



# 2021 Southwestern Regional Potato Variety Trial Report



Southwestern Regional Cooperators presenting Annual Potato Field Days.

Top-left clockwise David Holm (Colorado), Jaspreet Sidhu (California) Isabel Vales (Texas), and Rob Wilson (California).

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**Description of Clones - 2021 Southwestern Regional Trial**

Entry #	Clone/Cultivar	Parents		Flower Color	Vine		Tuber Shape	Skin Type	Flesh Color	Entered By	Use	Seed Source	2021 Year	2022 Status	Notes
		Female	Male		Size	Maturity									
<b>Russet Trial</b>															
1	Russet Norkotah	ND9687-5RU	ND9526-4RU	White	Small	Early	Long	Russet	White	Check	Fresh	CO	***	***	
2	AC12080-4RU	A05084-1	ND028673B-2Russ	White	Medium-Sma	Early	Long	Russet	White	CO	Dual	CO	1.0	Discard	
3	AC12090-3RU	A05214-3LB	A06021-1T	White	Small	Medium	Oblong	Russet	White	CO	Dual	CO	1.0	Advance	
4	CO13003-1RU	Fortress Russet	AC96052-1RU	White	Medium	Medium	Oblong	Russet	White	CO	Dual	CO	1.0	Advance	
5	COTX08063-2Ru	A93157-6LS	A99073-1	White	Medium	Late	Oblong	Russet	White	TX	Dual	CO	2.0	Return	
<b>Chip Trial</b>															
6	Atlantic	Wauseon	B5141-6	Red-Purple	Med	Medium	Oval	Scaley-buff	White	Check	Chip	CO	***	***	
7	Snowden	B5141-6	Wischip	White	Large	Late	Oval	White	White	Check	Chip	CO	***	***	
8	CO13232-5W	AC00206-2W	CO02024-9W	White	Medium	Medium	Round	White	White	CO	Chip	CO	1.0	Discard	
9	CO13232-25W	AC00206-2W	CO02024-9W	White	Medium	Late	Round	White	White	CO	Chip	CO	1.0	Advance	

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**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. Sidhu J. Nunez J. DuBose					2/15/2021		6/14/2021				
2. Tulelake California (TUL)	R. Wilson D. Culp K. Nicholson	Solid-set sprinkler	Russet, Chip	172-100-400	Reglone / Roll	5/18/2021	9/1/2021	9/29/2021	106	Prowl H2O Matrix SG Outlook	Admire Pro	Quadris Maxim 4fs (seed)
3. San Luis Valley Colorado (SLV)	D. Holm C. Gray E. Niebaum	Pivot	All Trials	120-100-150	Reglone	5/11/2021	9/3/2021	9/27/2021	115	Prowl H2O Intensity Tuscany	Pure Spray Green Sefina Inscalis	Quadris Top Revus Top Bravo Weather Stik Agri Tin
4. Springlake Texas (SPR)	I. Vales J. Koym D. Scheuring	Pivot	Russet Chip	72-14-13	Mechanical	3/30/2021	7/24/2021	7/29/2021	116	Eptam 7E Makaze Medal EC Stealth	Velum Rrime SPE 120 Cruiser Maxx Vibrance	
5. Dalhart Texas (Dal)	I. Vales J. Koym D. Scheuring	Pivot	Russet Chip	211-226-263	Reglone	5/2/2021 5/2/2021	8/23/2021 8/6/2021	9/15/2021 9/14/2021	113 96	Eptam 7E, Tricor 4F Treflan, Chateau Acumen, Brawl Reglone	Movento Fulfill Reaper ClearForm	Minuet MetaStar A-Frame Provysol, Scala SC

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**Table 2. Percent Stand and Stems/Hill**

