



2023 Southwestern Regional Potato Variety Trial Report

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Description of Clones - 2023 Southwestern Regional Trial

Entry#	Clone/Cultivar	Parents		Flower Color	Vine		Tuber Shape	Skin Type	Flesh Color	Entered By	Use	Seed Source	2023 Year	2024 Status	Notes
		Female	Male		Size	Maturity									
Russet Trial															
1	Russet Norkotah	ND9687-5RU	ND9526-4RU	White	Small	Early	Long	Russet	White	Check	Fresh	???	***		
2	CO14371-3RU	CO07205-4RU	OR05039-4	White	Medium	Early	Long	Russet	White	CO	Dual	CO	1.0		
3	CO15016-1RUsto	A03921-2	Pomerelle Russet	White	Med-Large	Early	Long	Russet	White	CO	Dual	CO	1.0		
Red Trial															
4	Chieftain	LA1354	LA1027-18	Purple	Medium	Medium	Round	Dark Red	White	Check	Fresh	CO	***		
5	Red LaSoda	Triumph	Katahdin	Red-purple	Medium	Medium	Oval	Lt. Red	White	Check	Fresh	CO	***		
6	CO15084-4R	CO01198-2R	OR04131-2	Red-purple	Large	Early	Round	Dark Red	White	CO	Fresh	CO	1.0		
Chip Trial															
7	Atlantic	Wauseon	B5141-6	Red-Purple	Med	Medium	Oval	Scaley-buff	White	Check	Chip	CO	***		
8	Snowden	B5141-6	Wischip	White	Large	Late	Oval	White	White	Check	Chip	CO	***		
9	AC13125-5W	MSR061-1	Winterset	White	Med-Large	Medium	Round	White	White	CO	Chip	CO	1.0		

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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				2/10/2023		6/19/2023					
2. Tulelake California (TUL)	R. Wilson D. Culp K. Nicholson	Solid-set sprinkler	120-0-300	Reglone and rolling	5/19/2023	8/28/2023	9/26/2023	101	Prowl h20 Outlook Matrix	Admire-Pro (in-furrow) Vydate (Chemigation)	Vellum Prime (in-furrow) Quadris (in furrow) Luna Tranquility (Chemigation) Manzate Max (Chemigation)	
3. San Luis Valley Colorado (SLV)	J. Chitwood-Brown D. Holm C. Gray E. Niebaum	Pivot	180-80-60	Reglone	5/16/2023	9/6/2023	10/3/2023	113	Metribuzin 75 Tuscany Boundary 6.5 EC Dual II Magnum	Sefina Inscalis Movento HL	Amistar Top Revus Top	
4. Springlake Texas (SPR)	I. Vales J. Koym D. Scheuring J. Pandey S. Toinga-Villafuerte	Pivot	Russet Red/Chip	159-64.5-93	Mechanical	3/25/2023 3/24/2023	7/12/2023 6/27/2023	7/17/2023 7/10/2023	109 95	Boundary 6.5 EC Eptam 7E Makaze	Eptam 7E Movento Oberon@4 SC Sivanto 200 SL SPE 120 Velum Prime	Makaze Headline Luna Tranquility Miravis Prime NUCOP Provyso!™ Scala SC
5. Dalhart Texas (Dal)	I. Vales J. Koym D. Scheuring J. Pandey S. Toinga-Villafuerte	Pivot	Russet Red/Chip	211-226-263	Reglone	45057 45057	45166 45152	45188 45188	109 95	Eptam 7E Gly Star 5 Extra he Matrix SG TriCor 4F Trifluralin Trifluralin 4 EC (Agri Star) Volunteer (42750-72-55467) Reglone	Fulfill Reaper ClearForm Silencer Transform WG	Aframe Endura Fungicide Manzate Max Minuet Provyso! Revus Top Xyler FC

