2006 Colorado Advanced Potato Selections Data Summary

Submitted by

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to the

Colorado Potato Administrative Committee (Area II) Research Committee

and the

Colorado Potato Administrative Committee (Area III)






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Table 1. Summary comparison of advanced selections and named cultivars for yield, grade, maturity, specific gravity, and grade defects - 2006. Advanced selections that may be released for grower evaluation in 2007 are highlighted.

Clone	Usage[1]	# Trials	Total Yield (Cwt/A)	% US #1	Vine Maturity[2]	Specific Gravity	% External Defects[3]	% Hollow Heart[4]
Russets								
CO94035-15RU	Dual	8	415	85.8	2.9	1.082	2.1	3.0
CO95172-3RU	FM	6	505	81.3	3.3	1.088	1.3	0.7
AC96052-1RU	Dual	5	458	87.1	3.4	1.088	1.1	0.2
CO97087-2RU	**Dual**	**4**	**427**	**86.0**	**2.9**	**1.095**	**2.2**	**0.2**
Canela Russet	FM	11	386	89.8	3.1	1.096	1.3	0.1
Centennial Russet	FM	35	294	77.4	3.0	1.080	0.8	0.3
Rio Grande Russet	FM	12	525	82.6	3.1	1.086	3.8	0.8
Russet Norkotah	FM	63	368	84.6	1.8	1.078	2.2	0.4
Russet Nugget	Dual	60	440	81.3	3.8	1.093	1.5	0.2
Reds								
Colorado Rose	FM	12	518	83.7	2.8	1.082	3.0	0.3
Rio Colorado	FM	11	405	55.8	1.7	1.087	0.9	0.0
Sangre-S10	FM	18	541	87.5	3.4	1.075	2.3	2.1
Specialties								
VC1009-1W/Y	Spec	6	606	71.2	3.3	1.084	1.9	1.2
AC97521-1R/Y	**Spec**	**4**	**610**	**80.4**	**3.0**	**1.090**	**0.5**	**1.1**
CO97226-2R/R	**Spec**	**4**	**374**	**40.2**	**2.3**	**1.081**	**0.2**	**0.0**
CO97232-1R/Y	**Spec**	**4**	**436**	**72.3**	**2.1**	**1.081**	**0.6**	**0.0**
CO97232-2R/Y	**Spec**	**4**	**448**	**87.1**	**2.7**	**1.070**	**0.8**	**1.1**
CO97233-3R/Y	**Spec**	**4**	**509**	**74.9**	**3.5**	**1.082**	**4.6**	**3.5**
All Blue	Spec	10	531	63.0	3.0	1.084	0.7	0.2
Mountain Rose	Spec	7	382	68.3	2.1	1.081	1.3	0.0
Purple Majesty	Spec	7	485	63.8	2.0	1.083	0.8	1.7
Yukon Gold	Spec	18	407	88.2	1.8	1.085	2.0	0.7

Table 1 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 - 2006. Advanced selections that may be released for grower evaluation in 2007 are highlighted.

Clone	Usage[1]	# Trials	Total Yield (Cwt/A)	% US #1	Vine Maturity[2]	Specific Gravity	% External Defects[3]	% Hollow Heart[4]
Chippers								
CO95051-7W	Chip	6	418	86.5	3.4	1.098	1.1	0.3
CO96141-4W	Chip	5	421	89.2	2.8	1.087	1.5	0.0
CO97043-14W	**Chip**	**4**	**418**	**85.9**	**2.9**	**1.088**	**1.8**	**0.5**
CO97065-7W	**Chip**	**4**	**418**	**87.8**	**2.6**	**1.098**	**0.9**	**0.2**
Atlantic	Chip	31	455	87.2	3.2	1.097	2.8	5.6
Chipeta	Chip	29	533	83.8	3.3	1.089	5.5	0.6

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

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

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

[4]Based on tubers greater than 10 ounces.

Table 2. Detailed data summary for CO94035-15RU.