Clone / Variety	Percent Stand						Stems per Hill			
	California		Colorado	Texas		Mean	Colorado	Texas	Mean	
	KRN	TUL	SLV	SPR	Dal		SLV	SPR		
<b>Russet Trial</b>										
1	Russet Norkotah	87	99	96	89	100	96	3.1	1.4	2.3
2	AC12080-4RU	89	100	98	100	100	100	2.1	1.5	1.8
3	AC12090-3RU	87	95	93	95	100	96	3.1	1.4	2.3
4	CO13003-1RU	90	100	98	100	100	100	3.0	1.3	2.2
5	COTX08063-2Ru	91	99	95	90	100	96	2.8	1.4	2.1
<b>Chip Trial</b>										
6	Atlantic	79	82	94	89	100	91	2.6	1.1	1.9
7	Snowden	88	92	95	93	100	95	3.4	1.1	2.3
8	CO13232-5W	90	97	97	100	100	99	2.6	1.3	2.0
9	CO13232-25W	92	99	97	89	100	96	3.4	1.0	2.2
<b>Mean</b>		88	96	96	94	100	96	2.9	1.3	2.1

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**Table 3. Vine Size and Maturity**

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>Russet Trial</b>									
1	Russet Norkotah	2.3	3.9	3.7	3.3	1.0	2.8	3.6	2.5
2	AC12080-4RU	3.0	3.5	4.3	3.6	2.0	3.8	4.2	3.3
3	AC12090-3RU	3.5	3.6	4.0	3.7	2.0	3.9	3.7	3.2
4	CO13003-1RU	3.5	3.5	4.0	3.7	3.3	4.0	5.0	4.1
5	COTX08063-2Ru	3.3	3.7	4.2	3.7	1.8	5.0	5.0	3.9
<b>Chip Trial</b>									
6	Atlantic	3.5	3.4	4.0	3.6	3.3	4.0	4.2	3.8
7	Snowden	4.3	3.7	4.1	4.0	3.5	4.5	5.0	4.3
8	CO13232-5W	4.3	3.6	3.8	3.9	4.0	4.5	5.0	4.5
9	CO13232-25W	4.0	2.6	4.0	3.5	4.3	5.0	5.0	4.8
<b>Mean</b>		3.5	3.5	4.0	3.7	2.8	4.2	4.5	3.8

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**Table 4. Total Yield, Yield Rank Within Type (Russet and Chip), and Merit Score1 (MS)**

Clone / Variety	California						Colorado			Texas						Mean		
	KRN		TUL			SLV			SPR			DAL			cwt/a	Rank	MS	
	cwt/a	Rank	cwt/a	Rank	MS	cwt/a	Rank	MS	cwt/a	Rank	MS	cwt/a	Rank	MS	cwt/a	Rank	MS	
<b>Russet Trial</b>																		
1	Russet Norkotah	81	5	486	1	4.0	132	5	1.0	191	1	4.2	525	2	4.6	283	4	3.5
2	AC12080-4RU	159	1	395	3	3.0	282	3	3.0	168	3	3.9	496	3	4.2	300	3	3.5
3	AC12090-3RU	117	4	438	2	2.5	390	1	5.0	162	5	3.9	597	1	4.4	341	1	4.0
4	CO13003-1RU	130	2	359	4	3.5	335	2	4.0	185	2	3.8	494	4	4.4	301	2	3.9
5	COTX08063-2Ru	129	3	345	5	2.0	256	4	3.0	165	4	3.8	355	5	3.9	250	5	3.2
<b>Chip Trial</b>																		
6	Atlantic	120	4	425	3	3.5	404	3	2.0	162	2	3.8	562	1	4.3	335	1	3.4
7	Snowden	122	3	447	1	4.0	421	2	1.0	127	3	3.7	449	4	4.0	313	4	3.2
8	CO13232-5W	175	1	372	4	4.0	382	4	2.0	177	1	4.5	520	2	3.8	325	2	3.6
9	CO13232-25W	126	2	437	2	3.5	457	1	5.0	100	4	3.5	482	3	4.2	320	3	4.1
<b>Mean</b>		129		412		3.3	340		2.9	160		3.9	498		4.2	308		3.6

