

2022

Potato Variety Development In Tulelake, CA

Three variety trials were grown at the Intermountain Research and Extension Center during 2022.

Trials were categorized by their market type and included russet, specialty and chip.

Trial results are summarized in this report.



University of California

Agriculture and Natural Resources

Intermountain Research and Extension Center

Table of Contents

Acknowledgements	2
Introduction	2
Late Russet Variety Trial	
Cultural Information	3
Tables	4-7
Tulelake Variety Photos and Comments	8-9
Red/Specialty Variety Trial	
Cultural Information	10
Tables	11-15
Tulelake Variety Photos and Comments	16-17
Chipping Potato Variety Trial	
Cultural Information	18
Tables	19-20
Tulelake Variety Photos and Comments	21



2022 Annual Progress Report Potato Variety Development in Tulelake

Rob Wilson: Center Director/Farm Advisor
Email: rgwilson@ucanr.edu
Phone: (530) 667-5117
Fax: (530) 667-5265

Darrin Culp: Superintendent of Agriculture
Email: daculp@ucanr.edu
Phone: (530) 667-5117

Kevin Nicholson: Staff Research Associate II
Email: kwnicholson@ucanr.edu
Prepared Report

Three potato variety trials were conducted at the Intermountain Research and Extension Center (IREC) in Tulelake, CA. Trials were categorized by market type and included a Russet trial with 14 entries, a Specialty trial with 11 entries, and a Chipping trial with 6 entries. Entries included selections from the Western Regional (WR) variety development program, Southwest Regional (SWR) variety development program, and varieties of local interest.

Weather data can be found at: <http://www.cimis.water.ca.gov> Station # 91.

Late Russet Variety Trial

The Late Russet Variety Trial is a combination of thirteen entries from the Western Regional Variety Trial (WR) and one entry from the Southwest Regional Trial (SWR). Merit scoring and culls were evaluated considering fresh market standards, given most Russets grown in Tulelake, CA are sold for fresh market. Important characteristics for the local area include total yield, percent US No. 1 yield, fresh merit score, tuber shape uniformity, low internal and external defects, and resistance to early-dying. See Tables 1-4 for Russet results and Figure 1 for entry pictures and comments.

Trial Information

Location:	Intermountain Research and Extension Center, Tulelake, CA
Soil Type:	Tulebasin mucky silty clay loam
Planting Date:	May 18 th
Vine Kill Date:	September 7 th
Days to Vine Kill:	112
Harvest Date:	October 3 rd
Irrigation:	Solid-set sprinklers; applied water + precipitation = 24.6 inches
Plot Length:	18.3 Feet
In-Row Spacing:	10 Inches
Row Spacing:	36 Inches
Number of Reps:	4
# of Fertilizer/Acre:	150-50-200
Seed Treatment:	Maxim 4FS and Fir Bark Dust
Weed Control:	Prowl H2O, Outlook, Matrix
Insecticides:	Admire Pro (In-furrow), Vydate (Chemigation)
Fungicides:	Vellum Prime & Quadris (In-furrow), Manzate Max & Tranquility (Chemigation)
Vine Kill Method:	Rolling and Reglone at labeled rates

Table 1. Tuber Yield and Size of Russet Potato Entries.

