

Colorado Advanced Potato Selections Data Summary

December 17, 2010

2010 Advanced Selection Evaluation Meeting

David G. Holm

San Luis Valley Research Center
Department of Horticulture & Landscape Architecture
Colorado State University



Mission Statement

"The mission of the Colorado Potato Breeding and Selection Program is to develop cultivars that will help assure that the Colorado potato industry remains productive, competitive, and sustainable and to develop cultivars that provide the consumer with improved nutrition and quality."

Table of Contents

Summary Comparisons	1
Russets	
AC96052-1RU	3
AC99375-1RU	4
CO99053-3RU	5
CO99053-4RU	6
CO99100-1RU	7
Canela Russet	8
Centennial Russet	9
Mesa Russet	10
Rio Grande Russet	11
Russet Norkotah	12
Russet Nugget	13
Reds	
CO98012-5R	14
CO99076-6R	15
CO99256-2R	16
CO00277-2R	17
CO00291-5R	18
Colorado Rose	19
Sangre-S10	20
Specialty	
AC97521-1R/Y	21
CO97226-2R/R	22
CO97232-1R/Y	23
CO97232-2R/Y	24
CO97233-3R/Y	25
CO97222-1R/R	26
CO97227-2P/PW	27
AC99329-7PW/Y	28
AC99330-1P/Y	29
CO99045-1W/Y	30
ATC00293-1W/Y	31
CO00405-1RF	32
CO00412-5W/Y	33
CO00415-1RF	34
CO01399-10P/Y	35
Mountain Rose	36
Purple Majesty	37
Yukon Gold	38

Chippers	
CO00188-4W	39
CO00197-3W	40
CO00270-7W	41
Atlantic	42
Chipeta	43
Footnotes	44
Photographs	45

Table 1. Summary comparison of advanced selections and named cultivars for yield, grade, maturity, specific gravity, and grade defects.

Clone	Usage ¹	# Trials	Total Yield (Cwt/A)	% US #1	Vine Maturity ²	Specific Gravity	% External Defects ³	% Hollow Heart ⁴
Russets								
AC96052-1RU	Dual	8	441	86	3.2	1.090	0.8	0.2
AC99375-1RU	Dual	5	512	82	3.1	1.100	1.7	0.0
CO99053-3RU	Dual	5	516	90	3.5	1.089	2.5	0.7
CO99053-4RU	Dual	5	362	84	2.1	1.085	1.4	0.0
CO99100-1RU	Dual	5	373	83	1.4	1.084	4.6	0.1
Canela Russet	FM	11	386	90	3.1	1.096	1.3	0.1
Centennial Russet	FM	35	294	77	3.0	1.080	0.8	0.3
Mesa Russet	Dual	10	419	86	2.9	1.082	1.8	2.5
Rio Grande Russet	FM	22	533	80	3.0	1.087	2.8	0.4
Russet Norkotah	FM	78	385	84	1.8	1.079	2.2	0.4
Russet Nugget	Dual	64	441	81	3.8	1.093	1.5	0.2
Reds								
CO98012-5R	FM	6	466	77	3.0	1.080	0.7	0.3
CO99076-6R	FM	5	402	76	1.5	1.086	2.2	0.0
CO99256-2R	FM	5	512	65	2.9	1.088	0.4	0.1
CO00277-2R	FM	4	419	76	1.6	1.080	0.9	0.5
CO00291-5R	FM	4	384	79	3.4	1.083	0.5	0.0
Colorado Rose	FM	14	517	85	2.7	1.082	2.7	0.3
Rio Colorado	FM	11	405	56	1.7	1.087	0.9	0.0
Sangre-S10	FM	24	542	88	3.3	1.077	1.8	1.7
Specialties								
AC97521-1R/Y	Spec	7	578	78	2.9	1.090	0.8	1.2
CO97226-2R/R	Spec	7	364	34	2.3	1.080	0.2	0.0
CO97232-1R/Y	Spec	7	420	67	2.0	1.081	0.8	0.0
CO97232-2R/Y	Spec	7	440	84	2.6	1.071	0.8	1.0
CO97233-3R/Y	Spec	7	477	73	3.3	1.082	4.0	2.3

Table 14 continued on next page

Table 1 (cont'd). Summary comparison of advanced selections and named cultivars for yield, grade, maturity, specific gravity, and grade defects.

Clone	Usage ¹	# Trials	Total Yield (Cwt/A)	% US #1	Vine Maturity ²	Specific Gravity	% External Defects ³	% Hollow Heart ⁴
CO97222-1R/R	Spec	6	394	55	2.4	1.076	1.5	0.0
CO97227-2P/PW	Spec	6	483	24	2.8	1.087	1.0	0.0
AC99329-7PW/Y	Spec	5	537	76	3.0	1.091	1.6	0.4
AC99330-1P/Y	Spec	5	503	53	2.8	1.082	0.0	0.2
CO99045-1W/Y	Spec	5	556	78	3.2	1.088	2.9	0.0
ATC00293-1W/Y	Spec	4	577	84	3.0	1.082	4.5	3.1
CO00405-1RF	Spec	4	262		1.3	1.080	2.8	0.0
CO00412-5W/Y	Spec	4	489	72	2.8	1.088	2.7	0.9
CO00415-1RF	Spec	4	357		1.3	1.075	4.3	0.0
CO01399-10P/Y	Spec	3	572	74	3.3	1.088	1.1	0.1
Mountain Rose	Spec	8	383	68	2.2	1.081	1.1	0.0
Purple Majesty	Spec	12	496	58	2.1	1.085	0.6	1.3
Yukon Gold	Spec	22	413	89	1.8	1.086	1.6	0.6
Chippers								
CO00188-4W	Chip	4	446	74	2.6	1.091	1.1	0.1
CO00197-3W	Chip	4	481	72	2.3	1.086	0.8	1.0
CO00270-7W	Chip	4	429	83	2.6	1.088	1.1	0.0
Atlantic	Chip	36	460	86	3.2	1.098	2.6	5.0
Chipeta	Chip	34	541	84	3.3	1.090	5.1	0.5

¹FM=fresh market; Dual= fresh market and processing potential; SPEC=specialty.

²Vine maturity: 1=very early; 2=early; 3=medium; 4=late; 5=very late.

³Includes defects such as second growth, growth crack, misshapen, and green.

⁴Based on tubers greater than 10 ounces.

Table 2. Detailed data summary for AC96052-1RU.

Variable	# Trials	Mean	Range	
Total Yield (Cwt/A)	8	441	355-530	
Yield US #1 (Cwt/A)	8	377	276-457	
% US #1	8	86	78-92	
Yield >10 oz (Cwt/A)	8	84	23-117	
Yield <4 oz (Cwt/A)	8	60	30-100	
% External Defects ¹	8	0.8	0.1-1.9	
% Hollow Heart ²	8	0.2	0.0-0.7	
% Stand	8	94	68-99	
Emergence Uniformity	8	2.7	1.5-3.5	
Vine Vigor ³	8	2.9	2.0-3.3	
Stems/Plant	8	2.9	2.3-3.9	
Vine Size ⁴	8	3.9	3.8-4.5	
Vine Maturity ⁵	8	3.2	2.8-3.8	
Blackspot ⁶	Bud End	9	4.0	2.7-4.8
	Stem End	9	3.0	1.4-4.0
	Average	9	3.5	
Weight Loss ⁷	9	2.5	1.0-4.9	
Dormancy ⁸	9	83	70-104	
Enzymatic Browning ⁹	9	3.8	3.2-4.2	
Specific Gravity	9	1.090	1.080-1.096	
Fry Color ¹⁰	Harvest	9	0.3	0.0-1.0
	Storage	9	0.9	0.0-2.0
Fry Texture ¹¹	Harvest	9	3.6	2.0-5.0
	Storage	9	3.6	3.0-4.0

Refer to footnotes on page 44.

Table 3. Detailed data summary for AC99375-1RU.

Variable	# Trials	Mean	Range	
Total Yield (Cwt/A)	5	512	451-545	
Yield US #1 (Cwt/A)	5	420	404-457	
% US #1	5	82	77-91	
Yield >10 oz (Cwt/A)	5	106	74-148	
Yield <4 oz (Cwt/A)	5	83	32-118	
% External Defects ¹	5	1.7	0.6-2.3	
% Hollow Heart ²	5	0.0	0.0-0.0	
% Stand	5	97	94-100	
Emergence Uniformity	5	3.2	2.8-3.8	
Vine Vigor ³	5	3.6	2.5-4.0	
Stems/Plant	5	3.8	2.1-6.3	
Vine Size ⁴	5	4.2	3.0-5.0	
Vine Maturity ⁵	5	3.1	3.0-3.5	
Blackspot ⁶	Bud End	6	4.7	3.8-5.0
	Stem End	6	4.3	3.7-4.8
	Average	6	4.5	
Weight Loss ⁷	6	2.3	1.4-2.8	
Dormancy ⁸	6	97	82-132	
Enzymatic Browning ⁹	6	3.2	1.8-4.6	
Specific Gravity	6	1.100	1.095-1.104	
Fry Color ¹⁰	Harvest	6	1.0	0.0-2.0
	Storage	6	1.3	1.0-2.0
Fry Texture ¹¹	Harvest	6	3.8	3.0-5.0
	Storage	6	3.8	3.0-5.0

Refer to footnotes on page 44.