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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	
Russet Trial									
1 Russet Norkotah	97	99	99	100	100	100	2.3	1.3	1.8
2 CO14371-3RU	92			100	100	100		1.5	1.5
3 CO15016-1RUsto	85	91	100	100	100	98	3.1	1.3	2.2
Red Trial									
4 Chieftain	94	80	83	85	100	87	2.3	1.9	2.1
5 Red LaSoda	98		77	100	100	92	2.5	1.8	2.2
6 CO15084-4R	85	95	98	100	100	98	3.0	1.6	2.3
Chip Trial									
7 Atlantic	96	90	100	100	100	98	3.2	1.5	2.4
8 Snowden	95	91	100	100	100	98	3.4	1.7	2.6
9 AC13125-5W	87	81	95	100	100	94	3.0	1.6	2.3
Mean	92	90	94	98	100	96	2.9	1.6	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	
Russet Trial								
1 Russet Norkotah	2.0	3.8		2.9	1.5	3.4	5.0	3.3
2 CO14371-3RU		3.4	4.1	3.7		2.4	5.0	3.7
3 CO15016-1RUsto	3.0	3.6	3.5	3.4	2.5	3.4	4.7	3.5
			3.8					
Red Trial								
4 Chieftain	3.0	3.6	4.4	3.7	3.0	3.7	3.5	3.4
5 Red LaSoda	3.5	4.0	4.4	4.0	3.3	3.6	5.0	4.0
6 CO15084-4R	3.3	3.6	4.3	3.7	3.5	3.8	3.7	3.6
Chip Trial								
7 Atlantic	3.0	3.3	3.8	3.4	3.0	3.5	3.5	3.3
8 Snowden	3.5	3.7	3.9	3.7	3.5	3.8	4.3	3.9
9 AC13125-5W	3.5	3.7	3.7	3.6	3.0	3.8	4.3	3.7
Mean	3.1	3.6	4.0	3.6	2.9	3.5	4.3	3.6

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	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y
1	Table 4. Total Yield, Yield Rank Within Type and Merit Score¹ (MS)																								
2																									
3																									
4																									
5																									
6		California						Colorado			Texas						Mean								
7		KRN		TUL		SLV			SPR			DAL			cwt/a	Rank	MS								
8	Clone / Variety	cwt/a	Rank	cwt/a	Rank	MS	cwt/a	Rank	MS	cwt/a	Rank	MS	cwt/a	Rank	MS	cwt/a	Rank	MS							
9	Russet Trial																								
10	1	Russet Norkotah	148	2	384	1	3.5	192	2	2.0	399	1	4.6	386	1	4.2	302	1	3.6						
11	2	CO14371-3RU	131	3							267	3	3.7	301	3	3.8	233	3	3.8						
12	3	CO15016-1RUsto	168	1	297	2	3.0	327	1	4.0	308	2	3.8	360	2	4.1	292	2	3.7						
13	Red Trial																								
14	4	Chieftain	193	2	484	1	3.0	307	2	2.0	314	2	4.0	418	3	3.9	343	2	3.2						
15	5	Red LaSoda	226	1				296	3	2.0	406	1	4.4	666	1	3.7	399	1	3.4						
16	6	CO15084-4R	175	3	426	2	3.0	370	1	4.0	252	3	3.6	456	2	3.5	336	3	3.5						
17																									
18	Chip Trial																								
19	7	Atlantic	139	3	419	2	3.5	332	2	3.0	257	3	3.8	306	3	3.7	290	3	3.5						
20	8	Snowden	242	1	411	3	3.5	374	1	3.5	332	2	3.7	357	2	4.1	343	2	3.7						
21	9	AC13125-5W	223	2	514	1	4.0	314	3	4.0	354	1	4.2	418	1	4.2	364	1	4.1						
22																									
23	Mean		183		419		3.4	314		3.1	321		4.0	408		3.9	322		3.6						
24																									
25	¹ 1=very poor to 5= excellent Table of Contents																								