	Trial	Tuber Yield (cwt/A) ¹																	
		%1's		U.S. 1's	Total	U.S. No. 1's					Culls + 2's								
						>14oz	10-14oz	6-10oz	4-6oz	<4oz									
Clearwater Russet	WR	79.3	abc	273.0	de	343.1	ef	26.6	bcd	46.1	cd	117.8	def	82.5	a	62.9	ab	7.2	ab
Ranger Russet	WR	70.1	c	121.8	f	170.6	g	12.3	cd	23.3	d	56.4	f	29.9	b	38.9	abc	9.9	ab
Russet Norkotah	WR	70.0	c	170.2	ef	242.3	fg	3.9	d	15.0	d	72.2	ef	79.1	a	67.7	a	4.4	b
COTX08063-2Ru	SWR	77.3	bc	270.9	de	349.5	def	20.8	bcd	55.6	cd	111.5	def	83.0	a	64.8	ab	13.9	ab
A09086-1LB	WR	88.5	ab	450.7	ab	508.6	ab	74.5	a	113.3	abc	176.2	abcd	86.8	a	50.3	abc	7.6	ab
A10594-4sto	WR	90.3	a	449.5	ab	498.1	ab	43.6	abcd	111.7	abc	216.8	ab	77.4	ab	40.6	abc	8.1	ab
A12305-2adg	WR	90.5	a	412.4	abc	456.1	abcd	18.7	bcd	73.2	bcd	229.9	a	90.7	a	35.9	bc	7.7	ab
AFA5661-8	WR	90.3	a	482.1	a	533.9	a	55.4	abc	145.8	a	198.9	ab	81.9	a	29.4	c	22.4	ab
AOR11217-3	WR	81.3	abc	309.1	cd	380.3	cde	30.4	bcd	79.3	abcd	127.3	cde	72.2	ab	62.7	ab	8.5	ab
AOR08540-1	WR	87.0	ab	392.6	abc	450.7	abcde	60.4	ab	70.2	bcd	189.0	abc	73.0	ab	47.3	abc	10.8	ab
AC12090-3RU	WR	83.0	ab	361.9	bcd	434.4	abcde	56.0	abc	86.1	abcd	147.7	bcd	72.1	ab	46.3	abc	26.2	a
CO13003-1RU	WR	86.8	ab	367.2	abcd	420.8	bcde	20.2	bcd	81.4	abcd	175.1	abcd	90.5	a	48.8	abc	4.8	b
CO10085-1RU	WR	80.8	abc	347.6	bcd	430.3	abcde	38.3	abcd	63.5	cd	150.7	bcd	95.0	a	55.9	abc	26.8	a
CO11009-3RU	WR	87.0	ab	413.1	abc	473.8	abc	48.8	abc	137.9	ab	154.7	bcd	71.8	ab	38.7	abc	21.9	ab
Mean		83.0		344.4		406.6		36.4		78.7		151.7		77.6		49.3		12.9	

¹Mean comparisons were performed using Tukey's-Kramer HSD; means with the same letter within columns are not significantly different

Table 2. External Tuber Characteristics of Russet Potato Entries.

	Trial	Merit Score ¹	Russeting ²	Eye Depth ³	Shape Uniformity ⁴	Length/Depth Ratio ⁵	Length/Width Ratio ⁵
Clearwater Russet	WR	4.0	3.5	4.5	4.0	2.20	1.78
Ranger Russet	WR	3.0	3.0	3.5	3.0	2.38	2.05
Russet Norkotah	WR	4.0	4.0	4.0	4.0	2.07	1.82
COTX08063-2Ru	SWR	2.0	2.5	4.5	4.0	1.79	1.58
A09086-1LB	WR	2.5	2.5	4.5	4.0	2.03	1.71
A10594-4sto	WR	3.0	2.5	4.5	4.0	2.13	1.88
A12305-2adg	WR	4.0	4.0	5.0	4.0	1.83	1.67
AFA5661-8	WR	3.0	3.5	4.0	3.5	1.84	1.56
AOR11217-3	WR	3.5	3.5	4.5	4.0	2.50	2.08
AOR08540-1	WR	4.0	4.0	4.5	4.0	2.20	1.83
AC12090-3RU	WR	2.5	3.5	4.5	4.0	2.19	1.90
CO13003-1RU	WR	3.5	3.5	4.5	3.5	2.07	1.66
CO10085-1RU	WR	3.0	3.5	4.0	3.0	1.79	1.46
CO11009-3RU	WR	3.0	4.0	4.0	3.0	1.97	1.79
Mean		3.2	3.4	4.3	3.7	2.07	1.77

¹ 1=Worst, 5=Best - Fresh Market Russet Merit Score takes into account multiple factors including tuber shape, eye depth, russeting, and shape uniformity

² 1=Light,5=Heavy

³ 1=Deep, 5=Shallow

⁴ 1= Non Uniform, 5=Very Uniform

⁵ Ratio of 10 tubers measured from each plot, 8-14 oz size class.