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**Table 5. Yield and Percent of U.S. No. 1's (>4oz.) and Yield Rank Within Type (Russet and Chip)**

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>Russet Trial</b>																			
1	Russet Norkotah	81	5	100	329	1	68	54	5	41	82	4	43	384	3	73	186	4	65
2	AC12080-4RU	156	1	98	310	3	79	208	3	74	82	3	49	355	4	72	222	3	74
3	AC12090-3RU	111	4	94	326	2	74	332	1	85	89	2	55	407	1	68	253	1	75
4	CO13003-1RU	129	2	100	258	5	72	257	2	77	89	1	48	396	2	80	226	2	75
5	COTX08063-2Ru	129	3	100	283	4	82	191	4	75	64	5	39	237	5	67	181	5	73
<b>Chip Trial</b>																			
6	Atlantic	120	4	100	374	1	88	323	3	80	120	2	74	385	1	69	264	1	82
7	Snowden	122	3	100	372	2	83	283	4	67	106	3	84	296	2	66	236	3	80
8	CO13232-5W	175	1	100	206	4	55	326	2	85	127	1	72	205	4	39	208	4	70
9	CO13232-25W	126	2	100	334	3	76	394	1	86	76	4	76	280	3	58	242	2	79
<b>Mean</b>		128		99	310		75	263		74	93		60	327		66	224		75

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**Table 6. Yield and Percent of U.S. No. 1's (>10oz.)**

Clone / Variety	California				Colorado <sup>3</sup>		Texas				Mean		
	KRN <sup>1</sup>		TUL <sup>2</sup>		SLV		SPR		DAL		Mean		
	cwt/a	%	cwt/a	%	cwt/a	%	cwt/a	%	cwt/a	%	cwt/a	%	
<b>Russet Trial</b>													
1	Russet Norkotah	0	0	235	48	4	3	5	2	198	38	89	18
2	AC12080-4RU	0	0	92	23	26	9	3	2	194	39	63	15
3	AC12090-3RU	0	0	87	20	73	19	16	10	254	42	86	18
4	CO13003-1RU	0	0	61	17	53	16	2	1	225	46	68	16
5	COTX08063-2Ru	0	0	78	23	37	14	4	3	95	27	43	13
<b>Chip Trial</b>													
6	Atlantic	0	0	98	23	70	17	0	0	38	7	41	9
7	Snowden	0	0	42	9	33	8	0	0	28	6	21	5
8	CO13232-5W	0	0	6	2	40	10	0	0	3	1	10	3
9	CO13232-25W	0	0	47	11	99	22	0	0	19	4	33	7
<b>Mean</b>		0	0	83	20		13	3	2	117	23	50	12

<sup>1</sup> > 10oz

<sup>2</sup> >14oz

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**Table 7. Yield and Percent of U.S. No. 1's (6 - 10oz.)**

Clone / Variety	California				Texas				Mean		
	KRN		TUL		SPR		DAL		cwt/a	%	
	cwt/a	%	cwt/a	%	cwt/a	%	cwt/a	%			
<b>Russet Trial</b>											
1	Russet Norkotah	0	0	135	28	25	13	144	28	76	17
2	AC12080-4RU	9	6	127	32	30	18	126	25	73	20
3	AC12090-3RU	6	5	140	32	32	20	133	22	78	20
4	CO13003-1RU	7	5	123	34	23	12	136	27	72	20
5	COTX08063-2Ru	0	0	143	41	19	11	86	24	62	19
<b>Chip Trial</b>											
6	Atlantic	0	0	205	48	40	25	164	29	102	26
7	Snowden	1	1	203	45	10	8	122	27	84	20
8	CO13232-5W	0	0	74	20	0	0	86	17	40	9
9	CO13232-25W	1	1	155	35	8	8	151	31	79	19
<b>Mean</b>		3	2	145	35	21	13	128	26	74	19