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

Clone / Variety	California						Colorado ¹			Texas ²						Mean		
	KRN			TUL			SLV			SPR			DAL					
	cwt/a	Rank	%	cwt/a	Rank	%	cwt/a	Rank	%	cwt/a	Rank	%	cwt/a	Rank	%	cwt/a	Rank	%
Russet Trial																		
1 Russet Norkotah	145	2	98	318	1	83	110	2	57	305	1	76	266	1	69	229	1	77
2 CO14371-3RU	128	3	98							122	3	46	243	2	81	164	3	75
3 CO15016-1RUsto	162	1	96	236	2	79	254	1	78	146	2	47	223	3	62	204	2	73
Red Trial																		
4 Chieftain	191	2	99	425	1	88	262	1	85	198	2	63	281	2	67	271	2	80
5 Red LaSoda	222	1	99				220	2	74	246	1	61	558	1	84	312	1	79
6 CO15084-4R	172	3	99	215	2	50	151	3	41	22	3	9	126	3	28	137	3	45
Chip Trial																		
7 Atlantic	136	3	98	340	2	81	279	1	84	151	3	59	226	3	74	226	3	79
8 Snowden	239	1	99	316	3	77	249	2	67	195	2	59	273	1	77	254	2	76
9 AC13125-5W	220	2	99	432	1	84	223	3	71	204	1	58	263	2	63	269	1	75
Mean	179		98	326		78	219		70	177		53	273		67	230		73

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

Clone / Variety	California				Colorado ³		Texas				Mean	
	KRN ¹		TUL ²		SLV		SPR		DAL		cwt/a	%
	cwt/a	%	cwt/a	%	cwt/a	%	cwt/a	%	cwt/a	%		
Russet Trial												
1 Russet Norkotah	1	1	80	21	3	2	187	47	54	14	65	17
2 CO14371-3RU	3	2					17	6	82	27	34	12
3 CO15016-1RUsto	13	8	53	18	54	17	4	1	20	6	29	10
Red Trial												
4 Chieftain	10	5	217	45	104	34	3	1	49	12	77	19
5 Red LaSoda	8	4			115	39	1	0	273	41	99	21
6 CO15084-4R	0	0	7	2	3	1	0	0	8	2	4	1
Chip Trial												
7 Atlantic	2	2	123	29	73	22	27	10	61	20	57	17
8 Snowden	1	1	48	12	30	8	0	0	52	15	26	7
9 AC13125-5W	14	6	136	26	40	13	0	0	10	2	40	10
Mean	6	3	95	22	53	17	27	7	68	15	48	13

¹ > 10oz

² >14oz

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

Clone / Variety	California				Colorado ³		Texas				Mean	
	KRN		TUL		SLV		SPR		DAL			
	cwt/a	%	cwt/a	%	cwt/a	%	cwt/a	%	cwt/a	%	cwt/a	%
Russet Trial												
1 Russet Norkotah	20	14	145	38	49	26	99	25	109	28	93	26
2 CO14371-3RU	14	11					40	15	72	24	42	17
3 CO15016-1RUsto	44	26	102	34	109	33	55	18	104	29	76	27
Red Trial												
4 Chieftain	39	20	140	29	92	30	71	23	95	23	86	24
5 Red LaSoda	49	22			60		92	23	183	27	108	24
6 CO15084-4R	22	12	84	20	45	12	2	1	15	3	31	9
Chip Trial												
7 Atlantic	25	18	141	34	135	41	57	22	70	23	73	24
8 Snowden	40	17	147	36	101	27	45	14	69	19	75	21
9 AC13125-5W	69	31	190	37	94	30	42	12	66	16	92	24
Mean	36	19	136	32			56	17	87	21	75	22

¹ 4-10 oz

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

Clone / Variety	California				Colorado ³		Texas				Mean	
	KRN		TUL		SLV		SPR		DAL		Mean	
	cwt/a	%	cwt/a	%	cwt/a	%	cwt/a	%	cwt/a	%	cwt/a	%
Russet Trial												
1 Russet Norkotah	28	19	93	24	58	30	54	14	104	27	70	21
2 CO14371-3RU	30	23					65	24	89	29	61	25
3 CO15016-1RUsto	66	39	81	27	91	28	87	28	99	27	83	31
Red Trial												
4 Chieftain	110	57	68	14	66	21	124	39	138	33	110	36
5 Red LaSoda	130	58			45		153	38	127	19	137	38
6 CO15084-4R	53	30	124	29	103	28	21	8	103	23	75	22
Chip Trial												
7 Atlantic	69	50	77	18	71	21	75	29	95	31	79	32
8 Snowden	132	55	121	29	118	32	150	45	152	43	139	43
9 AC13125-5W	107	48	106	21	89	28	162	46	188	45	141	40
Mean	81	42	96	23			99	30	122	31	99	32