Table 4. Detailed data summary for CO99053-3RU.

Variable	# Trials	Mean	Range	
Total Yield (Cwt/A)	5	516	456-559	
Yield US #1 (Cwt/A)	5	463	415-517	
% US #1	5	90	88-93	
Yield >10 oz (Cwt/A)	5	217	159-259	
Yield <4 oz (Cwt/A)	5	40	22-58	
% External Defects ¹	5	2.5	0.7-4.2	
% Hollow Heart ²	5	0.7	0.0-2.9	
% Stand	5	98	95-100	
Emergence Uniformity	5	3.1	3.0-3.3	
Vine Vigor ³	5	3.4	3.0-3.8	
Stems/Plant	5	4.0	2.5-5.2	
Vine Size ⁴	5	4.1	4.0-4.3	
Vine Maturity ⁵	5	3.5	3.0-4.0	
Blackspot ⁶	Bud End	6	4.8	4.3-5.0
	Stem End	6	4.1	2.8-4.9
	Average	6	4.4	
Weight Loss ⁷	6	2.0	1.2-2.5	
Dormancy ⁸	6	88	54-132	
Enzymatic Browning ⁹	6	4.1	3.2-4.6	
Specific Gravity	6	1.089	1.077-1.096	
Fry Color ¹⁰	Harvest	6	1.0	0.0-2.0
	Storage	6	2.0	1.0-3.0
Fry Texture ¹¹	Harvest	6	3.3	3.0-4.0
	Storage	6	3.3	2.0-4.0

Refer to footnotes on page 44.

Table 5. Detailed data summary for CO99053-4RU.

Variable	# Trials	Mean	Range	
Total Yield (Cwt/A)	5	362	320-403	
Yield US #1 (Cwt/A)	5	302	269-325	
% US #1	5	84	78-91	
Yield >10 oz (Cwt/A)	5	77	60-93	
Yield <4 oz (Cwt/A)	5	54	30-80	
% External Defects ¹	5	1.4	0.0-3.4	
% Hollow Heart ²	5	0.0	0.0-0.0	
% Stand	5	98	96-100	
Emergence Uniformity	5	3.2	3.0-3.3	
Vine Vigor ³	5	2.9	2.5-3.0	
Stems/Plant	5	4.0	3.1-4.6	
Vine Size ⁴	5	2.9	2.5-3.3	
Vine Maturity ⁵	5	2.1	1.3-2.8	
Blackspot ⁶	Bud End	6	4.7	3.9-5.0
	Stem End	6	4.5	4.0-5.0
	Average	6	4.6	
Weight Loss ⁷	6	2.8	1.5-3.5	
Dormancy ⁸	6	71	54-87	
Enzymatic Browning ⁹	6	4.5	4.4-4.6	
Specific Gravity	6	1.085	1.083-1.087	
Fry Color ¹⁰	Harvest	6	1.2	0.0-3.0
	Storage	6	2.0	1.0-3.0
Fry Texture ¹¹	Harvest	6	3.5	2.0-4.0
	Storage	6	3.3	2.0-4.0

Refer to footnotes on page 44.

Table 6. Detailed data summary for CO99100-1RU.

Variable	# Trials	Mean	Range	
Total Yield (Cwt/A)	5	373	338-409	
Yield US #1 (Cwt/A)	5	312	272-377	
% US #1	5	83	76-92	
Yield >10 oz (Cwt/A)	5	76	48-121	
Yield <4 oz (Cwt/A)	5	45	29-82	
% External Defects ¹	5	4.6	0.0-9.1	
% Hollow Heart ²	5	0.1	0.0-0.5	
% Stand	5	99	98-100	
Emergence Uniformity	5	3.2	3.0-3.5	
Vine Vigor ³	5	3.6	3.0-4.0	
Stems/Plant	5	3.4	2.8-4.2	
Vine Size ⁴	5	2.4	2.3-2.5	
Vine Maturity ⁵	5	1.4	1.0-2.0	
Blackspot ⁶	Bud End	6	4.5	3.8-5.0
	Stem End	6	4.8	4.5-5.0
	Average	6	4.6	
Weight Loss ⁷	6	3.3	1.4-4.3	
Dormancy ⁸	6	63	54-77	
Enzymatic Browning ⁹	6	3.8	3.4-4.6	
Specific Gravity	6	1.084	1.078-1.087	
Fry Color ¹⁰	Harvest	6	0.3	0.0-1.0
	Storage	6	1.5	1.0-2.0
Fry Texture ¹¹	Harvest	6	2.8	2.0-3.0
	Storage	6	3.2	3.0-4.0

Refer to footnotes on page 44.

Table 7. Detailed data summary for Canela Russet.

Variable	# Trials	Mean	Range	
Total Yield (Cwt/A)	11	386	332-468	
Yield US #1 (Cwt/A)	11	347	290-421	
% US #1	11	90	86-94	
Yield >10 oz (Cwt/A)	11	105	63-156	
Yield <4 oz (Cwt/A)	11	35	20-49	
% External Defects ¹	11	1.3	0.0-2.4	
% Hollow Heart ²	11	0.1	0.0-0.9	
% Stand	11	97	88-99	
Emergence Uniformity	11	3.1	2.5-3.5	
Vine Vigor ³	11	2.5	2.0-3.0	
Stems/Plant	11	1.9	1.4-2.6	
Vine Size ⁴	11	3.8	3.0-4.3	
Vine Maturity ⁵	11	3.1	2.8-3.8	
Blackspot ⁶	Bud End	14	4.6	3.7-5.0
	Stem End	14	3.9	2.5-5.0
	Average	14	4.3	
Weight Loss ⁷	14	3.8	1.3-7.0	
Dormancy ⁸	14	147	113-195	
Enzymatic Browning ⁹	14	4.4	3.4-5.0	
Specific Gravity	14	1.096	1.081-1.105	
Fry Color ¹⁰	Harvest	14	1.9	1.0-3.0
	Storage	14	2.2	1.0-3.0
Fry Texture ¹¹	Harvest	14	3.4	3.0-5.0
	Storage	14	3.6	3.0-5.0

Refer to footnotes on page 44.

Table 8. Detailed data summary for Centennial Russet.

Variable	# Trials	Mean	Range	
Total Yield (Cwt/A)	35	294	177-392	
Yield US #1 (Cwt/A)	35	229	129-320	
% US #1	35	77.4	61.9-89.0	
Yield >10 oz (Cwt/A)	35	26	4-72	
Yield <4 oz (Cwt/A)	35	62	32-102	
% External Defects ¹	35	0.8	0.0-3.3	
% Hollow Heart ²	35	0.3	0.0-3.3	
% Stand	35	97	90-99	
Emergence Uniformity	15	3.2	3.0-3.5	
Vine Vigor ³	15	2.2	1.0-3.0	
Stems/Plant	27	3.0	2.2-3.6	
Vine Size ⁴	15	2.6	2.0-3.0	
Vine Maturity ⁵	35	3.0	2.5-3.5	
Blackspot ⁶	Bud End	42	4.8	3.7-5.0
	Stem End	42	4.8	4.2-5.0
	Average	45	4.8	
Weight Loss ⁷	45	6.2	1.6-9.0	
Dormancy ⁸	38	88	57-123	
Enzymatic Browning ⁹	40	4.0	3.2-5.0	
Specific Gravity	52	1.080	1.069-1.092	
Fry Color ¹⁰	Harvest	44	3.7	3.0-4.0
	Storage	44	3.9	3.0-5.0
Fry Texture ¹¹	Harvest	44	2.3	1.0-4.0
	Storage	44	2.2	1.0-3.0

Refer to footnotes on page 44.

Table 9. Detailed data summary for Mesa Russet.

Variable	# Trials	Mean	Range	
Total Yield (Cwt/A)	10	419	345 - 478	
Yield US #1 (Cwt/A)	10	360	279 - 406	
% US #1	10	86	81 - 92	
Yield >10 oz (Cwt/A)	10	97	54 - 144	
Yield <4 oz (Cwt/A)	10	51	23 - 61	
% External Defects ¹	10	1.8	0.2 - 2.3	
% Hollow Heart ²	10	2.5	0.0 - 5.4	
% Stand	10	96	91 - 99	
Emergence Uniformity	10	3.3	3.0 - 3.8	
Vine Vigor ³	10	3.7	2.8 - 4.0	
Stems/Plant	10	3.0	2.2 - 3.7	
Vine Size ⁴	10	3.5	3.0 - 4.0	
Vine Maturity ⁵	10	2.9	2.8 - 3.0	
Blackspot ⁶	Bud End	12	4.0	2.9 - 5.0
	Stem End	12	3.8	2.7 - 5.0
	Average	12	3.9	
Weight Loss ⁷	12	3.6	1.2 - 6.8	
Dormancy ⁸	12	94	83 - 105	
Enzymatic Browning ⁹	12	4.6	4.0 - 5.0	
Specific Gravity	12	1.082	1.074 - 1.090	
Fry Color ¹⁰	Harvest	12	1.3	0.0 - 2.0
	Storage	12	1.8	1.0 - 4.0
Fry Texture ¹¹	Harvest	12	2.9	2.0 - 4.0
	Storage	12	3.1	3.0 - 4.0

Refer to footnotes on page 44.

