Equivalents <sup>1</sup>	
		µg Ascorbic Acid equivalents/gfw <sup>2</sup>	µg Trolox equivalents/gfw <sup>3</sup>
<b>Yellow Flesh</b>			
1	Yukon Gold	457.9	399.0
2	CO07131-1W/Y	466.6	406.7
3	CO07370-1W/Y	435.9	379.6
<b>Red Trial</b>			
4	Chieftain	382.4	332.5
5	Red LaSoda	380.5	330.9
6	CO07102-1R	576.8	503.9
<b>Russet Trial</b>			
7	Russet Norkotah	335.9	291.5
8	CO07015-4RU	331.9	288.0
9	CO07049-1RU	200.8	172.5
<b>Chip Trial</b>			
10	Atlantic	175.3	150.0
11	Snowden	309.4	268.2
12	CO07070-10W	244.5	211.0
13	CO07070-13W	288.7	249.9
Mean		352.8	306.4

<sup>1</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, Levensm. Wiss. Technol. 28:25-30. Antioxidants soluble in methanol 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>2</sup> µg Ascorbic acid equivalents/gfw - Absorbance was converted to trolox equivalents based on a standard curve using the following equation:  $y=860.86x-$

<sup>3</sup> µg Trolox equivalents/gfw - Absorbance was converted to trolox equivalents based on a standard curve using the following equation:  $y=758.56x-12.274$

**Table 17. Colorado Chipping Results for Clones in the Southwestern Regional Trial, 2015**

Clone / Variety	Chip Color <sup>1</sup> Colorado				Chip Color <sup>1</sup> Texas <sup>4</sup>		Texas <sup>5</sup>	
	40 <sup>2</sup>	R40 <sup>2</sup>	50 <sup>3</sup>	R50 <sup>3</sup>	SPR	DAL	SPR	DAL
10 Atlantic	4.0	4.0	3.5	3.0	1	2	9scab	
11 Chipeta	4.5	4.5	3.5	3.0				
12 CO07070-10W	3.5	4.5	3.0	3.0	1	3	3scab	3im drop
13 CO07070-13W	3.5	3.0	2.5	2.5	1	1	3scab	keep

<sup>1</sup> 1=light, 5=dark

<sup>2</sup>40°F Storage protocol prior to frying

Initial storage temperature 55°F

Holding temperature 40°F

Weeks to holding temperature 4

Weeks at holding temperature 4

Reconditioning temp. (if applicable) 60°F

Number of weeks reconditioning 3

<sup>3</sup>50°F Storage protocol prior to frying

Initial storage temperature 55°F

Holding temperature 50°F

Weeks to holding temperature 4

Weeks at holding temperature 4

Reconditioning temp. (if applicable) 60°F

Number of weeks reconditioning 3

<sup>4</sup> Chipped immediately following harvest

<sup>5</sup> Chip notes

**Table 18. Notes for Clones in the Southwestern Regional Trial, 2015**

Clone / Variety	California		Colorado		Texas	
	TUL		SLV		SPR	DAL
<b>Yellow Flesh</b>						
1	Yukon Gold				low yield, uniform, nice	oversized, nice shape
2	CO07131-1W/Y		dark yellow flesh		very small, parent	all very small, Drop, very late, nice flesh
3	CO07370-1W/Y	Teardrop shape	good yellow flesh		some chain tubers, small, poor shape, drop	poor shape, all very small, Drop
<b>Red Trial</b>						
4	Chieftain	Attached Stolons			lots of B's, nice shape, light skin color	poor internals++, light skin, IBS++
5	Red LaSoda				deep eyes, some vascular discoloration	light skin, deep eyes
6	CO07102-1R		good red skin		poor stand, very low yield	feathering, smooth skin, nice skin, rough,
<b>Russet Trial</b>						
7	Russet Norkotah	Slightly non-uniform			second growth, small, nice shape, ,	too long, rough, oversized, curved, many culls, skinny
8	CO07015-4RU	Lumpy, non-uniform			very small, nice shape, B's, light set.	rough, small blocky, nice shape
9	CO07049-1RU	Pear shape, ruptured lenticels			pointed, heavy set, B's, , too small,	heavy set, blocky, pointed, nice shape, small
<b>Chip Trial</b>						
10	Atlantic				nice yield, buff, some internal brownspot, nice shape, poor internals	yield+, hollow heart, nice shape, poor internals
11	Snowden				smooth, nice shape and size	nice size, browncenter, hollow heart
12	CO07070-10W				light set, nice shape and size	uniform, nice, small all B's
13	CO07070-13W				smooth, ZC, nice shape and size	yield++, B's, nice, smooth, nice shape

**Table 19. Summary for Clones in the Southwestern Regional Trial, 2015**

Clone / Variety	Field Data				Yield Qualities					Tuber Description					
	% Stand	Stems/hill	Vine Size	Vine Mat.	Total Yield	% #1s	% >10 <sup>1</sup>	% <4	% Culls	Merit Score	Specific Gravity	Tuber Shape	Tuber Weight	Skin Color	
<b>Yellow Flesh</b>															
1	Yukon Gold	94	2.0	3.5	3.1	353	84	23	15	2	4.2	1.077	Oval	5.2	White
2	CO07131-1W/Y	99	3.2	1.3	1.7	104	20	0	100	0	2.3	1.063	Round	0.6	White
3	CO07370-1W/Y	93	2.9	4.6	4.7	234	32	2	57	15	2.7	1.077	Round	2.5	White
<b>Red Trial</b>															
4	Chieftain	96	2.4	3.6	3.5	413	79	17	18	5	4.0	1.068	Oblong	4.7	Lt. Red
5	Red LaSoda	94	2.5	4.0	3.6	403	79	14	14	9	3.3	1.066	Oval	5.3	Lt. Red
6	CO07102-1R	77	2.9	2.7	3.1	284	67	5	32	4	1.7	1.069	Oval	3.5	Red
<b>Russet Trial</b>															
7	Russet Norkotah	98	2.6	3.3	2.7	342	76	20	15	10	2.5	1.070	Long	5.5	Russet
8	CO07015-4RU	99	2.8	3.3	2.8	327	70	10	31	3	3.7	1.075	Oblong	3.8	Russet
9	CO07049-1RU	98	2.4	3.6	3.3	362	71	13	29	4	3.8	1.074	Long	4.2	Russet
<b>Chip Trial</b>															
10	Atlantic	95	2.3	3.8	3.9	373	80	16	19	2	3.8	1.092	Oval	4.6	Scaly-buff
11	Snowden	99	2.7	4.1	4.2	347	68	7	31	1	3.7	1.077	Oblong	4.1	White
12	CO07070-10W	96	2.7	3.9	3.5	315	68	5	33	1	3.8	1.098	Oval	2.9	White
13	CO07070-13W	90	3.0	3.4	2.9	364	70	4	29	1	2.9	1.083	Oval	3.5	White

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