Table 3. Tuber Defects of Russet Potato Entries.

	Trial	Hollow Heart ¹	Stem-end Necrosis ¹	Vascular Discoloration ¹	Knobs ²	Growth Crack ²	Irregular Shaped ²	Greening ²
		%	%	%	%	%	%	%
Clearwater Russet	WR	0.0	0.0	3.3	1.0 ab	0.3 a	0.8 ab	0.8 a
Ranger Russet	WR	0.0	3.3	10.0	0.3 ab	1.0 a	2.5 ab	0.3 a
Russet Norkotah	WR	0.0	0.0	3.3	0.5 ab	0.0 a	1.0 ab	0.0 a
COTX08063-2Ru	SWR	0.0	0.0	0.0	0.5 ab	0.3 a	1.0 ab	0.8 a
A09086-1LB	WR	0.0	0.0	0.0	0.5 ab	0.0 a	0.3 ab	0.8 a
A10594-4sto	WR	0.0	0.0	6.7	1.0 ab	0.0 a	0.8 ab	0.0 a
A12305-2adg	WR	0.0	0.0	3.3	1.5 ab	0.0 a	0.0 b	0.0 a
AFA5661-8	WR	0.0	0.0	23.3	2.5 ab	0.0 a	0.5 ab	1.0 a
AOR11217-3	WR	0.0	0.0	16.7	1.0 ab	0.0 a	0.8 ab	0.3 a
AOR08540-1	WR	0.0	0.0	0.0	0.8 ab	0.0 a	0.5 ab	1.3 a
AC12090-3RU	WR	0.0	0.0	0.0	3.3 a	0.0 a	0.0 b	1.3 a
CO13003-1RU	WR	0.0	0.0	6.7	0.0 b	0.3 a	0.8 ab	0.5 a
CO10085-1RU	WR	0.0	0.0	20.0	0.5 ab	0.0 a	2.8 a	0.5 a
CO11009-3RU	WR	16.7	0.0	6.7	0.8 ab	1.0 a	1.5 ab	0.5 a
Mean		1.2	0.2	7.1	1.0	0.0	0.9	0.6

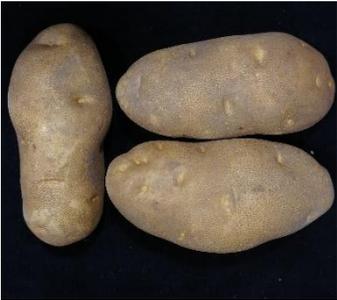
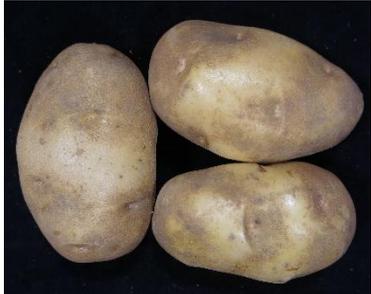
¹ Thirty, 8 to 14 oz. tubers were evaluated from each plot.

² Percent of total tubers.

Table 4. Stand, Tuber Set, Average Tuber Size and Specific Gravity of Russet Potato Entries.

	Trial	% Stand	Tubers per Plant	Average Tuber Size	Specific Gravity
Clearwater Russet	WR	97 a	6.0 ab	5.5 def	1.090 bcd
Ranger Russet	WR	100 a	4.5 b	4.1 f	1.078 e
Russet Norkotah	WR	99 a	5.0 ab	4.6 ef	1.068 f
COTX08063-2Ru	SWR	96 a	6.1 ab	5.5 cdef	1.099 a
A09086-1LB	WR	99 a	7.1 a	6.9 abcd	1.093 abc
A10594-4sto	WR	97 a	7.1 a	7.0 abc	1.085 cde
A12305-2adg	WR	93 a	7.0 ab	6.5 abcd	1.090 bcd
AFA5661-8	WR	98 a	6.9 ab	7.4 a	1.098 ab
AOR11217-3	WR	97 a	6.1 ab	5.8 bcde	1.088 cde
AOR08540-1	WR	98 a	6.3 ab	6.8 abcd	1.088 cd
AC12090-3RU	WR	100 a	5.9 ab	6.8 abcd	1.081 de
CO13003-1RU	WR	99 a	6.3 ab	6.1 abcd	1.086 cde
CO10085-1RU	WR	99 a	6.5 ab	6.1 abcd	1.094 abc
CO11009-3RU	WR	99 a	6.1 ab	7.3 ab	1.092 abc
Mean		98	6.2	6.1	1.088

Figure 1. 2022 Late Russet Trial Entries.