Table 10. Detailed data summary for Rio Grande Russet.

Variable	# Trials	Mean	Range	
Total Yield (Cwt/A)	22	533	367-683	
Yield US #1 (Cwt/A)	22	426	255-603	
% US #1	22	80	65-91	
Yield >10 oz (Cwt/A)	22	122	14-275	
Yield <4 oz (Cwt/A)	22	92	33-202	
% External Defects ¹	22	2.8	0.1-8.7	
% Hollow Heart ²	22	0.4	0.0-4.1	
% Stand	22	99	96-100	
Emergence Uniformity	22	3.5	3.0-4.0	
Vine Vigor ³	22	3.6	2.0-4.5	
Stems/Plant	22	3.4	2.0-4.8	
Vine Size ⁴	22	4.1	3.5-5.0	
Vine Maturity ⁵	22	3.0	2.5-3.5	
Blackspot ⁶	Bud End	27	4.8	4.1-5.0
	Stem End	27	4.6	3.0-5.0
	Average	27	4.7	
Weight Loss ⁷	27	3.9	1.5-7.1	
Dormancy ⁸	27	91	68-120	
Enzymatic Browning ⁹	27	4.0	3.0-5.0	
Specific Gravity	27	1.087	1.078-1.094	
Fry Color ¹⁰	Harvest	27	2.2	1.0-4.0
	Storage	27	2.9	2.0-4.0
Fry Texture ¹¹	Harvest	27	3.1	2.0-4.0
	Storage	27	3.0	2.0-4.0

Refer to footnotes on page 44.

Table 11. Detailed data summary for Russet Norkotah.

Variable	# Trials	Mean	Range	
Total Yield (Cwt/A)	78	385	174-557	
Yield US #1 (Cwt/A)	78	324	144-480	
% US #1	78	84	69-92	
Yield >10 oz (Cwt/A)	78	107	23-242	
Yield <4 oz (Cwt/A)	78	52	22-131	
% External Defects ¹	78	2.2	0.0-5.3	
% Hollow Heart ²	78	0.4	0.0-2.8	
% Stand	78	98	88-100	
Emergence Uniformity	69	3.3	1.0-4.0	
Vine Vigor ³	69	2.9	1.0-4.0	
Stems/Plant	74	3.7	2.4-5.7	
Vine Size ⁴	69	2.4	1.0-4.0	
Vine Maturity ⁵	78	1.8	1.0-3.0	
Blackspot ⁶	Bud End	77	4.6	2.9-5.0
	Stem End	77	4.3	2.6-5.0
	Average	78	4.5	
Weight Loss	78	3.7	1.0-7.1	
Dormancy ⁸	77	100	78-140	
Enzymatic Browning ⁹	77	3.3	2.2-4.8	
Specific Gravity	81	1.079	1.066-1.091	
Fry Color ¹⁰	Harvest	78	2.2	1.0-4.0
	Storage	78	2.5	1.0-4.0
Fry Texture ¹¹	Harvest	78	2.7	1.0-4.0
	Storage	78	2.7	1.0-4.0

Refer to footnotes on page 44.

Table 12. Detailed data summary for Russet Nugget.

Variable	# Trials	Mean	Range	
Total Yield (Cwt/A)	64	441	284-585	
Yield US #1 (Cwt/A)	64	360	225-518	
% US #1	64	81	68-93	
Yield >10 oz (Cwt/A)	64	91	11-258	
Yield <4 oz (Cwt/A)	64	73	30-133	
% External Defects ¹	64	1.5	0.1-4.3	
% Hollow Heart ²	64	0.2	0.0-1.9	
% Stand	64	98	96-100	
Emergence Uniformity	54	3.3	2.8-4.0	
Vine Vigor ³	54	3.4	2.5-4.0	
Stems/Plant	60	3.4	2.1-5.7	
Vine Size ⁴	54	4.2	3.8-5.0	
Vine Maturity ⁵	64	3.8	3.0-4.3	
Blackspot ⁶	Bud End	76	4.7	3.0-5.0
	Stem End	76	4.5	2.1-5.0
	Average	79	4.6	
Weight Loss ⁷	79	3.1	1.1-5.5	
Dormancy ⁸	74	95	57-144	
Enzymatic Browning ⁹	75	4.0	2.8-4.8	
Specific Gravity	81	1.093	1.072-1.110	
Fry Color ¹⁰	Harvest	79	1.4	0.0-3.0
	Storage	79	1.9	1.0-3.0
Fry Texture ¹¹	Harvest	79	4.1	2.0-5.0
	Storage	79	4.0	2.0-5.0

Refer to footnotes on page 44.

Table 13. Detailed data summary for CO98012-5R.

Variable	# Trials	Mean	Range	
Total Yield (Cwt/A)	6	466	368-546	
Yield US #1 (Cwt/A)	6	358	290-426	
% US #1	6	77	66-86	
Yield >10 oz (Cwt/A)	6	50	16-105	
Yield <4 oz (Cwt/A)	6	106	65-170	
% External Defects ¹	6	0.7	0.0-1.3	
% Hollow Heart ²	6	0.3	0.0-1.1	
% Stand	6	98	95-100	
Emergence Uniformity	6	3.2	2.8-3.8	
Vine Vigor ³	6	3.1	2.8-3.5	
Stems/Plant	6	3.3	2.6-4.4	
Vine Size ⁴	6	3.4	3.0-3.8	
Vine Maturity ⁵	6	3.0	3.0-3.0	
Blackspot ⁶	Bud End	7	3.9	3.0-4.8
	Stem End	7	3.3	2.4-4.5
	Average	7	3.6	
Weight Loss ⁷	7	3.3	1.6-5.5	
Dormancy ⁸	7	63	53-77	
Enzymatic Browning ⁹	7	2.1	1.2-3.0	
Specific Gravity	7	1.080	1.073-1.082	
Fry Color ¹⁰	Harvest	7	1.9	1.0-3.0
	Storage	7	3.1	2.0-4.0
Fry Texture ¹¹	Harvest	7	2.3	2.0-3.0
	Storage	7	2.1	2.0-3.0

Refer to footnotes on page 44.

Table 14. Detailed data summary for CO99076-6R.

Variable	# Trials	Mean	Range	
Total Yield (Cwt/A)	5	402	379-448	
Yield US #1 (Cwt/A)	5	306	262-344	
% US #1	5	76	68-82	
Yield >10 oz (Cwt/A)	5	47	17-77	
Yield <4 oz (Cwt/A)	5	87	62-102	
% External Defects ¹	5	2.2	0.5-4.8	
% Hollow Heart ²	5	0.0	0.0-0.0	
% Stand	5	97	92-99	
Emergence Uniformity	5	3.3	2.8-4.0	
Vine Vigor ³	5	3.5	3.0-4.0	
Stems/Plant	5	4.2	3.6-4.8	
Vine Size ⁴	5	3.2	3.0-3.3	
Vine Maturity ⁵	5	1.5	1.0-2.0	
Blackspot ⁶	Bud End	6	3.8	3.1-4.5
	Stem End	6	2.9	2.3-3.7
	Average	6	3.3	
Weight Loss ⁷	6	6.2	1.7-7.4	
Dormancy ⁸	6	69	56-79	
Enzymatic Browning ⁹	6	1.7	1.0-2.0	
Specific Gravity	6	1.086	1.082-1.089	
Fry Color ¹⁰	Harvest	6	2.2	1.0-3.0
	Storage	6	2.8	2.0-3.0
Fry Texture ¹¹	Harvest	6	2.3	2.0-3.0
	Storage	6	1.8	1.0-2.0

Refer to footnotes on page 44.

Table 15. Detailed data summary for CO99256-2R.

Variable	# Trials	Mean	Range	
Total Yield (Cwt/A)	5	512	422-571	
Yield US #1 (Cwt/A)	5	337	235-397	
% US #1	5	65	56-70	
Yield >10 oz (Cwt/A)	5	42	9-81	
Yield <4 oz (Cwt/A)	5	173	145-200	
% External Defects ¹	5	0.4	0.2-0.8	
% Hollow Heart ²	5	0.1	0.0-0.3	
% Stand	5	98	96-100	
Emergence Uniformity	5	3.1	2.8-3.8	
Vine Vigor ³	5	3.1	2.8-3.5	
Stems/Plant	5	3.8	2.9-4.8	
Vine Size ⁴	5	4.2	3.8-4.5	
Vine Maturity ⁵	5	2.9	2.5-3.0	
Blackspot ⁶	Bud End	6	3.8	2.6-5.0
	Stem End	6	3.5	2.6-4.3
	Average	6	3.6	
Weight Loss ⁷	6	4.9	1.6-7.1	
Dormancy ⁸	6	96	84-118	
Enzymatic Browning ⁹	6	2.7	1.8-3.4	
Specific Gravity	6	1.088	1.080-1.095	
Fry Color ¹⁰	Harvest	6	1.2	1.0-2.0
	Storage	6	2.0	2.0-2.0
Fry Texture ¹¹	Harvest	6	2.8	2.0-3.0
	Storage	6	2.7	2.0-3.0

Refer to footnotes on page 44.