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**Table 8. Yield and Percent of U.S. No. 1's (4 - 6 oz.)**

Clone / Variety	California				Texas				Mean		
	KRN		TUL		SPR		DAL		cwt/a	%	
	cwt/a	%	cwt/a	%	cwt/a	%	cwt/a	%			
<b>Russet Trial</b>											
1	Russet Norkotah	21	26	63	13	52	27	78	15	53	20
2	AC12080-4RU	82	51	92	23	50	30	81	16	76	30
3	AC12090-3RU	62	53	99	23	41	25	68	11	68	28
4	CO13003-1RU	75	58	74	20	65	35	76	15	72	32
5	COTX08063-2Ru	62	48	62	18	41	25	73	20	59	28
<b>Chip Trial</b>											
6	Atlantic	78	65	71	17	79	49	183	32	103	41
7	Snowden	61	50	127	28	96	76	146	33	107	47
8	CO13232-5W	108	62	126	34	127	72	116	22	119	47
9	CO13232-25W	54	43	132	30	68	68	111	23	91	41
<b>Mean</b>		67	51	94	23	69	45	103	21	83	35

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**Table 9. Yield and Percent B (<4 oz.) Tubers**

Clone / Variety	California				Colorado		Texas				Mean		
	KRN		TUL		SLV		SPR		DAL		cwt/a	%	
	cwt/a	%	cwt/a	%	cwt/a	%	cwt/a	%	cwt/a	%			
<b>Russet Trial</b>													
1	Russet Norkotah	60	74	32	7	77	58	103	54	69	13	68	41
2	AC12080-4RU	65	41	67	17	67	24	80	48	55	11	67	28
3	AC12090-3RU	43	36	62	14	56	14	71	44	81	14	62	24
4	CO13003-1RU	47	36	42	12	73	22	91	49	46	9	60	26
5	COTX08063-2Ru	66	52	44	13	59	23	93	56	81	23	69	33
<b>Chip Trial</b>													
6	Atlantic	43	35	38	9	66	16	32	19	168	30	69	22
7	Snowden	60	49	66	15	131	31	16	12	153	34	85	28
8	CO13232-5W	66	38	159	43	51	13	47	26	313	60	127	36
9	CO13232-25W	70	56	92	21	45	10	24	24	202	42	86	30
<b>Mean</b>		58	46	67	17		24	62	37	130	26	77	30

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**Table 10. Yield and Percent Culls/No. 2s**

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>Russet Trial</b>													
1	Russet Norkotah	0	0	21	4	1	1	6	3	35	7	12	3
2	AC12080-4RU	0	0	17	4	6	2	5	3	40	8	14	4
3	AC12090-3RU	7	6	50	11	2	1	2	1	61	10	24	6
4	CO13003-1RU	0	0	59	16	5	2	5	3	12	2	16	5
5	COTX08063-2Ru	0	0	18	5	4	2	9	5	20	6	10	4
<b>Chip Trial</b>													
6	Atlantic	0	0	12	3	15	4	11	7	9	2	9	3
7	Snowden	0	0	10	2	7	2	5	4	0	0	4	2
8	CO13232-5W	0	0	7	2	5	1	4	2	2	0	4	1
9	CO13232-25W	0	0	11	3	18	4	0	0	0	0	6	1
<b>Mean</b>		1	1	23	6	7	2	5	3	20	4	11	3

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

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**Table 11. Specific Gravity**