Clearwater Russet	Ranger Russet	Russet Norkotah
 <ul style="list-style-type: none"> • Check 	 <ul style="list-style-type: none"> • Check 	 <ul style="list-style-type: none"> • Check
COTX08063-2Ru	A09086-1LB	A10594-4sto
 <ul style="list-style-type: none"> • Blocky tuber shape • Red splotches on skin 	 <ul style="list-style-type: none"> • Poor appearance • Uniform tuber shape 	 <ul style="list-style-type: none"> • Light russeting • Uniform tuber shape
A12305-2adg	AFA5661-8	AOR11217-3
 <ul style="list-style-type: none"> • Nice skinset/russeting 	 <ul style="list-style-type: none"> • Lumpy tuber shape 	 <ul style="list-style-type: none"> • Long tubers

AOR08540-1	AC12090-3RU	CO13003-1RU
 <ul style="list-style-type: none"><li data-bbox="253 569 467 600">• Nice russeting	 <ul style="list-style-type: none"><li data-bbox="670 569 906 600">• Red hue on skin<li data-bbox="670 604 927 636">• Ruptured lenticils	 <ul style="list-style-type: none"><li data-bbox="1084 569 1243 600">• Few culls
CO10085-1RU	CO11009-3RU	
 <ul style="list-style-type: none"><li data-bbox="253 1140 529 1203">• Non-uniform tuber shape	 <ul style="list-style-type: none"><li data-bbox="670 1140 946 1171">• Lumpy tuber shape<li data-bbox="670 1176 930 1207">• High hollow heart	

Red/Specialty Variety Trial

The Red/Specialty Trial included nine entries from the Western Regional Variety Trial (WR) and two entries from the South West Region Variety Trial (SWR). Important vine and tuber characteristics for fresh market red/specialty types include: skin and flesh color, fresh merit score, tuber shape, tuber uniformity, tubers per plant, and average tuber size. See Tables 5-9 for Red/Specialty trial results and Figure 2 for entry pictures and comments.

Trial Information

Location:	Intermountain Research and Extension Center, Tulelake, CA
Soil Type:	Tulebasin mucky silty clay loam
Planting Date:	May 18 th
Vine Kill Date:	September 7 th
Days to Vine Kill:	112
Harvest Date:	October 3 rd
Irrigation:	Solid-set sprinklers; applied water + precipitation = 24.6 inches
Plot Length:	18.3 Feet
In-Row Spacing:	10 Inches
Row Spacing:	36 Inches
Number of Reps:	4
# of Fertilizer/Acre:	150-50-200
Seed Treatment:	Maxim 4FS and Fir Bark Dust
Weed Control:	Prowl H2O, Outlook, Matrix
Insecticides:	Admire Pro (In-furrow), Vydate (Chemigation)
Fungicides:	Vellum Prime & Quadris (In-furrow), Manzate Max & Tranquility (Chemigation)
Vine Kill Method:	Rolling and Reglone at labeled rates

Table 5. Skin and Flesh Characteristics of Specialty Potato Entries.