Variable		# Trials	Mean	Range
Total Yield (Cwt/A)		8	415	345-478
Yield US #1 (Cwt/A)		8	356	279-406
% US #1		8	85.8	80.8-92.1
Yield >10 oz (Cwt/A)		8	104	54-144
Yield <4 oz (Cwt/A)		8	50	23-61
% External Defects[1]		8	2.1	1.7-2.3
% Hollow Heart[2]		8	3.0	1.0-5.4
% Stand		8	96	91-99
Emergence Uniformity		8	3.3	3.0-3.8
Vine Vigor[3]		8	3.6	2.8-4.0
Stems/Plant		8	2.8	2.2-3.5
Vine Size[4]		8	3.4	3.0-3.8
Vine Maturity5		8	2.9	2.8-3.0
Blackspot[6]	Bud End	9	3.9	2.9-5.0
	Stem End	9	3.6	2.7-4.7
	Average	9	3.7	
Weight Loss[7]		9	3.8	1.2-6.8
Dormancy[8]		9	94	83-105
Enzymatic Browning[9]		9	4.6	4.0-5.0
Specific Gravity		9	1.081	1.073-1.089
Fry Color[10]	Harvest	9	1.2	0.0-2.0
	Storage	9	1.6	1.0-3.0
Fry Texture[11]	Harvest	9	2.9	2.0-3.0
	Storage	9	3.1	3.0-4.0

Refer to footnotes on page 31.

Table 3. Detailed data summary for CO95172-3RU.

Variable		# Trials	Mean	Range
Total Yield (Cwt/A)		6	505	415-547
Yield US #1 (Cwt/A)		6	411	327-450
% US #1		6	81.3	78.3-84.2
Yield >10 oz (Cwt/A)		6	98	58-138
Yield <4 oz (Cwt/A)		6	87	73-103
% External Defects[1]		6	1.3	0.2-2.2
% Hollow Heart[2]		6	0.7	0.0-2.1
% Stand		6	97	94-100
Emergence Uniformity		6	3.3	2.8-3.8
Vine Vigor[3]		6	3.0	2.5-3.5
Stems/Plant		6	2.9	2.3-3.8
Vine Size[4]		6	3.8	3.5-4.0
Vine Maturity5		6	3.3	3.0-3.5
Blackspot[6]	Bud End	7	4.6	4.3-5.0
	Stem End	7	4.2	3.5-5.0
	Average	7	4.4	
Weight Loss[7]		7	3.5	1.1-6.2
Dormancy[8]		7	83	76-91
Enzymatic Browning[9]		7	3.2	2.4-4.2
Specific Gravity		7	1.088	1.075-1.096
Fry Color[10]	Harvest	7	2.3	1.0-4.0
	Storage	7	2.0	1.0-4.0
Fry Texture[11]	Harvest	7	2.7	1.0-4.0
	Storage	7	2.9	1.0-4.0

Refer to footnotes on page 31.

Table 4. Detailed data summary for AC96052-1RU.

Variable		# Trials	Mean	Range
Total Yield (Cwt/A)		5	458	398-530
Yield US #1 (Cwt/A)		5	398	357-457
% US #1		5	87.1	84.2-89.4
Yield >10 oz (Cwt/A)		5	101	79-117
Yield <4 oz (Cwt/A)		5	54	37-69
% External Defects[1]		5	1.1	0.6-1.9
% Hollow Heart[2]		5	0.2	0.0-0.6
% Stand		5	91	68-99
Emergence Uniformity		5	2.8	1.5-3.5
Vine Vigor[3]		5	3.1	3.0-3.0
Stems/Plant		5	2.9	2.3-3.9
Vine Size[4]		5	4.0	3.8-4.5
Vine Maturity5		5	3.4	3.0-3.8
Blackspot[6]	Bud End	6	4.0	2.7-4.6
	Stem End	6	3.0	1.4-3.8
	Average	6	3.5	
Weight Loss[7]		6	2.5	1.0-4.9
Dormancy[8]		6	83	70-104
Enzymatic Browning[9]		6	3.8	3.4-4.2
Specific Gravity		6	1.090	1.080-1.096
Fry Color[10]	Harvest	6	0.3	0.0-1.0
	Storage	6	1.0	0.0-2.0
Fry Texture[11]	Harvest	6	3.7	2.0-5.0
	Storage	6	3.5	3.0-4.0

Refer to footnotes on page 31.