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

Clone / Variety	California				Colorado		Texas				Mean	
	KRN		TUL		SLV		SPR		DAL		Mean	
	cwt/a	%	cwt/a	%	cwt/a	%	cwt/a	%	cwt/a	%	cwt/a	%
Russet Trial												
1 Russet Norkotah	95	65	52	13	75	39	38	10	97	25	71	30
2 CO14371-3RU	80	61					135	50	56	19	90	43
3 CO15016-1RUsto	39	23	48	16	63	19	162	53	61	17	75	26
Red Trial												
4 Chieftain	32	17	58	12	41	13	106	34	132	32	74	21
5 Red LaSoda	34	15			64	22	160	39	47	7	76	21
6 CO15084-4R	98	56	201	47	217	59	212	84	320	70	210	63
Chip Trial												
7 Atlantic	39	28	61	15	50	15	91	36	74	24	63	24
8 Snowden	65	27	93	23	123	33	133	40	84	23	100	29
9 AC13125-5W	31	14	66	13	82	26	143	40	155	37	95	26
Mean	57	34	83	20	89	28	131	43	114	28	95	32

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

Clone / Variety	California				Colorado		Texas				Mean	
	KRN		TUL ¹		SLV		SPR		DAL		Mean	
	cwt/a	%	cwt/a	%	cwt/a	%	cwt/a	%	cwt/a	%	cwt/a	%
Russet Trial												
1 Russet Norkotah	3	2	14	4	8	4	21	5	23	6	14	4
2 CO14371-3RU	17						10	4	2	1	10	2
3 CO15016-1RUsto	6	4	13	4	10	3	0	0	76	21	21	6
Red Trial												
4 Chieftain	3	1	18	4	3	1	10	3	5	1	8	2
5 Red LaSoda	3	1			13	4	0	0	37	6	13	3
6 CO15084-4R	3	1	10	2	2	1	18	7	9	2	8	3
Chip Trial												
7 Atlantic	3	2	17	4	4	1	6	2	5	2	7	2
8 Snowden	3	1	2	1	3	1	4	1	0	0	2	1
9 AC13125-5W	2	1	15	3	8	3	7	2	0	0	7	2
Mean	5	2	13	3	6	2	8	3	18	4	10	3

¹ includes over 16 oz tubers

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Table 11. Specific Gravity

Clone / Variety	California	Colorado	Texas		Mean
	TUL	SLV	SPR	DAL	
Russet Trial					
1 Russet Norkotah	1.067	1.065	1.076	1.078	1.072
2 CO14371-3RU			1.064	1.079	1.071
3 CO15016-1RUsto	1.070	1.078	1.077	1.059	1.071
Red Trial					
4 Chieftain	1.071	1.072	1.062	1.059	1.066
5 Red LaSoda		1.077	1.060	1.058	1.065
6 CO15084-4R	1.071	1.081	1.066	1.063	1.070
Chip Trial					
7 Atlantic	1.095	1.092	1.081	1.078	1.087
8 Snowden	1.090	1.096	1.075	1.077	1.084
9 AC13125-5W	1.081	1.082	1.067	1.071	1.075
Mean	1.078	1.080	1.070	1.069	1.074

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Table 12. Average Tuber Weight (Size) and Shape