Clone / Variety	Trial	Skin Color	Skin Color		Flesh Color	Flesh Color Rating ¹
				Rating ¹		
Chieftain	WR	Red		2.0	White	1.5
Red LaSoda	WR	Red		2.0	White	2.5
Modoc	WR	Red		2.0	White	2.5
A08122-12Rsto	WR	Red		3.0	White	1.5
CO14040-3R	WR	Red		3.0	White	2.0
Yukon Gold	WR	Yellow		1.0	Yellow	3.0
AC10376-2012-1W/Y	WR	Yellow		1.0	Yellow	4.0
AORTX09037-1W/Y	WR	Yellow		1.0	Yellow	3.5
COTX10118-4Wpe/Y	WR	Yellow/Purple		1.0	Yellow	3.5
AORTX09037-5W/Y	SWR	Yellow		1.0	White	2.0
CO14226-3W/Y	SWR	Yellow		1.0	Yellow	4.0

¹1=Light, 5=Dark; Reds and purples were rated using red/purple color scale. Yellows were rated using a white/yellow color scale. All varieties were rated using the same internal flesh darkness scale.

Table 6. Tuber Yield and Size of Specialty Potato Entries.

Clone / Variety	Trial	Tuber Yield (cwt/A) ¹									
		Total Yield	10-14 oz	6-10 oz	4-6 oz	< 4oz	> 14 oz	Undersize	Culls		
Chieftain	WR	546.8 abc	95.3 a	175.7 a	79.2 de	45.9 c	68.5 a	16.4 d	65.9 a		
Red LaSoda	WR	470.6 abcd	75.3 a	114.3 abc	63.8 e	41.0 c	97.0 a	12.2 d	66.9 a		
Modoc	WR	410.6 cd	14.6 b	93.5 bc	122.8 bcd	131.7 b	5.6 b	27.3 cd	15.1 a		
A08122-12Rsto	WR	533.8 abc	13.8 b	127.7 ab	132.1 abcd	168.5 ab	2.6 b	80.9 a	8.2 a		
CO14040-3R	WR	414.3 cd	4.1 b	48.6 c	105.6 cde	175.4 ab	0.0 b	77.9 a	2.7 a		
Yukon Gold	WR	351.6 d	70.5 a	116.4 abc	51.9 e	44.3 c	25.9 b	7.5 d	35.0 a		
AC10376-2012-1W/Y	WR	541.4 abc	4.1 b	85.2 bc	188.4 a	184.3 a	0.0 b	70.9 ab	8.7 a		
AORTX09037-1W/Y	WR	472.5 abcd	7.0 b	74.6 bc	128.0 bcd	192.1 a	1.6 b	62.1 ab	7.1 a		
COTX10118-4Wpe/Y	WR	600.9 ab	59.5 a	173.5 a	142.9 abc	134.4 b	13.0 b	66.5 ab	11.1 a		
AORTX09037-5W/Y	SWR	458.8 bcd	11.9 b	78.9 bc	110.3 cde	162.4 ab	4.2 b	50.1 bc	41.1 a		
CO14226-3W/Y	SWR	615.6 a	8.3 b	114.8 abc	178.1 ab	176.9 ab	0.0 b	83.1 a	54.5 a		
Mean		492.4	33.1	109.4	118.5	132.5	19.9	50.4	28.8		

¹Mean comparisons were performed using Tukey's-Kramer HSD; means with the same letter within columns are not significantly different

Table 7. External Tuber Characteristics of Specialty Potato Entries.

Clone / Variety	Trial	Merit ¹	Eye Depth ²	Tuber Shape ³	Shape Uniformity ⁴	Length/Depth Ratio ⁵	Length/Width Ratio ⁵
Chieftain	WR	3.5	4.0	3.5	3.5	1.49	1.17
Red LaSoda	WR	2.5	3.0	3.0	2.5	1.44	1.17
Modoc	WR	3.5	4.0	2.5	3.5	1.32	1.20
A08122-12Rsto	WR	3.0	3.5	2.0	4.0	1.16	1.00
CO14040-3R	WR	2.0	4.0	2.0	3.0	1.27	1.07
Yukon Gold	WR	3.0	4.0	4.0	2.5	1.45	1.22
AC10376-2012-1W/Y	WR	2.0	5.0	2.5	2.5	1.40	1.23
AORTX09037-1W/Y	WR	3.0	4.0	2.0	3.5	1.28	1.11
COTX10118-4Wpe/Y	WR	2.0	4.0	2.5	3.0	1.45	1.09
AORTX09037-5W/Y	SWR	3.0	4.0	2.0	2.5	1.24	1.00
CO14226-3W/Y	SWR	2.0	4.5	2.0	3.5	1.11	0.99
Mean		2.7	4.0	2.5	3.1	1.33	1.11