Clone / Variety	California	Colorado	Texas		Mean
	TUL	SLV	SPR	DAL	
<b>Russet Trial</b>					
1 Russet Norkotah	1.071	1.077	1.064	1.071	1.071
2 AC12080-4RU	1.076	1.094	1.070	1.058	1.074
3 AC12090-3RU	1.077	1.090	1.066	1.071	1.076
4 CO13003-1RU	1.074	1.096	1.067	1.066	1.076
5 COTX08063-2Ru	1.088	1.112	1.087	1.083	1.092
<b>Chip Trial</b>					
6 Atlantic	1.088	1.105	1.070	1.073	1.084
7 Snowden	1.091	1.102	1.065	1.066	1.081
8 CO13232-5W	1.075	1.088	1.056	1.071	1.073
9 CO13232-25W	1.078	1.094	1.071	1.070	1.078
<b>Mean</b>	1.080	1.095	1.068	1.070	1.078

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Table 12. Average Tuber Weight (Size) and Shape

Clone / Variety	Weight (oz.)				Shape <sup>1</sup>					Length / Width					Width/ Thickness					
	California		Texas		California	Colorado	Texas		Mean	California		Colorado		Texas		California	Colorado	Texas		Mean
	TUL	SPR	DAL	Mean			TUL	SLV		SPR	DAL	TUL	SLV	SPR	DAL			Mean	TUL	
<b>Russet Trial</b>																				
1	Russet Norkotah	8.0	3.1	6.3	5.8	4.0	5.0	5.0	4.6	4.7	1.76	2.28	1.69	1.88	1.90	1.23	1.16	1.08	1.07	1.14
2	AC12080-4RU	5.8	3.7	6.5	5.3	4.0	4.0	4.3	4.6	4.2	1.91	1.85	1.79	1.94	1.87	1.08	1.09	1.06	1.02	1.06
3	AC12090-3RU	6.4	3.3	6.8	5.5	4.0	4.0	4.7	4.6	4.3	1.87	1.98	1.81	1.80	1.86	1.17	1.14	1.04	1.20	1.14
4	CO13003-1RU	6.4	3.2	8.0	5.8	4.5	4.0	3.8	4.3	4.2	1.62	1.82	1.57	1.61	1.65	1.21	1.21	1.20	1.13	1.18
5	COTX08063-2Ru	6.4	2.9	5.4	4.9	4.0	4.0	4.2	4.5	4.2	1.60	1.89	1.83	1.82	1.79	1.18	1.16	1.14	1.19	1.17
<b>Chip Trial</b>																				
6	Atlantic	6.6	2.6	4.2	4.5	2.0	1.0	1.2	1.0	1.3	1.01	1.00	1.21	1.03	1.06	1.22	1.24	1.26	1.18	1.23
7	Snowden	5.7	2.3	4.1	4.0	2.0	1.0	1.5	1.2	1.4	0.99	0.89	1.07	1.01	0.99	1.25	1.32	1.24	1.03	1.21
8	CO13232-5W	4.0	2.2	3.5	3.2	1.5	1.0	1.0	1.0	1.1	1.01	1.11	1.02	1.07	1.05	1.14	1.21	1.15	1.19	1.17
9	CO13232-25W	5.2	2.2	3.8	3.7	1.5	1.0	1.0	1.0	1.1	0.97	0.95	1.09	1.09	1.03	1.20	1.20	1.10	1.07	1.14
<b>Mean</b>		6.1	2.8	5.4	4.8	3.1	2.8	3.0	3.0	2.9	1.42		1.45	1.47	1.47		1.19	1.14	1.12	1.16

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

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**Table 13. Eye Depth and Growth Cracks**

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>Russet Trial</b>										
1	Russet Norkotah	4.0	3.8	4.0	3.9	0.3	5.0	5.0	5.0	5.0
2	AC12080-4RU	4.0	4.8	4.5	4.5	0.8	5.0	5.0	5.0	5.0
3	AC12090-3RU	4.5	4.5	4.4	4.5	0.8	5.0	5.0	5.0	5.0
4	CO13003-1RU	4.5	5.0	4.6	4.7	6.8	4.0	5.0	4.9	4.6
5	COTX08063-2Ru	4.5	5.0	4.5	4.7	1.8	4.0	5.0	5.0	4.7
<b>Chip Trial</b>										
6	Atlantic	3.5	3.8	3.8	3.7	0.3	5.0	5.0	5.0	5.0
7	Snowden	3.5	3.8	3.7	3.7	0.3	5.0	5.0	5.0	5.0
8	CO13232-5W	4.0	5.0	4.5	4.5	0.3	5.0	5.0	5.0	5.0
9	CO13232-25W	4.0	4.5	4.3	4.3	1.0	5.0	5.0	5.0	5.0
<b>Mean</b>		4.1	4.5	4.3	4.3	1.4	4.8	5.0	5.0	4.9