Table 16. Detailed data summary for CO00277-2R.

Variable	# Trials	Mean	Range	
Total Yield (Cwt/A)	4	419	380-458	
Yield US #1 (Cwt/A)	4	317	287-332	
% US #1	4	76	69-85	
Yield >10 oz (Cwt/A)	4	52	39-68	
Yield <4 oz (Cwt/A)	4	98	54-127	
% External Defects ¹	4	0.9	0.0-1.8	
% Hollow Heart ²	4	0.5	0.0-1.8	
% Stand	4	98	93-100	
Emergence Uniformity	4	2.9	2.5-3.3	
Vine Vigor ³	4	3.0	2.8-3.3	
Stems/Plant	4	4.8	3.8-5.7	
Vine Size ⁴	4	2.9	2.5-3.0	
Vine Maturity ⁵	4	1.6	1.3-2.0	
Blackspot ⁶	Bud End	5	4.4	3.9-5.0
	Stem End	5	4.3	3.7-5.0
	Average	5	4.3	
Weight Loss ⁷	5	4.8	2.7-5.9	
Dormancy ⁸	5	60	47-77	
Enzymatic Browning ⁹	5	4.2	3.6-4.6	
Specific Gravity	5	1.080	1.075-1.084	
Fry Color ¹⁰	Harvest	5	3.2	3.0-4.0
	Storage	5	4.0	4.0-4.0
Fry Texture ¹¹	Harvest	5	2.6	2.0-3.0
	Storage	5	2.4	2.0-3.0

Refer to footnotes on page 44.

Table 17. Detailed data summary for CO00291-5R.

Variable	# Trials	Mean	Range	
Total Yield (Cwt/A)	4	384	343-422	
Yield US #1 (Cwt/A)	4	304	263-325	
% US #1	4	79	75-87	
Yield >10 oz (Cwt/A)	4	25	17-30	
Yield <4 oz (Cwt/A)	4	79	45-105	
% External Defects ¹	4	0.5	0.2-0.9	
% Hollow Heart ²	4	0.0	0.0-0.0	
% Stand	4	98	97-99	
Emergence Uniformity	4	2.9	2.3-3.5	
Vine Vigor ³	4	2.8	2.3-3.3	
Stems/Plant	4	3.2	2.4-3.8	
Vine Size ⁴	4	4.1	3.5-4.3	
Vine Maturity ⁵	4	3.4	3.0-3.8	
Blackspot ⁶	Bud End	5	2.6	2.0-3.2
	Stem End	5	3.2	2.0-4.3
	Average	5	2.9	
Weight Loss ⁷	5	7.6	4.6-11.1	
Dormancy ⁸	5	76	61-87	
Enzymatic Browning ⁹	5	1.8	1.4-2.2	
Specific Gravity	5	1.083	1.072-1.089	
Fry Color ¹⁰	Harvest	5	2.2	2.0-3.0
	Storage	5	3.0	2.0-4.0
Fry Texture ¹¹	Harvest	5	2.4	1.0-3.0
	Storage	5	2.2	1.0-3.0

Refer to footnotes on page 44.

Table 18. Detailed data summary for Colorado Rose.

Variable	# Trials	Mean	Range	
Total Yield (Cwt/A)	14	517	390-641	
Yield US #1 (Cwt/A)	14	439	310-530	
% US #1	14	85	76-91	
Yield >10 oz (Cwt/A)	14	153	69-249	
Yield <4 oz (Cwt/A)	14	63	43-98	
% External Defects ¹	14	2.7	0.2-6.5	
% Hollow Heart ²	14	0.3	0.0-0.8	
% Stand	14	96	90-100	
Emergence Uniformity	14	3.0	2.5-3.5	
Vine Vigor ³	14	3.0	2.2-3.8	
Stems/Plant	14	3.5	2.3-4.5	
Vine Size ⁴	14	3.4	3.0-4.0	
Vine Maturity ⁵	14	2.7	2.0-3.8	
Blackspot ⁶	Bud End	15	3.8	2.1-4.8
	Stem End	15	3.8	2.4-5.0
	Average	15	3.8	
Weight Loss ⁷	15	5.8	1.4-8.2	
Dormancy ⁸	15	62	54-78	
Enzymatic Browning ⁹	15	4.3	3.4-5.0	
Specific Gravity	15	1.082	1.071-1.086	
Fry Color ¹⁰	Harvest	15	2.3	1.0-3.0
	Storage	14	2.9	2.0-3.0
Fry Texture ¹¹	Harvest	15	2.8	2.0-4.0
	Storage	14	2.9	2.0-3.0

Refer to footnotes on page 44.

Table 19. Detailed data summary for Sangre-S10.

Variable	# Trials	Mean	Range	
Total Yield (Cwt/A)	24	542	410-636	
Yield US #1 (Cwt/A)	24	476	358-566	
% US #1	24	88	82-93	
Yield >10 oz (Cwt/A)	24	182	101-319	
Yield <4 oz (Cwt/A)	24	56	34-90	
% External Defects ¹	24	1.8	0.3-5.7	
% Hollow Heart ²	24	1.7	0.0-8.2	
% Stand	24	97	91-100	
Emergence Uniformity	24	3.1	2.5-3.5	
Vine Vigor ³	24	2.8	1.8-3.5	
Stems/Plant	24	3.0	1.9-4.3	
Vine Size ⁴	24	4.0	3.5-4.5	
Vine Maturity ⁵	24	3.3	3.0-4.0	
Blackspot ⁶	Bud End	38	3.8	2.0-5.0
	Stem End	38	4.1	2.5-5.0
	Average	38	3.9	
Weight Loss ⁷	38	2.8	1.0-4.5	
Dormancy ⁸	38	87	56-126	
Enzymatic Browning ⁹	38	3.3	2.4-4.8	
Specific Gravity	38	1.077	1.060-1.089	
Fry Color ¹⁰	Harvest	38	3.6	2.0-4.0
	Storage	38	3.9	3.0-4.0
Fry Texture ¹¹	Harvest	38	2.2	1.0-4.0
	Storage	38	2.3	1.0-3.0

Refer to footnotes on page 44.

Table 20. Detailed data summary for AC97521-1R/Y.

Variable	# Trials	Mean	Range	
Total Yield (Cwt/A)	7	577	420-666	
Yield US #1 (Cwt/A)	7	449	319-548	
% US #1	7	78	71-89	
Yield >10 oz (Cwt/A)	7	73	22-129	
Yield <4 oz (Cwt/A)	7	123	62-167	
% External Defects ¹	7	0.8	0.0-1.7	
% Hollow Heart ²	7	1.2	0.4-1.9	
% Stand	7	97	93-100	
Emergence Uniformity	7	3.3	2.8-3.8	
Vine Vigor ³	7	3.9	3.3-4.3	
Stems/Plant	7	4.2	3.5-5.3	
Vine Size ⁴	7	4.1	3.8-4.5	
Vine Maturity ⁵	7	2.9	2.5-3.0	
Blackspot ⁶	Bud End	8	3.5	3.0-4.0
	Stem End	8	3.4	2.3-4.6
	Average	8	3.4	
Weight Loss ⁷	8	3.1	1.5-6.4	
Dormancy ⁸	8	90	62-108	
Enzymatic Browning ⁹	8	3.3	2.8-4.0	
Specific Gravity	8	1.090	1.085-1.096	
Fry Color ¹⁰	Harvest	8	4.0	4.0-4.0
	Storage	8	3.9	3.0-4.0
Fry Texture ¹¹	Harvest	8	2.5	2.0-3.0
	Storage	8	2.8	2.0-3.0

Refer to footnotes on page 44.

Table 21. Detailed data summary for CO97226-2R/R.

Variable	# Trials	Mean	Range	
Total Yield (Cwt/A)	7	364	336-406	
Yield US #1 (Cwt/A)	7	126	83-224	
% US #1	7	34	24-55	
Yield >10 oz (Cwt/A)	7	0.6	0.0-1.0	
Yield <4 oz (Cwt/A)	7	238	179-278	
% External Defects ¹	7	0.2	0.0-0.7	
% Hollow Heart ²	7	0.0	0.0-0.0	
% Stand	7	98	96-99	
Emergence Uniformity	7	3.1	3.0-3.3	
Vine Vigor ³	7	3.1	3.0-3.5	
Stems/Plant	7	4.2	3.0-5.9	
Vine Size ⁴	7	3.1	3.0-3.8	
Vine Maturity ⁵	7	2.3	1.3-3.0	
Blackspot ⁶	Bud End	--	-- --	
	Stem End	--	-- --	
	Average	--	--	
Weight Loss ⁷	8	4.9	1.9-10.6	
Dormancy ⁸	8	68	48-94	
Enzymatic Browning ⁹	--	--	-- --	
Specific Gravity	8	1.080	1.076-1.084	
Fry Color ¹⁰	Harvest	--	-- --	
	Storage	--	-- --	
Fry Texture ¹¹	Harvest	8	2.9	2.0-4.0
	Storage	8	2.6	2.0-4.0

Refer to footnotes on page 44.