¹ 1=Worst, 5=Best - Specialty Merit Score takes into account important appearance factors of the Specialty market including tuber shape, eye depth, and shape uniformity

² 1=Deep, 5=Shallow

³ 1=Round, 5=Oblong

⁴ 1= Poor uniformity, 5=Very Uniform

⁵ Ratio of 10 tubers measured from the 10-14 oz category in each plot

Table 8. Tuber Defects of Specialty Potato Entries.

Clone / Variety	Trial	Stem End	Vascular	Knobs ²	Growth		Greening ²	Undersize ³
		Necrosis ¹	Dicoloration ¹		Crack ²			
		%	%	%	%	%	%	%
Chieftain	WR	0.0	0.0	0.1 b	7.4 a	0.3 a	14.0 ef	
Red LaSoda	WR	0.0	6.7	1.4 b	4.8 ab	0.3 a	13.8 ef	
Modoc	WR	0.0	0.0	1.6 b	0.8 b	0.1 a	18.5 de	
A08122-12Rsto	WR	0.0	3.3	0.6 b	0.5 b	0.0 a	34.8 ab	
CO14040-3R	WR	3.3	0.0	0.2 b	0.0 b	0.2 a	39.0 a	
Yukon Gold	WR	10.0	6.7	2.0 b	4.3 ab	0.5 a	8.0 f	
AC10376-2012-1W/Y	WR	0.0	0.0	0.1 b	0.1 b	0.7 a	30.0 abc	
AORTX09037-1W/Y	WR	0.0	3.3	0.2 b	0.4 b	0.3 a	28.3 bcd	
COTX10118-4Wpe/Y	WR	6.7	3.3	0.5 b	0.2 b	0.5 a	29.0 abc	
AORTX09037-5W/Y	SWR	0.0	0.0	7.5 a	0.0 b	0.0 a	22.8 cde	
CO14226-3W/Y	SWR	0.0	56.7	0.5 b	0.7 b	0.2 a	33.8 ab	
Mean		1.8	7.2	1.3	1.7	0.3	24.7	

¹ Thirty, 6-10oz. tubers were evaluated from each entry.

² Percent of total tubers.

³ Percent of total CWT.

Table 9. Stand, Tuber Set, Average Tuber Size and Specific Gravity of Specialty Potato Entries.

Clone / Variety	Trial	% Stand	Tubers/Plant	Average Size (oz)	Specific Gravity
Chieftain	WR	99 a	7.9 ef	6.5 a	1.072 cde
Red LaSoda	WR	100 a	6.2 f	7.0 a	1.071 cde
Modoc	WR	94 a	10.4 de	3.9 bc	1.067 e
A08122-12Rsto	WR	100 a	15.0 ab	3.3 bc	1.072 cde
CO14040-3R	WR	99 a	14.4 abc	2.7 c	1.076 bc
Yukon Gold	WR	92 a	5.6 f	6.3 a	1.077 bc
AC10376-2012-1W/Y	WR	100 a	15.3 ab	3.2 bc	1.074 bcd
AORTX09037-1W/Y	WR	100 a	13.4 bc	3.2 bc	1.085 a
COTX10118-4Wpe/Y	WR	94 a	14.8 abc	4.0 b	1.068 de
AORTX09037-5W/Y	SWR	98 a	12.3 cde	3.5 bc	1.080 ab
CO14226-3W/Y	SWR	98 a	16.5 a	3.5 bc	1.086 a
Mean		98	12.0	4.3	1.075

Figure 2. 2022 Red/Specialty Entries.