Table 5. Detailed data summary for CO97087-2RU.

Variable		# Trials	Mean	Range
Total Yield (Cwt/A)		4	427	404-446
Yield US #1 (Cwt/A)		4	367	334-390
% US #1		4	86.0	82.6-87.6
Yield >10 oz (Cwt/A)		4	99	77-149
Yield <4 oz (Cwt/A)		4	50	43-60
% External Defects[1]		4	2.2	1.7-2.6
% Hollow Heart[2]		4	0.2	0.0-0.7
% Stand		4	98	97-98
Emergence Uniformity		4	3.4	3.0-3.8
Vine Vigor[3]		4	3.3	3.0-3.8
Stems/Plant		4	4.0	3.1-5.4
Vine Size[4]		4	3.4	3.3-3.8
Vine Maturity5		4	2.9	2.8-3.0
Blackspot[6]	Bud End	5	4.7	4.2-5.0
	Stem End	5	4.3	2.9-4.6
	Average	5	4.5	
Weight Loss[7]		5	2.7	1.1-5.8
Dormancy[8]		5	91	76-111
Enzymatic Browning[9]		5	4.0	3.8-4.4
Specific Gravity		5	1.096	1.089-1.102
Fry Color[10]	Harvest	5	0.4	0.0-1.0
	Storage	5	0.8	0.0-2.0
Fry Texture[11]	Harvest	5	3.2	2.0-4.0
	Storage	5	3.6	3.0-4.0

Refer to footnotes on page 31.

Table 6. 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	89.8	86.4-93.5
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	0.0-0.4
% 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 Maturity5		11	3.1	2.8-3.8
Blackspot[6]	Bud End	12	4.5	3.7-5.0
	Stem End	12	3.8	2.5-5.0
	Average	12	4.2	
Weight Loss[7]		12	3.8	1.3-7.0
Dormancy[8]		12	147	113-195
Enzymatic Browning[9]		12	4.4	3.4-5.0
Specific Gravity		12	1.096	1.081-1.106
Fry Color[10]	Harvest	12	1.9	1.0-3.0
	Storage	12	2.2	1.0-3.0
Fry Texture[11]	Harvest	12	3.4	3.0-5.0
	Storage	12	3.6	3.0-5.0

Refer to footnotes on page 31.

Table 7. 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 Maturity5		35	3.0	2.5-3.5
Blackspot[6]	Bud End	39	4.8	3.7-5.0
	Stem End	39	4.8	4.2-5.0
	Average	42	4.8	
Weight Loss[7]		42	6.4	1.6-9.0
Dormancy[8]		35	87	57-123
Enzymatic Browning[9]		37	4.0	3.2-5.0
Specific Gravity		49	1.080	1.069-1.092
Fry Color[10]	Harvest	41	3.7	3.0-4.0
	Storage	41	4.0	3.0-5.0
Fry Texture[11]	Harvest	41	2.3	1.0-4.0
	Storage	41	2.2	1.0-3.0

Refer to footnotes on page 31.

Table 8. Detailed data summary for Rio Grande Russet.

Variable		# Trials	Mean	Range
Total Yield (Cwt/A)		12	525	367-683
Yield US #1 (Cwt/A)		12	437	255-603
% US #1		12	82.6	69.2-90.7
Yield >10 oz (Cwt/A)		12	148	14-275
Yield <4 oz (Cwt/A)		12	69	33-111
% External Defects[1]		12	3.8	0.7-8.7
% Hollow Heart[2]		12	0.8	0.0-4.1
% Stand		12	99	96-100
Emergence Uniformity		12	3.6	3.0-4.0
Vine Vigor[3]		12	3.6	2.0-4.5
Stems/Plant		12	3.0	2.0-3.6
Vine Size[4]		12	3.9	3.5-4.5
Vine Maturity5		12	3.1	2.5 -3.5
Blackspot[6]	Bud End	14	4.7	4.1-5.0
	Stem End	14	4.5	3.0-5.0
	Average	14	4.6	
Weight Loss[7]		14	4.7	1.5-7.1
Dormancy[8]		14	86	73-111
Enzymatic Browning[9]		14	3.9	3.0-5.0
Specific Gravity		14	1.086	1.079-1.094
Fry Color[10]	Harvest	14	2.2	1.0-4.0
	Storage	14	3.1	2.0-4.0
Fry Texture[11]	Harvest	14	3.1	2.0-4.0
	Storage	14	2.9	2.0-4.0