Clone / Variety	Weight (oz.)					Shape ¹					Length / Width					Width/ Thickness					
	California	Colorado	Texas		Mean	California	Colorado	Texas		Mean	California	Colorado	Texas		Mean	California	Colorado	Texas		Mean	
	TUL	SLV	SPR	DAL		TUL	SLV	SPR	DAL		TUL	SLV	SPR	DAL		TUL	SLV	SPR	DAL		
Russet Trial																					
1 Russet Norkotah	6.0	3.5	8.1	4.6	5.5	4.0	4.0	4.6	4.6	4.3	1.80	1.96	1.76	1.93	1.86	1.13	1.22	1.11	1.09	1.14	
2 CO14371-3RU			3.6	5.4	4.5			3.9	4.7	4.3			1.83	2.05	1.94			1.13	1.11	1.12	
3 CO15016-1RUsto	5.7	5.5	3.8	4.7	4.9	4.5	3.0	3.7	4.5	3.9	1.78	1.80	1.84	1.76	1.79	1.15	1.24	1.19	1.18	1.19	
Red Trial																					
4 Chieftain	6.6	6.1	8.2	4.3	6.3	3.0	1.0	2.5	2.2	2.2	1.14	1.14	1.16	1.17	1.15	1.28	1.23	1.28	1.27	1.26	
5 Red LaSoda			5.3	10.2	6.6			2.0	1.5	2.9			1.16	1.07	1.20			1.34	1.22	1.13	1.23
6 CO15084-4R	3.3	2.7	11.0	2.5	4.9	3.0	1.0	1.0	1.0	1.5	1.07	1.02	1.13	1.09	1.08	1.21	1.26	1.15	1.15	1.20	
Chip Trial																					
7 Atlantic	6.4	5.8	4.8	5.0	5.5	2.0	1.0	1.3	1.5	1.5	1.04	1.03	1.05	1.11	1.06	1.00	1.23	1.22	1.17	1.16	
8 Snowden	5.1	4.4	8.7	5.6	6.0	2.0	1.0	1.0	1.0	1.3	0.96	0.98	0.93	1.07	0.98	1.00	1.29	1.37	1.16	1.21	
9 AC13125-5W	6.4	4.4	8.0	4.5	5.8	2.0	1.0	1.3	1.0	1.3	1.00	0.92	0.90	1.05	0.97	1.00	1.12	1.27	1.11	1.13	
Mean	5.6		7.4	4.8	5.6	2.9	1.8	2.3	2.6	2.5	1.26	1.25	1.29	1.38	1.33	1.11	1.24	1.22	1.15	1.18	

¹ 1=round to 5=long

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Table 13. Eye Depth and Growth Cracks

Clone / Variety	Eye Depth ¹				Growth Cracks ²				
	California	Texas		Mean	California	Colorado	Texas		Mean
	TUL	SPR	DAL		TUL ³	SLV	SPR	DAL	
Russet Trial									
1 Russet Norkotah	3.0	3.8	3.8	3.5	0.3	5.0	4.9	5.0	5.0
2 CO14371-3RU		4.0	4.0	4.0			4.3	5.0	4.7
3 CO15016-1RUsto	4.5	4.3	4.5	4.4	0.0	5.0	5.0	5.0	5.0
Red Trial									
4 Chieftain	3.5	3.8	3.8	3.7	0.1	4.0	4.5	4.8	4.4
5 Red LaSoda		3.5	3.5	3.5		4.0	5.0	4.9	4.6
6 CO15084-4R	4.0	4.0	4.5	4.2	0.0	5.0	3.8	5.0	4.6
Chip Trial									
7 Atlantic	3.5	3.8	4.0	3.8	1.7	5.0	5.0	5.0	5.0
8 Snowden	4.0	4.0	3.8	3.9	0.0	5.0	5.0	5.0	5.0
9 AC13125-5W	4.0	4.5	4.5	4.3	0.0	5.0	5.0	5.0	5.0
Mean	3.8	4.0	4.0	3.9	0.3	4.8	4.7	5.0	4.8

¹ 1=deep to 5=shallow

² 1=many to 5=none

³ % of total count

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Table 14. Fry Data, Antioxidant Equivalents, Vert. Wilt/Early Dying,