Table 22. Detailed data summary for CO97232-1R/Y.

Variable	# Trials	Mean	Range	
Total Yield (Cwt/A)	7	420	352-481	
Yield US #1 (Cwt/A)	7	282	220-366	
% US #1	7	67	53-75	
Yield >10 oz (Cwt/A)	7	18	8-33	
Yield <4 oz (Cwt/A)	7	135	105-189	
% External Defects ¹	7	0.8	0.1-1.3	
% Hollow Heart ²	7	0.0	0.0-0.0	
% Stand	7	95	90-99	
Emergence Uniformity	7	3.0	2.5-3.5	
Vine Vigor ³	7	3.3	3.0-4.0	
Stems/Plant	7	3.9	2.9-4.7	
Vine Size ⁴	7	3.0	2.3-3.3	
Vine Maturity ⁵	7	2.0	1.3-2.8	
Blackspot ⁶	Bud End	8	4.4	2.9-5.0
	Stem End	8	3.4	2.6-4.2
	Average	8	3.9	
Weight Loss ⁷	8	5.0	1.6-8.1	
Dormancy ⁸	8	60	49-80	
Enzymatic Browning ⁹	8	3.8	3.4-4.4	
Specific Gravity	8	1.081	1.077-1.084	
Fry Color ¹⁰	Harvest	7	0.9	0.0-1.0
	Storage	8	1.5	1.0-2.0
Fry Texture ¹¹	Harvest	8	3.0	2.0-4.0
	Storage	8	2.8	2.0-3.0

Refer to footnotes on page 44.

Table 23. Detailed data summary for CO97232-2R/Y.

Variable	# Trials	Mean	Range	
Total Yield (Cwt/A)	7	440	416-471	
Yield US #1 (Cwt/A)	7	371	318-420	
% US #1	7	84	76-91	
Yield >10 oz (Cwt/A)	7	89	43-148	
Yield <4 oz (Cwt/A)	7	66	36-100	
% External Defects ¹	7	0.8	0.3-1.7	
% Hollow Heart ²	7	1.0	0.0-2.7	
% Stand	7	93	85-99	
Emergence Uniformity	7	3.1	2.8-3.5	
Vine Vigor ³	7	3.3	3.0- 4.0	
Stems/Plant	7	3.3	2.6-4.0	
Vine Size ⁴	7	2.6	2.0-3.0	
Vine Maturity ⁵	7	2.6	2.0-3.0	
Blackspot ⁶	Bud End	8	4.7	4.1-5.0
	Stem End	8	4.4	3.5-5.0
	Average	8	4.5	
Weight Loss ⁷	8	4.2	1.5-8.8	
Dormancy ⁸	8	69	49-94	
Enzymatic Browning ⁹	8	4.4	4.0-5.0	
Specific Gravity	8	1.071	1.069-1.075	
Fry Color ¹⁰	Harvest	8	1.1	0.0-2.0
	Storage	8	1.8	1.0-2.0
Fry Texture ¹¹	Harvest	8	2.1	1.0-3.0
	Storage	8	2.4	2.0-3.0

Refer to footnotes on page 44.

Table 24. Detailed data summary for CO97233-3R/Y.

Variable	# Trials	Mean	Range	
Total Yield (Cwt/A)	7	477	409-524	
Yield US #1 (Cwt/A)	7	351	294-425	
% US #1	7	73	61-82	
Yield >10 oz (Cwt/A)	7	83	42-133	
Yield <4 oz (Cwt/A)	7	108	67-162	
% External Defects ¹	7	4.0	2.5-6.1	
% Hollow Heart ²	7	2.3	0.3-5.2	
% Stand	7	90	80-95	
Emergence Uniformity	7	3.1	3.0-3.5	
Vine Vigor ³	7	3.6	3.3- 4.0	
Stems/Plant	7	3.8	2.6-4.6	
Vine Size ⁴	7	3.0	2.8-3.3	
Vine Maturity ⁵	7	3.3	2.8-4.0	
Blackspot ⁶	Bud End	8	4.7	4.2-5.0
	Stem End	8	4.0	3.2-5.0
	Average	8	4.4	
Weight Loss ⁷	8	3.1	1.6-6.0	
Dormancy ⁸	8	74	61-94	
Enzymatic Browning ⁹	8	4.1	3.6-4.6	
Specific Gravity	8	1.082	1.077-1.090	
Fry Color ¹⁰	Harvest	8	1.3	0.0-2.0
	Storage	8	2.0	1.0-3.0
Fry Texture ¹¹	Harvest	8	2.8	2.0-3.0
	Storage	8	2.6	2.0-3.0

Refer to footnotes on page 44.

Table 25. Detailed data summary for CO97222-1R/R.

Variable	# Trials	Mean	Range
Total Yield (Cwt/A)	6	394	349-447
Yield US #1 (Cwt/A)	6	218	151-272
% US #1	6	55	42-63
Yield >10 oz (Cwt/A)	6	22	7-37
Yield <4 oz (Cwt/A)	6	171	132-223
% External Defects ¹	6	1.5	0.0-3.0
% Hollow Heart ²	6	0.0	0.0-0.0
% Stand	6	97	94-99
Emergence Uniformity	6	3.1	2.8-3.5
Vine Vigor ³	6	2.8	2.3-3.3
Stems/Plant	6	4.0	2.9-5.1
Vine Size ⁴	6	3.0	2.8-3.0
Vine Maturity ⁵	6	2.4	2.0-3.0
Blackspot ⁶	Bud End	--	-- --
	Stem End	--	-- --
	Average	--	-- --
Weight Loss ⁷	7	3.2	1.4-4.3
Dormancy ⁸	7	84	56-132
Enzymatic Browning ⁹	--	--	-- --
Specific Gravity	7	1.076	1.073-1.078
Fry Color ¹⁰	Harvest	--	-- --
	Storage	--	-- --
Fry Texture ¹¹	Harvest	6	2.0 1.0-3.0
	Storage	6	1.8 1.0-3.0

Refer to footnotes on page 44.

Table 26. Detailed data summary for CO97227-2P/PW.

Variable	# Trials	Mean	Range
Total Yield (Cwt/A)	6	483	385-561
Yield US #1 (Cwt/A)	6	115	79-163
% US #1	6	24	20-36
Yield >10 oz (Cwt/A)	6	1	0-2.0
Yield <4 oz (Cwt/A)	6	363	288-444
% External Defects ¹	6	1.0	0.2-2.4
% Hollow Heart ²	6	0.0	0.0-0.0
% Stand	6	95	78-100
Emergence Uniformity	6	3.3	2.8-4.0
Vine Vigor ³	6	3.7	3.0-4.0
Stems/Plant	6	5.5	4.0-8.0
Vine Size ⁴	6	4.0	3.8-4.3
Vine Maturity ⁵	6	2.8	2.0-3.0
Blackspot ⁶	Bud End	--	-- --
	Stem End	--	-- --
	Average	--	--
Weight Loss ⁷	8	4.5	2.0-8.0
Dormancy ⁸	8	94	61-153
Enzymatic Browning ⁹	--	--	-- --
Specific Gravity	8	1.087	1.082-1.093
Fry Color ¹⁰	Harvest	--	-- --
	Storage	--	-- --
Fry Texture ¹¹	Harvest	6	4.0 3.0-5.0
	Storage	6	3.8 3.0-5.0

Refer to footnotes on page 44.

Table 27. Detailed data summary for AC99329-7PW/Y.

Variable	# Trials	Mean	Range	
Total Yield (Cwt/A)	5	537	463-585	
Yield US #1 (Cwt/A)	5	411	349-471	
% US #1	5	76	71-80	
Yield >10 oz (Cwt/A)	5	83	43-141	
Yield <4 oz (Cwt/A)	5	116	95-149	
% External Defects ¹	5	1.6	0.5-3.7	
% Hollow Heart ²	5	0.4	0.0-1.6	
% Stand	5	99	98-100	
Emergence Uniformity	5	3.6	3.0-4.0	
Vine Vigor ³	5	4.4	3.8-5.0	
Stems/Plant	5	5.5	3.7-7.4	
Vine Size ⁴	5	4.3	4.0-4.8	
Vine Maturity ⁵	5	3.0	2.8-3.3	
Blackspot ⁶	Bud End	6	4.2	3.1-4.9
	Stem End	6	3.3	2.6-4.5
	Average	6	3.7	
Weight Loss ⁷	6	4.1	2.0-5.1	
Dormancy ⁸	6	38	23-52	
Enzymatic Browning ⁹	6	4.1	3.0-4.6	
Specific Gravity	6	1.091	1.081-1.094	
Fry Color ¹⁰	Harvest	6	2.7	1.0-4.0
	Storage	6	2.7	2.0-3.0
Fry Texture ¹¹	Harvest	6	2.8	2.0-3.0
	Storage	6	3.3	3.0-4.0

Refer to footnotes on page 44.