Refer to footnotes on page 31.

Table 9. Detailed data summary for Russet Norkotah.

Variable		# Trials	Mean	Range
Total Yield (Cwt/A)		63	368	174-557
Yield US #1 (Cwt/A)		63	312	144-444
% US #1		63	84.6	77.8-92.2
Yield >10 oz (Cwt/A)		63	100	23-212
Yield <4 oz (Cwt/A)		63	49	22-88
% External Defects[1]		63	2.2	0.0-5.3
% Hollow Heart[2]		63	0.4	0.0-2.8
% Stand		63	98	88-100
Emergence Uniformity		54	3.3	1.0-4.0
Vine Vigor[3]		54	2.7	1.0-4.0
Stems/Plant		59	3.6	2.4-4.8
Vine Size[4]		54	2.2	1.0-3.3
Vine Maturity5		63	1.8	1.0-3.0
Blackspot[6]	Bud End	62	4.6	2.9-5.0
	Stem End	62	4.4	3.1-5.0
	Average	63	4.5	
Weight Loss		63	3.9	1.0-7.1
Dormancy[8]		62	98	78-132
Enzymatic Browning[9]		62	3.3	2.2-4.8
Specific Gravity		66	1.078	1.066-1.091
Fry Color[10]	Harvest	63	2.2	1.0-4.0
	Storage	63	2.6	1.0-4.0
Fry Texture[11]	Harvest	63	2.7	1.0-4.0
	Storage	63	2.7	1.0-4.0

Refer to footnotes on page 31.

Table 10. Detailed data summary for Russet Nugget.

Variable		# Trials	Mean	Range
Total Yield (Cwt/A)		60	440	284-585
Yield US #1 (Cwt/A)		60	360	225-518
% US #1		60	81.3	68.0-93.0
Yield >10 oz (Cwt/A)		56	92	11-258
Yield <4 oz (Cwt/A)		60	72	30-133
% External Defects[1]		60	1.5	0.1-4.3
% Hollow Heart[2]		60	0.2	0.0-1.9
% Stand		60	98	96-100
Emergence Uniformity		50	3.3	2.8-4.0
Vine Vigor[3]		50	3.3	2.5-4.0
Stems/Plant		56	3.4	2.1-5.7
Vine Size[4]		50	4.2	3.8-5.0
Vine Maturity5		60	3.8	3.0-4.3
Blackspot[6]	Bud End	69	4.7	3.0-5.0
	Stem End	69	4.5	2.1-5.0
	Average	72	4.6	
Weight Loss[7]		72	3.2	1.1-5.5
Dormancy[8]		67	95	57-144
Enzymatic Browning[9]		68	4.0	2.8-4.8
Specific Gravity		74	1.093	1.072-1.110
Fry Color[10]	Harvest	72	1.5	0.0-3.0
	Storage	72	2.0	1.0-3.0
Fry Texture[11]	Harvest	72	4.0	2.0-5.0
	Storage	72	3.9	2.0-5.0

Refer to footnotes on page 31.

Table 11. Detailed data summary for Colorado Rose.