Clone / Variety	Fry Data ¹			Antioxidant Equivalents ⁵		Vert. Wilt/Early Dying ⁸	PVY Observed
	Colorado			µg Trolox equivalents/gfw ⁶ SPR	AOA Levels ⁷		
	SLV ²	SLV ³	MS ⁴				
Russet Trial							
1 Russet Norkotah	3.0	3.0	3.0	302.4	H	2032.5	
2 CO14371-3RU				208.1	M ^ψ		
3 CO15016-1RUsto	1.0	1.0	4.0	329.6	H ^ψ	885	
Red Trial							
4 Chieftain				164.4	M	913.5	31%
5 Red LaSoda				142.6	M		48%
6 CO15084-4R				153.0	M	1407.5	12%
Chip Trial							
7 Atlantic				135.3	M ^ψ	1215	32%
8 Snowden				101.9	L ^ψ	535	7%
9 AC13125-5W				52.1	VL	242.5	4%
Mean	2.0	2.0		176.6			

¹ 0=light, 5= dark

² at harvest

³ 0=light, 5=dark, stored at 45F for 11 weeks

⁴ Process Merit Score, 1-5=excellent

⁵ 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 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.

⁶ µg Trolox equivalents/gfw - Absorbance was converted to trolox equivalents based on standard curves using the following equations: $y = -282(x) + 309.72$ or $\Psi y = -244(x) + 278.89$

⁷ VH=very high (>417), H=high (302-350), M=medium (127-266), L=low (67-116), VL=very low (<55). n=70 including 14 check varieties

AUDPC=Area Under Disease Progress Curve based on foliar early-dying rating taken 77, 83, 89, 96, 104 and 110 days after planting

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Table 15. Internal Defects

Clone/Variety	Hollow Heart					Internal Brownspot				Vascular Discoloration					Blackspot Bruise					
	California		Colorado		Texas	Colorado		Texas		Colorado	California		Texas		California ¹	Colorado ²		Texas ¹		
	TUL	SLV	SPR	DAL	Mean	SLV	SPR	DAL	Mean	SLV	TUL	SPR	DAL	Mean	TUL	SLV	Mean ²	SPR	DAL	Mean ¹
Russet Trial																				
1 Russet Norkotah	7	1	0	3	3	0	0	0	0	0	3	0	13	4	0	5	2.5	0	0	2.5
2 CO14371-3RU			0	3	2		0	0	0			0	10	3		4.9	4.9	0	0	0.0
3 CO15016-1RUsto	0	1	3	20	6	0	0	0	0	0	3	0	3	2	0	4.5	2.25	0	0	2.25
Red Trial																				
4 Chieftain	0	0	20	0	5	8	0	23	10	0	0	0	0	0	3.3	4.2	3.75	0	0	3.8
5 Red LaSoda			3	0	1	0	0	0	0	0		0	10	3		4.9	4.9	0	0	4.9
6 CO15084-4R	0	0	0	0	0	0	0	0	0	4	17	0	30	13	0	4.5	2.25	0	0	2.3
Chip Trial																				
7 Atlantic	0	2	30	23	14	0	20	20	13	0	3	0	0	1	3.3	3.3	3.3	0	0	3.3
8 Snowden	0	1	0	0	0	3	0	10	4	1	3	0	40	11	3.3	3.3	3.3	0	0	3.3
9 AC13125-5W	0	0	0	0	0	4	0	0	1	0	10	0	0	3	0	3.3	1.65	0	0	1.65
Mean	1	1	6	6	3	2	6	3		6	0	12	5		1.4	4.1	3.0	0.0	0.0	2.7

¹ Percent based on 10 cut tubers.