Table 28. Detailed data summary for AC99330-1P/Y.

Variable	# Trials	Mean	Range	
Total Yield (Cwt/A)	5	503	480-531	
Yield US #1 (Cwt/A)	5	270	208-302	
% US #1	5	53	43-58	
Yield >10 oz (Cwt/A)	5	14	3-32	
Yield <4 oz (Cwt/A)	5	233	200-271	
% External Defects ¹	5	0.0	0.0-0.2	
% Hollow Heart ²	5	0.2	0.0-0.6	
% Stand	5	98	96-99	
Emergence Uniformity	5	3.2	3.0-3.8	
Vine Vigor ³	5	3.9	3.5-4.5	
Stems/Plant	5	5.3	4.2-6.6	
Vine Size ⁴	5	3.6	2.8-4.0	
Vine Maturity ⁵	5	2.8	2.0-3.0	
Blackspot ⁶	Bud End	6	4.7	4.0-5.0
	Stem End	6	4.2	3.7-4.8
	Average	6	4.4	
Weight Loss ⁷	6	3.2	1.4-5.0	
Dormancy ⁸	6	60	49-66	
Enzymatic Browning ⁹	6	3.2	2.4-3.6	
Specific Gravity	6	1.082	1.075-1.090	
Fry Color ¹⁰	Harvest	6	2.0	1.0-4.0
	Storage	6	3.2	3.0-4.0
Fry Texture ¹¹	Harvest	6	2.8	2.0-4.0
	Storage	6	3.2	3.0-4.0

Refer to footnotes on page 44.

Table 29. Detailed data summary for CO99045-1W/Y.

Variable	# Trials	Mean	Range	
Total Yield (Cwt/A)	5	556	503-634	
Yield US #1 (Cwt/A)	5	431	397-465	
% US #1	5	78	73-85	
Yield >10 oz (Cwt/A)	5	116	97-169	
Yield <4 oz (Cwt/A)	5	109	71-160	
% External Defects ¹	5	2.9	0.8-5.2	
% Hollow Heart ²	5	0.0	0.0-0.2	
% Stand	5	100	99-100	
Emergence Uniformity	5	3.4	3.0-3.5	
Vine Vigor ³	5	3.7	3.0-4.3	
Stems/Plant	5	4.3	3.7-6.0	
Vine Size ⁴	5	4.1	3.5-4.5	
Vine Maturity ⁵	5	3.2	3.0-3.5	
Blackspot ⁶	Bud End	6	4.6	3.8-5.0
	Stem End	6	4.4	3.8-5.0
	Average	6	4.5	
Weight Loss ⁷	6	2.4	1.4-3.1	
Dormancy ⁸	6	70	55-87	
Enzymatic Browning ⁹	6	4.6	4.0-5.0	
Specific Gravity	6	1.088	1.080-1.093	
Fry Color ¹⁰	Harvest	6	2.8	2.0-3.0
	Storage	6	3.2	2.0-4.0
Fry Texture ¹¹	Harvest	6	2.8	2.0-3.0
	Storage	6	2.8	2.0-3.0

Refer to footnotes on page 44.

Table 30. Detailed data summary for ATC00293-1W/Y.

Variable	# Trials	Mean	Range	
Total Yield (Cwt/A)	4	577	505-621	
Yield US #1 (Cwt/A)	4	484	449-517	
% US #1	4	84	80-89	
Yield >10 oz (Cwt/A)	4	130	80-185	
Yield <4 oz (Cwt/A)	4	67	47-78	
% External Defects ¹	4	4.5	1.7-6.8	
% Hollow Heart ²	4	3.1	1.2-3.8	
% Stand	4	98	95-100	
Emergence Uniformity	4	2.9	2.5-3.3	
Vine Vigor ³	4	3.4	3.0-4.0	
Stems/Plant	4	3.4	3.0-3.7	
Vine Size ⁴	4	4.1	4.0-4.3	
Vine Maturity ⁵	4	3.0	3.0-3.0	
Blackspot ⁶	Bud End	5	4.1	2.6-5.0
	Stem End	5	4.1	2.8-5.0
	Average	5	4.1	
Weight Loss ⁷	5	2.0	1.6-2.2	
Dormancy ⁸	5	118	110-129	
Enzymatic Browning ⁹	5	4.5	4.4-4.8	
Specific Gravity	5	1.082	1.075-1.085	
Fry Color ¹⁰	Harvest	5	0.8	0.0-2.0
	Storage	5	1.8	1.0-3.0
Fry Texture ¹¹	Harvest	5	2.2	1.0-3.0
	Storage	5	2.2	2.0-3.0

Refer to footnotes on page 44.

Table 31. Detailed data summary for CO00405-1RF.

Variable	# Trials	Mean	Range	
Total Yield (Cwt/A)	4	348	290-373	
Length: <2"	2	43	27-58	
Length: 2-4"	2	244	228-260	
Length: >4"-6"	2	70	40-101	
Length: >6"	2	3	0-6	
% External Defects ¹	4	2.8	0.2-4.7	
% Hollow Heart ²	4	0.0	0.0-0.0	
% Stand	4	99	98-100	
Emergence Uniformity	4	3.3	3.0-3.5	
Vine Vigor ³	4	2.8	2.0-3.8	
Stems/Plant	4	4.2	3.6-5.5	
Vine Size ⁴	4	2.2	1.8-2.8	
Vine Maturity ⁵	4	1.3	1.0-2.0	
Blackspot ⁶	Bud End	5	4.7	3.9-5.0
	Stem End	5	4.6	3.9-5.0
	Average	5	4.7	
Weight Loss ⁷	5	3.6	3.1-4.1	
Dormancy ⁸	5	74	61-87	
Enzymatic Browning ⁹	5	4.3	3.6-5.0	
Specific Gravity	5	1.080	1.077-1.086	
Fry Color ¹⁰	Harvest	5	1.4	1.0-2.0
	Storage	5	2.0	2.0-2.0
Fry Texture ¹¹	Harvest	5	3.0	2.0-5.0
	Storage	5	3.0	2.0-5.0

Refer to footnotes on page 44.

Table 32. Detailed data summary for CO00412-5W/Y.

Variable	# Trials	Mean	Range	
Total Yield (Cwt/A)	4	489	421-579	
Yield US #1 (Cwt/A)	4	353	283-448	
% US #1	4	72	61-82	
Yield >10 oz (Cwt/A)	4	66	29-108	
Yield <4 oz (Cwt/A)	4	122	75-167	
% External Defects ¹	4	2.7	0.7-3.8	
% Hollow Heart ²	4	0.9	0.0-1.9	
% Stand	4	99	98-100	
Emergence Uniformity	4	3.4	3.0-4.0	
Vine Vigor ³	4	3.9	3.5-4.3	
Stems/Plant	4	4.9	4.6-5.7	
Vine Size ⁴	4	3.6	3.0-4.0	
Vine Maturity ⁵	4	2.8	2.5-3.0	
Blackspot ⁶	Bud End	5	4.0	2.0-5.0
	Stem End	5	3.5	1.9-4.4
	Average	5	3.7	
Weight Loss ⁷	5	2.1	1.7-2.6	
Dormancy ⁸	5	77	70-87	
Enzymatic Browning ⁹	5	3.7	3.2-4.0	
Specific Gravity	5	1.088	1.077-1.094	
Fry Color ¹⁰	Harvest	5	1.6	1.0-3.0
	Storage	5	2.6	2.0-4.0
Fry Texture ¹¹	Harvest	5	2.6	2.0-3.0
	Storage	5	3.0	2.0-4.0

Refer to footnotes on page 44.

Table 33. Detailed data summary for CO00415-1RF.

Variable	# Trials	Mean	Range	
Total Yield (Cwt/A)	4	357	278-420	
Length: <2"	2	36	26-46	
Length: 2-4"	2	246	207-285	
Length: >4"-6"	2	56	19-93	
Length: >6"	2	3	0-6	
% External Defects ¹	4	4.3	2.4-7.8	
% Hollow Heart ²	4	0.0	0.0-0.0	
% Stand	4	87	54-100	
Emergence Uniformity	4	3.1	2.0-3.5	
Vine Vigor ³	4	2.9	2.5-3.3	
Stems/Plant	4	5.0	4.1-7.2	
Vine Size ⁴	4	2.4	2.0-3.3	
Vine Maturity ⁵	4	1.3	1.0-1.8	
Blackspot ⁶	Bud End	5	4.9	4.5-5.0
	Stem End	5	4.5	3.1-5.0
	Average	5	4.7	
Weight Loss ⁷	5	2.8	2.2-4.1	
Dormancy ⁸	5	94	84-105	
Enzymatic Browning ⁹	5	4.5	4.0-4.6	
Specific Gravity	5	1.075	1.071-1.078	
Fry Color ¹⁰	Harvest	5	1.8	1.0-2.0
	Storage	5	3.0	3.0-3.0
Fry Texture ¹¹	Harvest	5	2.6	2.0-4.0
	Storage	5	2.6	2.0-3.0

Refer to footnotes on page 44.