Variable		# Trials	Mean	Range
Total Yield (Cwt/A)		12	518	390-641
Yield US #1 (Cwt/A)		12	435	310-530
% US #1		12	83.7	75.6-90.7
Yield >10 oz (Cwt/A)		12	151	69-249
Yield <4 oz (Cwt/A)		12	66	43-98
% External Defects[1]		12	3.0	0.2-6.5
% Hollow Heart[2]		12	0.3	0.0-0.8
% Stand		12	96	92-100
Emergence Uniformity		12	3.0	2.5-3.5
Vine Vigor[3]		12	3.0	2.2-3.8
Stems/Plant		12	3.5	2.3-4.5
Vine Size[4]		12	3.4	3.0-4.0
Vine Maturity5		12	2.8	2.0-3.8
Blackspot[6]	Bud End	13	3.7	2.1-4.8
	Stem End	13	3.7	2.4-5.0
	Average	13	3.7	
Weight Loss[7]		13	6.1	1.4-8.2
Dormancy[8]		13	63	54-78
Enzymatic Browning[9]		13	4.2	3.4-4.8
Specific Gravity		13	1.082	1.071-1.086
Fry Color[10]	Harvest	13	2.2	1.0-3.0
	Storage	12	2.8	2.0-3.0
Fry Texture[11]	Harvest	13	2.8	2.0-4.0
	Storage	12	2.8	2.0-3.0

Refer to footnotes on page 31.

Table 12. Detailed data summary for Rio Colorado.

Variable		# Trials	Mean	Range
Total Yield (Cwt/A)		11	405	321-474
Yield US #1 (Cwt/A)		11	226	115-298
% US #1		11	55.8	28.4-72.3
Yield >10 oz (Cwt/A)		11	10	0-22
Yield <4 oz (Cwt/A)		11	175	110-289
% External Defects[1]		11	0.9	0.0-2.2
% Hollow Heart[2]		11	0.0	0.0-0.0
% Stand		11	96	92-99
Emergence Uniformity		11	3.4	3.0-4.0
Vine Vigor[3]		11	3.1	2.8-4.0
Stems/Plant		11	4.2	2.9-6.4
Vine Size[4]		11	3.1	2.5-3.8
Vine Maturity[5]		11	1.7	1.0-3.0
Blackspot[6]	Bud End	12	3.6	2.1-4.8
	Stem End	12	3.0	1.8-4.2
	Average	12	3.3	
Weight Loss[7]		12	6.6	1.2-10.2
Dormancy[8]		12	86	70-118
Enzymatic Browning[9]		12	1.4	1.0-2.4
Specific Gravity		12	1.087	1.080-1.096
Fry Color[10]	Harvest	12	1.4	1.0-3.0
	Storage	12	1.8	1.0-4.0
Fry Texture[11]	Harvest	12	2.8	2.0-4.0
	Storage	12	2.7	1.0-3.0

Refer to footnotes on page 31.

Table 13. Detailed data summary for Sangre-S10.

Variable		# Trials	Mean	Range
Total Yield (Cwt/A)		18	541	410-616
Yield US #1 (Cwt/A)		18	473	358-548
% US #1		18	87.5	82.2-92.8
Yield >10 oz (Cwt/A)		18	194	101-319
Yield <4 oz (Cwt/A)		18	55.2	34-90
% External Defects[1]		18	2.3	0.3-5.7
% Hollow Heart[2]		18	2.1	0.0-8.2
% Stand		18	96	91-100
Emergence Uniformity		18	3.0	2.5-3.5
Vine Vigor[3]		18	2.8	1.8-3.5
Stems/Plant		18	2.9	1.9-4.3
Vine Size[4]		18	3.9	3.5-4.5
Vine Maturity5		18	3.4	3.0-4.0
Blackspot[6]	Bud End	29	3.8	2.0-5.0
	Stem End	29	4.1	2.5-5.0
	Average	29	4.0	
Weight Loss[7]		29	3.0	1.0-4.5
Dormancy[8]		29	87	56-118
Enzymatic Browning[9]		29	3.3	2.6-4.8
Specific Gravity		29	1.075	1.060-1.087
Fry Color[10]	Harvest	29	3.6	2.0-4.0
	Storage	29	3.9	3.0-4.0
Fry Texture[11]	Harvest	29	2.3	1.0-4.0
	Storage	29	2.2	1.0-3.0

Refer to footnotes on page 31.