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

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

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

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**Table 14. Percent Hollow Heart/Brown Center, Blackspot Bruising, Fry Data**

Clone / Variety	Hollow Heart/Brown Center (%)					Blackspot Bruising				Fry Data <sup>5</sup>			Antioxidant Equivalents <sup>9</sup>	
	California	Colorado	Texas		Mean	Texas <sup>3</sup>		Colorado	Colorado			µg Trolox equivalents/gfw <sup>10</sup>	AOA Levels <sup>11</sup>	
	TUL	SLV	SPR	DAL		SPR	DAL	SLV <sup>4</sup>	SLV <sup>6</sup>	SLV <sup>7</sup>	MS <sup>8</sup>			
<b>Russet Trial</b>														
1 Russet Norkotah	0	0	0	3	1	0.0	0.0	4.6	2.0	2.0	1.0	170.9	M	
2 AC12080-4RU	0	0	0	3	1	0.0	0.0	4.0	0.0	1.0	4.0	108.1	L	
3 AC12090-3RU	0	0	0	17	4	0.0	0.0	4.5	3.0	3.0	1.0	178.4	M	
4 CO13003-1RU	30	1	0	20	13	0.0	0.0	5.0	1.0	0.0	5.0	113.8	L	
5 COTX08063-2Ru	10	0	7	17	8	0.0	0.0	4.8	1.0	0.0	4.0	168.4	M	
<b>Chip Trial</b>														
6 Atlantic	0	3	0	17	5	0.0	0.0	3.0			1.0	97.3	L	
7 Snowden	0	0	0	3	1	0.0	0.0	2.6			2.0	101.0	L	
8 CO13232-5W	0	0	0	0	0	0.0	0.0	2.7			4.0	141.3	M	
9 CO13232-25W	10	0	0	0	3	0.0	0.0	3.9			5.0	92.7	L	
<b>Mean</b>	6	0	1	9	4	0.0	0.0	3.9	1.4	1.2	3.0	130.2		

<sup>1</sup> 0 to 9=dead

<sup>2</sup> Area Under Disease Progress Curve based on foliar early-dying rating taken 77, 83, 89, 96, 104 and 110 days after planting. Higher value is more susceptible

<sup>3</sup> Percent

<sup>4</sup> 1 to 5=none

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

<sup>6</sup> at harvest

<sup>7</sup> 0=light, 5=dark, stored at 45F for 11 weeks

<sup>8</sup> Process Merit Score, 1-5=excellent

<sup>9</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>10</sup> µg Trolox equivalents/gfw - Absorbance was converted to trolox equivalents based on a standard curve using the following equation:  $y = -225.3x + 242.6$

<sup>11</sup> VH=very high (>424), H=high (271-389), M=medium (141-242), L=low (86-137), VL=very low (<86). n=64 including nine check varieties

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**Table 15. Vigor and Flesh Color**