Table 34. Detailed data summary for CO01399-10P/Y.

Variable	# Trials	Mean	Range	
Total Yield (Cwt/A)	3	572	478-648	
Yield US #1 (Cwt/A)	3	424	368-511	
% US #1	3	74	66-79	
Yield >10 oz (Cwt/A)	3	64	27-117	
Yield <4 oz (Cwt/A)	3	141	105-192	
% External Defects ¹	3	1.1	0.7-1.7	
% Hollow Heart ²	3	0.1	0.0-0.2	
% Stand	3	99	96-100	
Emergence Uniformity	3	3.0	3.0-3.0	
Vine Vigor ³	3	3.2	2.5-3.5	
Stems/Plant	3	4.0	3.8-4.2	
Vine Size ⁴	3	4.2	4.0-4.8	
Vine Maturity ⁵	3	3.3	3.0-4.0	
Blackspot ⁶	Bud End	4	4.4	4.2-5.0
	Stem End	4	4.3	4.0-5.0
	Average	4	4.4	
Weight Loss ⁷	4	2.2	1.4-2.6	
Dormancy ⁸	4	93	75-111	
Enzymatic Browning ⁹	4	3.6	3.2-4.4	
Specific Gravity	4	1.088	1.077-1.081	
Fry Color ¹⁰	Harvest	4	0.8	0.0-2.0
	Storage	4	1.2	0.0-2.0
Fry Texture ¹¹	Harvest	4	3.0	2.0-4.0
	Storage	4	3.2	3.0-4.0

Refer to footnotes on page 52.

Table 35. Detailed data summary for Mountain Rose.

Variable	# Trials	Mean	Range
Total Yield (Cwt/A)	8	383	288-449
Yield US #1 (Cwt/A)	8	262	150-354
% US #1	8	68	52-79
Yield >10 oz (Cwt/A)	8	23	4-63
Yield <4 oz (Cwt/A)	8	116	91-148
% External Defects ¹	8	1.1	0.0-2.4
% Hollow Heart ²	8	0.0	0.0-0.0
% Stand	8	98	94-100
Emergence Uniformity	8	3.6	3.0-4.3
Vine Vigor ³	8	2.7	2.0-3.0
Stems/Plant	8	3.7	2.9-4.9
Vine Size ⁴	8	2.7	2.3-3.0
Vine Maturity ⁵	8	2.2	1.5-3.0
Blackspot ⁶	Bud End	---	---
	Stem End	---	---
	Average	---	---
Weight Loss ⁷	11	4.1	1.3-6.3
Dormancy ⁸	11	102	77-153
Enzymatic Browning ⁹	---	---	---
Specific Gravity	11	1.081	1.074-1.086
Fry Color ¹⁰	Harvest	---	---
	Storage	---	---
Fry Texture ¹¹	Harvest	6	2.5
	Storage	6	2.7

Refer to footnotes on page 44.

Table 36. Detailed data summary for Purple Majesty.

Variable	# Trials	Mean	Range
Total Yield (Cwt/A)	12	496	404-606
Yield US #1 (Cwt/A)	12	289	203-401
% US #1	12	58	40-72
Yield >10 oz (Cwt/A)	12	30	14-61
Yield <4 oz (Cwt/A)	12	205	122-326
% External Defects ¹	12	0.6	0.0-1.7
% Hollow Heart ²	12	1.3	0.2-3.4
% Stand	12	97	94-99
Emergence Uniformity	12	3.5	3.0-4.0
Vine Vigor ³	12	3.7	2.8-4.5
Stems/Plant	12	4.3	3.5-6.1
Vine Size ⁴	12	2.9	2.3-3.0
Vine Maturity ⁵	12	2.1	1.5-3.0
Blackspot ⁶	Bud End	---	---
	Stem End	---	---
	Average	---	---
Weight Loss ⁷	17	3.5	1.1-6.8
Dormancy ⁸	17	64	47-85
Enzymatic Browning ⁹	---	---	---
Specific Gravity	17	1.085	1.076-1.091
Fry Color ¹⁰	Harvest	---	---
	Storage	---	---
Fry Texture ¹¹	Harvest	12	2.6
	Storage	12	2.6

Refer to footnotes on page 44.

Table 37. Detailed data summary for Yukon Gold.

Variable	# Trials	Mean	Range	
Total Yield (Cwt/A)	26	413	321-513	
Yield US #1 (Cwt/A)	26	368	293-444	
% US #1	26	89	82-94	
Yield >10 oz (Cwt/A)	26	162	89-248	
Yield <4 oz (Cwt/A)	26	38	22-66	
% External Defects ¹	26	1.6	0.0-4.4	
% Hollow Heart ²	26	0.6	0.0-2.2	
% Stand	26	96	90-100	
Emergence Uniformity	26	3.2	2.5-3.8	
Vine Vigor ³	26	3.8	3.0-4.3	
Stems/Plant	26	2.5	1.6-3.8	
Vine Size ⁴	26	3.0	2.5-3.5	
Vine Maturity ⁵	26	1.8	1.0-2.8	
Blackspot ⁶	Bud End	33	4.1	2.0-5.0
	Stem End	33	3.8	2.4-5.0
	Average	33	3.9	
Weight Loss ⁷	33	2.3	1.0-4.3	
Dormancy ⁸	33	91	69-132	
Enzymatic Browning ⁹	33	4.4	3.8-5.0	
Specific Gravity	33	1.086	1.079-1.092	
Fry Color ¹⁰	Harvest	33	1.7	1.0-3.0
	Storage	33	2.8	1.0-4.0
Fry Texture ¹¹	Harvest	33	3.0	1.0-4.0
	Storage	33	3.0	1.0-4.0

Refer to footnotes on page 44.

Table 38. Detailed data summary for CO00188-4W.

Variable	# Trials	Mean	Range	
Total Yield (Cwt/A)	4	444	385-483	
Yield US #1 (Cwt/A)	4	329	270-377	
% US #1	4	74	70-83	
Yield >10 oz (Cwt/A)	4	32	12-68	
Yield <4 oz (Cwt/A)	4	110	74-133	
% External Defects ¹	4	1.1	0.5-1.9	
% Hollow Heart ²	4	0.1	0.0-0.3	
% Stand	4	99	98-100	
Emergence Uniformity	4	3.4	3.3-3.8	
Vine Vigor ³	4	3.9	3.3-4.3	
Stems/Plant	4	4.6	4.4-4.8	
Vine Size ⁴	4	3.1	3.0-3.3	
Vine Maturity ⁵	4	2.6	2.3-3.0	
Blackspot ⁶	Bud End	9	4.6	3.8-5.0
	Stem End	9	3.0	1.4-4.3
	Average	9	3.8	
Weight Loss ⁷	9	2.9	2.1-3.7	
Dormancy ⁸	9	100	84-123	
Enzymatic Browning ⁹	9	4.4	3.8-5.0	
Specific Gravity	10	1.091	1.085-1.095	
Chip Color ¹⁰	40	10	3.3	2.0-4.0
	40R	10	2.8	1.5-4.0
	50	10	1.6	1.0-2.5
	50R	10	1.7	1.0-2.5

Refer to footnotes on page 44.

Table 39. Detailed data summary for CO00197-3W.

Variable	# Trials	Mean	Range	
Total Yield (Cwt/A)	4	482	456-511	
Yield US #1 (Cwt/A)	4	346	270-394	
% US #1	4	72	59-79	
Yield >10 oz (Cwt/A)	4	59	35-95	
Yield <4 oz (Cwt/A)	4	132	99-183	
% External Defects ¹	4	0.8	0.1-1.6	
% Hollow Heart ²	4	1.0	0.0-3.2	
% Stand	4	96	93-100	
Emergence Uniformity	4	3.3	3.0-3.5	
Vine Vigor ³	4	3.8	3.3-4.3	
Stems/Plant	4	3.8	3.7-3.9	
Vine Size ⁴	4	3.3	3.0-3.5	
Vine Maturity ⁵	4	2.3	2.0-3.0	
Blackspot ⁶	Bud End	9	3.6	2.4-4.6
	Stem End	9	2.5	1.1-3.8
	Average	9	3.1	
Weight Loss ⁷	9	2.5	1.6-4.3	
Dormancy ⁸	9	87	70-109	
Enzymatic Browning ⁹	9	3.2	2.2-3.8	
Specific Gravity	10	1.086	1.079-1.090	
Chip Color ¹⁰	40	10	4.2	3.0-5.0
	40R	10	3.6	2.5-4.5
	50	10	2.3	1.0-3.5
	50R	10	2.4	1.0-4.0

Refer to footnotes on page 44.

Table 40. Detailed data summary for CO00270-7W.