Cheiftain	Red LaSoda	Modoc
 <ul style="list-style-type: none"> • Check 	 <ul style="list-style-type: none"> • Check • Lumpy tuber shape 	 <ul style="list-style-type: none"> • Check
A08112-12Rsto	CO14040-3R	Yukon Gold
 <ul style="list-style-type: none"> • Nice shape 	 <ul style="list-style-type: none"> • Heavy skinning at harvest. 	 <ul style="list-style-type: none"> • Check
AC10376-2012-1W/Y	AORTX09037-1W/Y	COTX101148-4Wpe/Y
 <ul style="list-style-type: none"> • Inconsistent color splotches 	 <ul style="list-style-type: none"> • Uniform tuber shape 	 <ul style="list-style-type: none"> • Pancake shape

AORTX09037-5W/Y	CO14226-3W/Y
 <ul style="list-style-type: none"><li data-bbox="253 569 565 600">• Poor shape uniformity	 <ul style="list-style-type: none"><li data-bbox="669 569 987 636">• Internal pink splotches when cut<li data-bbox="669 642 935 674">• Pink splotchy eyes<li data-bbox="669 680 850 711">• Skins easily

Chipping Potato Variety Trial

The 2020 Chipping Trial included five entries from the Western Regional Variety Trial (WR) and one entry from the Southwest Region (SWR). Important characteristics for processing chippers include: total yield, tubers per plant, tuber shape, tuber uniformity, average tuber size, and specific gravity. See Tables 10-13 for Chipping Trial results and Figure 3 for entry pictures and comments.

Trial Information

Location:	Intermountain Research and Extension Center, Tulelake, CA
Soil Type:	Tulebasin mucky silty clay loam
Planting Date:	May 18 th
Vine Kill Date:	September 7 th
Days to Vine Kill:	112
Harvest Date:	October 3 rd
Irrigation:	Solid-set sprinklers; applied water + precipitation = 24.6 inches
Plot Length:	18.3 Feet
In-Row Spacing:	10 Inches
Row Spacing:	36 Inches
Number of Reps:	4
# of Fertilizer/Acre:	150-50-200
Seed Treatment:	Maxim 4FS and Fir Bark Dust
Weed Control:	Prowl H20, Outlook, Matrix
Insecticides:	Admire Pro (In-furrow), Vydate (Chemigation)
Fungicides:	Vellum Prime & Quadris (In-furrow), Manzate Max & Tranquility (Chemigation)
Vine Kill Method:	Rolling and Reglone at labeled rates

Table 10. Tuber Yield and Size of Chipping Potato Entries.

Clone / Variety	Trial	Total	Tuber Yield (cwt/A) ¹												
			>14 oz	10-14 oz	6-10oz	4-6 oz	<4 oz	Culls							
Lamoka	WR	487.4	a	6.1	c	48.7	c	236.9	a	115.1	ab	62.5	ab	18.2	b
CO11037-5W	WR	489.6	a	42.7	bc	94.8	ab	205.9	ab	98.0	abc	44.2	bc	4.0	c
CO12235-3W	WR	367.7	b	13.2	c	61.2	bc	145.0	b	77.7	bc	61.7	ab	8.9	bc
CO12293-1W	WR	496.5	a	62.7	ab	115.4	a	180.1	ab	74.4	bc	46.9	bc	17.1	bc
CO13232-25W	WR	499.4	a	9.3	c	37.8	c	223.3	a	142.5	a	75.1	a	11.5	bc
AC13126-1Wadg	SWR	490.1	a	106.0	a	118.9	a	145.8	b	58.5	c	28.3	c	32.7	a
Mean		471.8		40.0		79.5		189.5		94.4		53.1		15.4	

¹Mean comparisons were performed using Tukey's-Kramer HSD; means with the same letter within columns are not significantly different

Table 11. Merit Score and Tuber Characteristics of Chipping Potato Entries

Clone / Variety	Trial	Merit ¹	Eye depth ²	Tuber Shape ³	Shape Uniformity ⁴	Length/Depth Ratio ⁵	Length/Width Ratio ⁵
Lamoka	WR	3.5	3.5	2.5	3.0	1.33	1.07
CO11037-5W	WR	4.0	4.0	2.0	3.5	1.11	0.98
CO12235-3W	WR	4.0	4.0	1.5	4.0	1.00	0.87
CO12293-1W	WR	3.0	4.0	2.5	3.0	1.27	1.10
CO13232-25W	WR	3.5	4.0	2.0	3.5	1.24	1.00
AC13126-1Wadg	SWR	3.5	4.0	2.0	3.0	1.19	1.00
Mean		3.6	3.9	2.1	3.3	1.19	1.00

¹ 1=Worst, 5=Best - Chipper Merit Score takes into account multiple factors including tuber shape, eye depth, and shape uniformity

² 1=Deep, 5=Shallow

³ 1=Round, 5=Oblong

⁴ 1= No Uniformity, 5=Very Uniform

⁵ Ratio of 10 tubers measured from 10-14 oz size category.