Clone / Variety	Vigor <sup>1</sup>			Flesh Color				
	Texas		Mean	Colorado	Texas		Mean	
	SPR	DAL		SLV	SPR	DAL		
<b>Russet Trial</b>								
1	Russet Norkotah	3.8	3.7	3.7	1.0	1.0	1.0	1.0
2	AC12080-4RU	3.5	4.3	3.9	1.0	1.0	1.0	1.0
3	AC12090-3RU	3.5	4.0	3.8	1.0	1.0	1.0	1.0
4	CO13003-1RU	3.5	4.0	3.8	1.0	1.0	1.2	1.1
5	COTX08063-2Ru	3.5	4.2	3.9	1.0	1.0	1.0	1.0
<b>Chip Trial</b>								
6	Atlantic	3.3	4.0	3.7	1.0	1.0	1.0	1.0
7	Snowden	3.5	4.1	3.8	1.0	1.0	1.0	1.0
8	CO13232-5W	3.4	3.8	3.6	1.0	1.0	1.0	1.0
9	CO13232-25W	2.8	4.0	3.4	1.0	1.0		1.0
<b>Mean</b>		3.4	4.0	3.7	1.0	1.0	1.0	1.0

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

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

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Table 16. Notes

		Texas	
Clone / Variety		SPR	DAL
<b>Russet Trial</b>			
1	Russet Norkotah	heavy russet skin, long, nice, BOT+, very high tuber number, good size and shape, nice, soft stem ends	BOT+, impressive, high tuber number+, high yield+, intense russet skin+, very nice, good size and shape+
2	AC12080-4RU	light russet skin, not uniform russetting, round, lenticels, high tuber number, good size and shape	high tuber number+, ugly skin+, dislike skin, pointed
3	AC12090-3RU	BOT+, nice shape and size, redish tint, pink tint under the russet layer, nice	very long, knobs, a little curb, high tuber number+, high yield, intense russet skin, nice size and shape, heavy russet+
4	CO13003-1RU	nice shape, heals dark, good shape+, good skin	high tuber number, good russet+, very high tuber number, good size and shape+, some feathering
5	COTX08063-2Ru	nice shape, very high gravity, good shape, high tuber number, good size and shape, it likely needs for time to reach full potential	nice, light russet+, good shape
<b>Chip Trial</b>			
6	Atlantic	good shape and size	very high tuber number+, a little flat, buff skin, small-medium tubers are round, large tubers are oval to oblong
7	Snowden	deep bud end	scab, deep eyes, high tuber number
8	CO13232-5W	very nice, high tuber number	very high tuber number, uniform size and shape, extreme scab
9	CO13232-25W		scab+, BOT, high tuber number, good size and shape

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**Table 17. Notes**

Clone / Variety	California TUL	Colorado SLV
<b>Russet Trial</b>		
1	Russet Norkotah	
2	AC12080-4RU	lumpy Light Russet
3	AC12090-3RU	pink splotches Red undertone, Pink inside
4	CO13003-1RU	Nice
5	COTX08063-2Ru	pink blobs and eyes Light Russet, Pink undertone
<b>Chip Trial</b>		
6	Atlantic	
7	Snowden	Nice shape
8	CO13232-5W	Uniform, Round
9	CO13232-25W	ruptured lenticils Powdery Scab

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**Table 18. Colorado and Texas Chipping Results**

Clone / Variety	Chip Color <sup>1</sup>				Chip Color <sup>1</sup>				Chip Quality <sup>5</sup>				
	Colorado				Texas				Texas				
	40F <sup>2</sup>	R40F <sup>2</sup>	50F <sup>3</sup>	R50F <sup>3</sup>	SPR Field <sup>4</sup>	Field <sup>4</sup>	DAL 42F <sup>2</sup>	R42F <sup>2</sup>	SPR Field <sup>4</sup>	Field <sup>4</sup>	DAL 42F <sup>2</sup>	R42F <sup>2</sup>	
<b>Chip Trial</b>													
6	Atlantic	4.5	3.0	2.5	3.5	1.0	1.0	1.0	1.0	3.2	2.2	4.8	4.1
7	Snowden	4.0	1.0	2.0	3.0	1.0	2.0	1.0	1.0	2.8	1.0	5.0	3.6
8	CO13232-5W	4.0	1.5	2.5	1.0	1.0	1.0	1.0	1.0	3.5	1.9	3.6	3.4
9	CO13232-25W	3.0	1.0	3.0	1.0	1.0	1.0	1.0	1.0	2.5	1.4	1.4	1.3