Variable	# Trials	Mean	Range	
Total Yield (Cwt/A)	4	429	400-456	
Yield US #1 (Cwt/A)	4	357	326-383	
% US #1	4	83	80-88	
Yield >10 oz (Cwt/A)	4	75	68-84	
Yield <4 oz (Cwt/A)	4	68	46-76	
% External Defects ¹	4	1.1	0.4-1.7	
% Hollow Heart ²	4	0.0	0.0-0.0	
% Stand	4	95	93-99	
Emergence Uniformity	4	3.3	3.0-3.5	
Vine Vigor ³	4	3.8	3.5-4.0	
Stems/Plant	4	3.7	3.2-4.2	
Vine Size ⁴	4	3.1	3.0-3.3	
Vine Maturity ⁵	4	2.6	2.3-3.0	
Blackspot ⁶	Bud End	9	4.2	3.1-4.8
	Stem End	9	3.6	2.6-4.3
	Average	9	3.9	
Weight Loss ⁷	9	2.7	2.0-3.9	
Dormancy ⁸	9	68	54-94	
Enzymatic Browning ⁹	9	3.6	3.4-4.0	
Specific Gravity	10	1.088	1.080-1.097	
Chip Color ¹⁰	40	10	3.3	1.5-4.5
	40R	10	2.5	1.5-3.5
	50	10	1.6	1.0-3.0
	50R	10	1.5	1.0-2.0

Refer to footnotes on page 44.

Table 41. Detailed data summary for Atlantic.

Variable	# Trials	Mean	Range	
Total Yield (Cwt/A)	36	460	307-597	
Yield US #1 (Cwt/A)	36	397	265-512	
% US #1	36	86	76-93	
Yield >10 oz (Cwt/A)	36	148	58-290	
Yield <4 oz (Cwt/A)	36	50	19-109	
% External Defects ¹	36	2.6	0.1-9.1	
% Hollow Heart ²	36	5.0	0.3-16.4	
% Stand	36	96	88-100	
Emergence Uniformity	30	3.6	3.0-4.3	
Vine Vigor ³	30	3.5	2.8-4.3	
Stems/Plant	36	3.1	2.2-4.9	
Vine Size ⁴	30	3.1	2.2-4.0	
Vine Maturity ⁵	36	3.2	2.8-4.0	
Blackspot ⁶	Bud End	52	3.1	1.8-5.0
	Stem End	52	2.6	1.4-4.3
	Average	53	2.9	
Weight Loss ⁷	53	4.5	1.1-7.9	
Dormancy ⁸	51	86	62-119	
Enzymatic Browning ⁹	51	4.5	3.8-5.0	
Specific Gravity	54	1.098	1.083-1.120	
Chip Color ¹⁰	40	54	4.0	2.0-5.0
	40R	54	3.5	1.5-5.0
	50	54	2.6	1.0-4.0
	50R	54	2.5	1.0-4.0

Refer to footnotes on page 44.

Table 42. Detailed data summary for Chipeta.

Variable	# Trials	Mean	Range	
Total Yield (Cwt/A)	34	541	399-757	
Yield US #1 (Cwt/A)	34	458	306-606	
% US #1	34	84	71-90	
Yield >10 oz (Cwt/A)	34	166	52-388	
Yield <4 oz (Cwt/A)	34	56	22-119	
% External Defects ¹	34	5.1	1.1-13.0	
% Hollow Heart ²	34	0.5	0.0-4.0	
% Stand	34	98	94-100	
Emergence Uniformity	27	3.5	3.0-4.3	
Vine Vigor ³	27	4.0	3.2-5.0	
Stems/Plant	33	3.5	2.5-4.9	
Vine Size ⁴	27	4.3	4.0-5.0	
Vine Maturity ⁵	34	3.3	3.0-4.0	
Blackspot ⁶	Bud End	49	3.8	2.2-5.0
	Stem End	49	3.6	1.4-4.9
	Average	51	3.7	
Weight Loss ⁷	51	3.3	1.0-8.0	
Dormancy ⁸	47	104	77-153	
Enzymatic Browning ⁹	48	4.0	2.8-5.0	
Specific Gravity	51	1.090	1.073-1.104	
Chip Color ¹⁰	40	51	4.5	3.0-5.0
	40R	51	3.8	1.5-5.0
	50	51	2.5	1.0-4.0
	50R	51	2.3	1.0-4.0

Refer to footnotes on page 44.

Footnotes for Tables 2-42:

- ¹Percent external defects based on the proportion of the total sample weight with significant defects.
- ²Percent hollow heart calculated as follows: (Weight of tubers >10 ounces with defects/total sample weight) x 100.
- ³Vine vigor is rated on a 1 to 5 scale, with 5 indicating very vigorous vines.
- ⁴Vine size is rated on a 1 to 5 scale, with 5 indicating very large vines.
- ⁵Vine maturity is rated on the following basis: 1=very early; 2=early; 3=medium; 4=late; and 5=very late.
- ⁶Blackspot was rated on a 1 to 5 scale, with 5 indicating no discoloration.
- ⁷Tubers were stored at 45F for approximately 3 months.
- ⁸Days from harvest to first visible growth. Tubers were stored at 45F.
- ⁹Degree of darkening rated at 60 minutes after slicing fresh lengthwise. Rated on a 1 to 5 scale, with 5 indicating no discoloration.
- ¹⁰Chip color was rated using the Snack Food Association 1-5 scale. Ratings of ≤ 2.0 are acceptable. Reconditioned samples were stored at 60F for three weeks. Fry color was rated on a 0 to 4 scale, with 0 being the lightest or best color. Color ratings of ≤ 2.0 are acceptable.
- ¹¹Fry texture was rated on a 1 to 5 scale, with 5 indicating the cooked flesh was dry and mealy and 1 representing a soggy, wet texture.

Figure 1. Photographs of advanced selections.



Figure 1 (cont'd). Photographs of advanced selections.



Figure 1 (cont'd). Photographs of advanced selections.

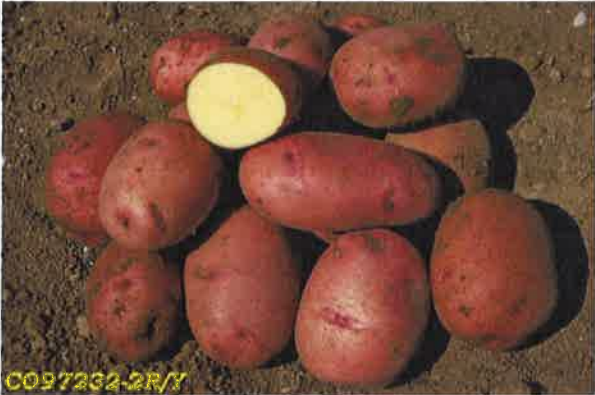
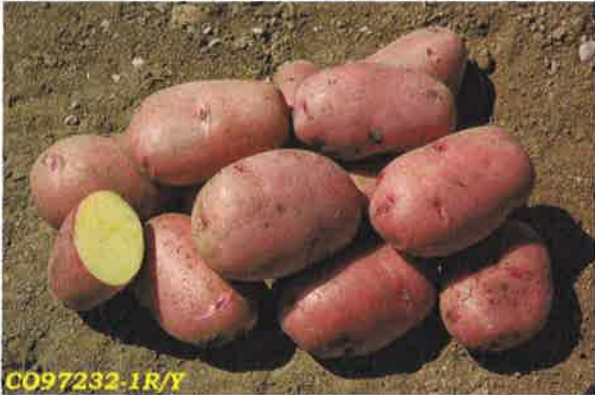


Figure 1 (cont'd). Photographs of advanced selections.

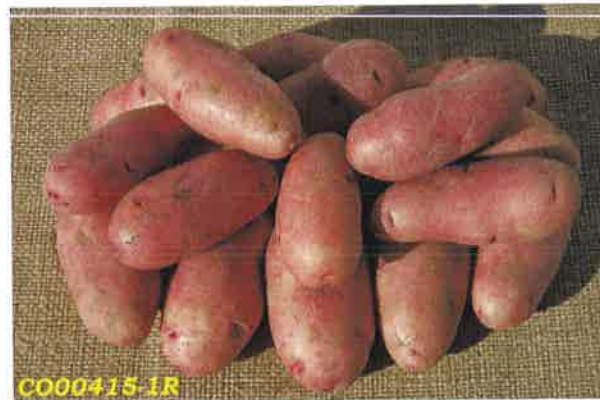
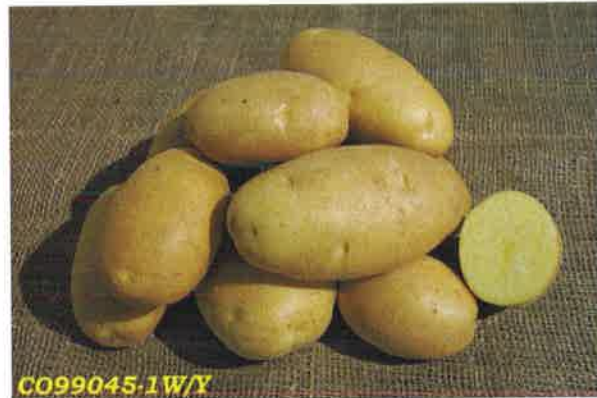


Figure 1 (cont'd). Photographs of advanced selections.