Table 12. Tuber Defects of Chipping Potato Entries.

Clone / Variety	Trial	Hollow Heart ¹	Vascular Discoloration ¹	Stem End Necrosis ¹	Knobs ²		Growth Crack ²	Greening ²		
		%	%	%	%		%	%		
Lamoka	WR	0.0	10.0	0.0	0.0	a	0.0	a	2.8	ab
CO11037-5W	WR	0.0	3.3	3.3	0.0	a	0.0	a	1.1	bc
CO12235-3W	WR	3.3	0.0	0.0	0.3	a	0.2	a	0.5	c
CO12293-1W	WR	0.0	6.7	0.0	0.0	a	0.5	a	3.1	a
CO13232-25W	WR	0.0	3.3	0.0	0.3	a	1.1	a	1.2	bc
AC13126-1Wadg	SWR	0.0	0.0	0.0	2.0	a	1.1	a	1.4	abc
Mean		0.6	3.9	0.6	0.4		0.5		1.7	

¹Thirty, 6-10oz tubers were evaluated from each entry.

² Percent of total tubers.

Table 13. Stand, Tuber Set, Average Tuber Size and Specific Gravity of Chipping Potato Entries.

Clone / Variety	Trial	% Stand		Tubers per Plant		Average Tuber Size (oz)		Specific Gravity	
Lamoka	WR	94.3	ab	8.0	a	6.0	c	1.085	a
CO11037-5W	WR	98.8	a	6.7	b	6.9	b	1.086	a
CO12235-3W	WR	97.5	a	6.0	b	5.8	c	1.084	a
CO12293-1W	WR	95.3	ab	6.7	b	7.1	b	1.085	a
CO13232-25W	WR	96.5	ab	8.4	a	5.7	c	1.086	a
AC13126-1Wadg	SWR	88.3	b	6.2	b	8.3	a	1.083	a
Mean		95.1		7.0		6.6		1.085	

Figure 3. 2022 Chipping Trial Entries

Lamoka	CO11037-5W	CO12235-3W
 <ul style="list-style-type: none"> • Check 	 <ul style="list-style-type: none"> • Nice tuber shape 	 <ul style="list-style-type: none"> • Round tubers
CO12293-1W	CO13232-25W	AC13126-1Wadg
 <ul style="list-style-type: none"> • 3% green potatoes 	 <ul style="list-style-type: none"> • High tuber set 	 <ul style="list-style-type: none"> • Large average tubers size

The University of California prohibits discrimination or harassment of any person on the basis of race, color, national origin, religion, sex, gender identity, pregnancy (including childbirth, and medical conditions related to pregnancy or childbirth), physical or mental disability, medical condition (cancer-related or genetic characteristics), ancestry, marital status, age, sexual orientation, citizenship, or service in the uniformed services (as defined by the Uniformed Services Employment and Reemployment Rights Act of 1994: service in the uniformed services includes membership, application for membership, performance of service, application for service, or obligation for service in the uniformed services) in any of its programs or activities. University policy also prohibits reprisal or retaliation against any person in any of its programs or activities for making a complaint of discrimination or sexual harassment or for using or participating in the investigation or resolution process of any such complaint. University policy is intended to be consistent with the provisions of applicable State and Federal laws. Inquiries regarding the University's nondiscrimination policies may be directed to the Affirmation Action/Equal Opportunity Director, University of California, Agriculture and Natural Resources, 1111 Franklin Street, 6th Floor, Oakland, CA 94607, (510) 987-0096.