Table 14. Detailed data summary for VC1009-1W/Y.

Variable		# Trials	Mean	Range
Total Yield (Cwt/A)		6	606	553-641
Yield US #1 (Cwt/A)		6	434	327-508
% US #1		6	71.2	58.3-79.7
Yield >10 oz (Cwt/A)		6	95	42-142
Yield <4 oz (Cwt/A)		6	160	121-216
% External Defects[1]		6	1.9	0.6-4.3
% Hollow Heart[2]		6	1.2	0.0-2.6
% Stand		6	98	96-99
Emergence Uniformity		6	3.4	3.0-3.8
Vine Vigor[3]		6	4.2	3.8-4.8
Stems/Plant		6	4.2	3.1-5.4
Vine Size[4]		6	4.6	4.0-5.0
Vine Maturity5		6	3.3	3.0-3.5
Blackspot[6]	Bud End	8	4.0	3.0-4.9
	Stem End	8	3.7	2.6-5.0
	Average	8	3.9	
Weight Loss[7]		8	3.0	1.0-6.8
Dormancy[8]		8	99	84-132
Enzymatic Browning[9]		8	4.0	3.2-4.8
Specific Gravity		9	1.085	1.072-1.092
Fry Color[10]	Harvest	7	1.1	0.0-2.0
	Storage	7	1.7	1.0-3.0
Fry Texture[11]	Harvest	7	3.0	3.0-3.0
	Storage	7	3.0	2.0-4.0

Refer to footnotes on page 31.

Table 15. Detailed data summary for AC97521-1R/Y.

Variable		# Trials	Mean	Range
Total Yield (Cwt/A)		4	610	519-666
Yield US #1 (Cwt/A)		4	491	391-548
% US #1		4	80.4	74.6-88.5
Yield >10 oz (Cwt/A)		4	92	54-129
Yield <4 oz (Cwt/A)		4	116	62-166
% External Defects[1]		4	0.5	0.0-1.2
% Hollow Heart[2]		4	1.1	0.4-1.9
% Stand		4	97	93-100
Emergence Uniformity		4	3.3	2.8-3.8
Vine Vigor[3]		4	3.9	3.8-4.0
Stems/Plant		4	4.3	3.5-5.3
Vine Size[4]		4	4.2	4.0-4.5
Vine Maturity5		4	3.0	3.0-3.0
Blackspot[6]	Bud End	5	3.6	3.4-4.0
	Stem End	5	3.6	2.3-4.6
	Average	5	3.6	
Weight Loss[7]		5	3.0	1.5-6.4
Dormancy[8]		5	88	62-108
Enzymatic Browning[9]		5	3.4	2.8-4.0
Specific Gravity		5	1.089	1.085-1.096
Fry Color[10]	Harvest	5	4.0	4.0-4.0
	Storage	5	3.8	3.0-4.0
Fry Texture[11]	Harvest	5	2.4	2.0-3.0
	Storage	5	2.6	2.0-3.0

Refer to footnotes on page 31.

Table 16. Detailed data summary for CO97226-2R/R.

Variable		# Trials	Mean	Range
Total Yield (Cwt/A)		4	374	336-406
Yield US #1 (Cwt/A)		4	154	90-224
% US #1		4	40.2	26.8-55.1
Yield >10 oz (Cwt/A)		4	1	0-1
Yield <4 oz (Cwt/A)		4	220	179-253
% External Defects[1]		4	0.2	0.0-0.7
% Hollow Heart[2]		4	0.0	0.0-0.0
% Stand		4	98	96-99
Emergence Uniformity		4	3.1	3.0-3.3
Vine Vigor[3]		4	3.1	3.0-3.5
Stems/Plant		4	3.9	3.0-4.6
Vine Size[4]		4	3.3	3.0-3.8
Vine Maturity5		4	2.3	1.3-3.0
Blackspot[6]	Bud End	--	--	-- --
	Stem End	--	--	-- --
	Average	--	--	
Weight Loss[7]		5	3.9	1.9-7.8
Dormancy[8]		5	66	48-94
Enzymatic Browning[9]		--	--	-- --
Specific Gravity		5	1.080	1.076-1.084
Fry Color[10]	Harvest	--	--	-- --
	Storage	--	--	-- --
Fry Texture[11]	Harvest	5	3.0	2.0-4.0
	Storage	5	2.6	2.0-3.0

Refer to footnotes on page 31.