² 1 to 5=none

Table 15. Vigor and Flesh Color

Clone / Variety	Vigor ¹			Flesh Color ²			
	Texas		Mean	Colorado	Texas		Mean
	SPR	DAL		SLV	SPR	DAL	
Russet Trial							
1 Russet Norkotah	3.8	4.0	3.9	1.5	1.2	1.0	1.2
2 CO14371-3RU	3.4	4.2	3.8		1.3	1.0	1.2
3 CO15016-1RUsto	3.6	3.7	3.7	1.0	1.4	1.0	1.1
Red Trial							
4 Chieftain	3.5	4.4	4.0	1.0	1.0	1.0	1.0
5 Red LaSoda	4.1	4.4	4.2	2.0	1.1	1.0	1.4
6 CO15084-4R	3.6	4.3	4.0	3.0	1.0	1.0	1.7
Chip Trial							
7 Atlantic	3.2	3.8	3.5	1.0	1.3	1.0	1.1
8 Snowden	3.7	4.3	4.0	1.0	1.0	1.0	1.0
9 AC13125-5W	3.7	3.9	3.8	1.0	1.3	1.0	1.1
Mean	3.6	4.1	3.9	1.6	1.2	1.0	1.2

¹ 1= poor, 2= fair, 3= medium, 4= vigorous, 5= very vigorous

² 1=light to 5=dark

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Table 16. Notes

Clone / Variety	Texas	
	SPR	DAL
Russet Trial		
1 Russet Norkotah	high yield, high tuber number+, large tubers, knobs, nice, deep eyes, green head, BOT+, great size and shape	pointed++, medium size, uneven russet, knobs+, gemmations, high percent of smalls, high tuber number, nice shape
2 CO14371-3RU	very nice skin+, intense russet, good size and shape+, many smalls	pointed, light skin++, deep eyes++, long tubers+, smaller tubers than in the other trial, good length
3 CO15016-1RUsto	very intense russet skin+, short, heals dark+, small	lumpy, soft stolon end, moon shapes, misshapen++, deformed, skinny+, pointed+, long, KNOBS
Red Trial		
4 Chieftain	Nice+, good size and shape, a little flat, feathering, green head, cracks, herbicide damage?, BOT	high yield++, deep eyes, light skin medium size, high tuber number
5 Red LaSoda	BOT, deep eyes++, nice, good size and shape, bright skin, high tuber number+, high yield+, parent,	growth cracks+, herbicide damage?+, great size and shape+, excellent color
6 CO15084-4R	intense red skin color but dull+, herbicide damage?++, pointed, cracks+, high tuber number, uniform size and shape, translucent center,	very high tuber number++, high yield++, deep eyes++, huge
Chip Trial		
7 Atlantic	Large, buff skin, green heads	deep bud end
8 Snowden	Nice, smaller size profile than Atlantic and Lamoka, buff skin, green heads	large, oval+, very nice size
9 AC13125-5W	great skin, no feathering, BOT, green heads	high tuber number++, buff skin+, deep eyes

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Table 17. Notes

Clone / Variety	California TUL	Colorado SLV
Russet Trial		
1 Russet Norkotah	Check	pointy
2 CO14371-3RU		
3 CO15016-1RUsto	Skins easily, shallow eyes	V. nice type, good size + shape, Yld*, good skin, dry rot
Red Trial		
4 Chieftain	Check	C scab
5 Red LaSoda		soft rot
6 CO15084-4R	feels soft, good color, low turgor	nice type, good shape, variable size, good skin
Chip Trial		
7 Atlantic	Check	soft rot
8 Snowden	Check	flat, deep eyes
9 AC13125-5W	Nice round shape	v. good size, good shape, nice, some small, scurf

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Table 18. Colorado and Texas Chipping Results

Clone / Variety	Chip Color ¹				Chip Color ¹ Texas				Chip Quality ⁵ Texas			
	Colorado				SPR	DAL		SPR	DAL			
	40F ²	R40F ²	50F ³	R50F ³	Field ⁴	Field ⁴	42F ²	R74F ³	Field ⁴	Field ⁴	42F ²	R74F ³
Chip Trial												
7 Atlantic	4.0	3.0	4.0	3.0	1.0	1.3	1.0	1.0	2.0	3.5	4.1	4.0
8 Snowden	4.0	3.0	3.0	2.5	1.0	1.7	1.0	1.0	2.0	2.3	3.9	1.7
9 AC13125-5W	4.5	3.5	4.0	3.0	1.5	1.7	1.0	1.0	1.0	2.9	4.5	2.7
Mean	4.2	3.2	3.7	2.8	1.2	1.6	1.0	1.0	1.7	2.9	4.2	2.8