<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 6

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 6

Reconditioning temp. (if applicable) 60°F

Number of weeks reconditioning 3

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

<sup>5</sup> Chip Quality 1=excellent (light color) to 5=poor (dark color)

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**Table 19. Summary**

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>Russet Trial</b>															
1	Russet Norkotah	96	2.3	3.3	2.5	283	65	18	41	3	3.5	1.071	Long	5.8	Russet
2	AC12080-4RU	100	1.8	3.6	3.3	300	74	15	28	4	3.5	1.074	Long	5.3	Russet
3	AC12090-3RU	96	2.3	3.7	3.2	341	75	18	24	6	4.0	1.076	Oblong	5.5	Russet
4	CO13003-1RU	100	2.2	3.7	4.1	301	75	16	26	5	3.9	1.076	Oblong	5.8	Russet
5	COTX08063-2Ru	96	50.1	3.7	3.9	250	73	13	33	4	3.2	1.092	Oblong	4.9	Russet
<b>Chip Trial</b>															
6	Atlantic	91	1.9	3.6	3.8	335	82	9	22	3	3.4	1.084	Oval	4.5	Scaley-buff
7	Snowden	95	2.3	4.0	4.3	313	80	5	28	2	3.2	1.081	Oval	4.0	White
8	CO13232-5W	99	2.0	3.9	4.5	325	70	3	36	1	3.6	1.073	Round	3.2	White
9	CO13232-25W	96	2.2	3.5	4.8	320	79	7	30	1	4.1	1.078	Round	3.7	White

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2022 Southwestern Regional Trial Entries															
Entry	Parents			Flower	Vine		Tuber	Skin	Flesh	Entered		Seed	2022	2023	
#	Clone/Cultivar	Female	Male	Color	Size	Maturity	Shape	Type	Color	By	Use	Source	Year	Status	Notes
<b>Russet Trial</b>															
1	Russet Norkotah	ND9687-5RU	ND9526-4RU	White	Small	Early	Long	Russet	White	Check	Fresh	???	***		
2	COTX08063-2Ru	A93157-6LS	A99073-1	White	Medium	Late	Oblong	Russet	White	TX	Fresh	CO	3.0		
<b>Red Trial</b>															
3	Chieftain	LA1354	LA1027-18	Purple	Medium	Medium	Round	Dark Red	White	Check	Fresh	CO	***		
4	Red LaSoda	Triumph	Katahdin	Red-purple	Medium	Medium	Oval	Lt. Red	White	Check	Fresh	CO	***		
5	CO14040-3R	CO99256-2R	CO05211-4R	Red-Purple	Medium	Med-Early	Round	Dark Red	White	CO	Fresh	CO	1.0		
<b>White/Yellow Trial</b>															
6	Yukon Gold	Norgleam	W5279-4	Pink	Medium	Early	Oval	White	Yellow	Check	Fresh	CO	***		
7	AORTX09037-5W/Y	Fasan	Ivory Crisp	White	Medium	Medium	Round	White	Yellow	TX	Fresh	CO	1.0		
8	CO14226-3W/Y	AC07315-1W/Y	BDC704-1-1W/Y	White	Med-Large	Very Early	Round	White	Yellow	CO	Fresh	CO	1.0		
<b>Chip Trial</b>															
9	Atlantic	Wauseon	B5141-6	Red-Purple	Med	Medium	Oval	Scaley-buf	White	Check	Chip	CO	***		
10	Snowden	B5141-6	Wischip	White	Large	Late	Oval	White	White	Check	Chip	CO	***		
11	AC13126-1Wadg	MSR061-1	CO95051-7W	Blue-Purple	Large	Medium	Oval	White	White	CO	Chip	CO	1.0		

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