CO TX

¹ 1=light, 5=dark

²40°F Storage protocol prior to frying

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Initial storage temperature

55°F 42

Holding temperature

40°F

Weeks to holding temperature

4

Weeks at holding temperature

6

6

Reconditioning temp. (if applicable)

60°F 74°F

Number of weeks reconditioning

3

2

³50°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

⁴ Chipped immediately following harvest

⁵ Overall Chip Quality of the chip sample 1=excellent (light color) to 5=poor (dark color)

Table 19. Summary

Clone / Variety	Field Data				Yield Qualities					Tuber Description					
	% Stand	Stems/hill	Vine Size	Vine Mat.	Total Yield	% #1s	% >10 ¹	% <4	% Culls	Merit Score	Specific Gravity	Tuber Shape	Tuber Weight	Skin Color	
Russet Trial															
1	Russet Norkotah	100	1.8	2.9	3.3	302	77	17	30	4	3.6	1.072	Long	5.5	Russet
2	CO14371-3RU	100	1.5	3.7	3.7	233	75	12	43	2	3.8	1.071	Long	4.5	Russet
3	CO15016-1RUsto	98	2.2	3.4	3.5	292	73	10	26	6	3.7	1.071	Long	4.9	Russet
Red Trial															
4	Chieftain	87	2.1	3.7	3.4	343	80	19	21	2	3.2	1.066	Round	6.3	Dark Red
5	Red LaSoda	92	2.2	4.0	4.0	399	79	21	21	3	3.4	1.065	Oval	7.4	Lt. Red
6	CO15084-4R	98	2.3	3.7	3.6	336	45	1	63	3	3.5	1.070	Round	4.9	Dark Red
Chip Trial															
7	Atlantic	98	2.4	3.4	3.3	290	79	17	24	2	3.5	1.087	Oval	5.5	Scaley-buff
8	Snowden	98	2.6	3.7	3.9	343	76	7	29	1	3.7	1.084	Oval	6.0	White
9	AC13125-5W	94	2.3	3.6	3.7	364	75	10	26	2	4.1	1.075	Round	5.8	White

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2024 Southwestern Regional Trial Entries															
Entry #	Clone/Cultivar	Parents		Flower Color	Vine Size	Maturity	Tuber Shape	Skin Type	Flesh Color	Entered By	Use	Seed Source	2024 Year	2024 Status	Notes
Russet Trial															
	Russet Norkotah	ND9687-5RU	ND9526-4RU	White	Small	Early	Long	Russet	White	Check	Fresh				
	CO15070-4RU	AO06191-1	CO09036-2RU	White	Medium	Med-Early	Long	Russet	White	CO	Dual	CO	1		
	CO16238-4RU	CO10090-9RU	CO08065-2RU	White	Large	Medium	Oblong	Russet	White	CO	Dual	CO	1		
Red Trial															
	Chieftain	LA1354	LA1027-18	Purple	Medium	Medium	Round	Dark Red	White	Check	Fresh	CO			
	Red LaSoda	Triumph	Katahdin	Red-purple	Medium	Medium	Oval	Lt. Red	White	Check	Fresh	CO			
	TC17742-1PW/PW	ATTX98500-3Pu/Y	NDTX059761-1R/R	dark purple	Large	Late	Round	bi-color	purple/white	CO	Fresh	CO	1		
White/Yellow Trial															
	Yukon Gold	Norgleam	W5279-4	Pink	Medium	Early	Oval	White	Yellow	Check	Fresh				
	ATX13134-3W/Y	NDA081451CB-1CY	CO02321-4W	White	Large	Medium	Round	White	Yellow	TX	Fresh	CO	1		
	CO16154-2Y	AC07315-1W/Y	CO11323-1W/Y	White	Large	Medium	Oval	White	Yellow	CO	Fresh	CO	1		
	CO16279-5Y	CO11317-1W/Y	AC07315-1W/Y	red-purple	Large	Medium	Round	White	Yellow	CO	Fresh	CO	1		



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