Table 17 . Detailed data summary for CO97232-1R/Y.

Variable		# Trials	Mean	Range
Total Yield (Cwt/A)		4	436	397-481
Yield US #1 (Cwt/A)		4	316	289-366
% US #1		4	72.3	68.5-75.3
Yield >10 oz (Cwt/A)		4	24	20-33
Yield <4 oz (Cwt/A)		4	117	105-131
% External Defects[1]		4	0.6	0.1-1.0
% Hollow Heart[2]		4	0.0	0.0-0.0
% Stand		4	95	91-99
Emergence Uniformity		4	3.2	3.0-3.5
Vine Vigor[3]		4	3.3	3.0-4.0
Stems/Plant		4	3.9	2.9-4.7
Vine Size[4]		4	3.1	3.0-3.3
Vine Maturity5		4	2.1	1.3-2.8
Blackspot[6]	Bud End	5	4.2	2.9-5.0
	Stem End	5	3.4	2.6-4.2
	Average	5	3.8	
Weight Loss[7]		5	4.7	1.6-8.1
Dormancy[8]		5	59	49-80
Enzymatic Browning[9]		5	3.8	3.4-3.8
Specific Gravity		5	1.081	1.077-1.084
Fry Color[10]	Harvest	4	1.0	1.0-1.0
	Storage	5	1.4	1.0-2.0
Fry Texture[11]	Harvest	5	3.0	2.0-4.0
	Storage	5	2.8	2.0-3.0

Refer to footnotes on page 31.

Table 18. Detailed data summary for CO97232-2R/Y.

Variable		# Trials	Mean	Range
Total Yield (Cwt/A)		4	448	416-471
Yield US #1 (Cwt/A)		4	391	354-420
% US #1		4	87.1	83.4-91.2
Yield >10 oz (Cwt/A)		4	111	72-148
Yield <4 oz (Cwt/A)		4	54	36-70
% External Defects[1]		4	0.8	0.3-1.7
% Hollow Heart[2]		4	1.1	0.0-2.7
% Stand		4	92	85-96
Emergence Uniformity		4	3.1	2.8-3.5
Vine Vigor[3]		4	3.2	3.0- 3.5
Stems/Plant		4	3.2	2.6-4.0
Vine Size[4]		4	2.8	2.5-3.0
Vine Maturity5		4	2.7	2.0-3.0
Blackspot[6]	Bud End	5	4.5	4.1-5.0
	Stem End	5	4.3	3.5-5.0
	Average	5	4.4	
Weight Loss[7]		5	4.0	1.5-8.8
Dormancy[8]		5	69	49-94
Enzymatic Browning[9]		5	4.5	4.0-5.0
Specific Gravity		5	1.070	1.069-1.072
Fry Color[10]	Harvest	5	1.4	1.0-2.0
	Storage	5	1.8	1.0-2.0
Fry Texture[11]	Harvest	5	2.2	1.0-3.0
	Storage	5	2.4	2.0-3.0

Refer to footnotes on page 31.

Table 19. Detailed data summary for CO97233-3R/Y.

Variable		# Trials	Mean	Range
Total Yield (Cwt/A)		4	509	492-524
Yield US #1 (Cwt/A)		4	383	301-425
% US #1		4	74.9	61.0-82.4
Yield >10 oz (Cwt/A)		4	104	68-133
Yield <4 oz (Cwt/A)		4	105	67-162
% External Defects[1]		4	4.6	3.2-6.1
% Hollow Heart[2]		4	3.5	1.0-5.2
% Stand		4	90	84-92
Emergence Uniformity		4	3.2	3.0-3.5
Vine Vigor[3]		4	3.7	3.3- 4.0
Stems/Plant		4	3.8	2.6-4.6
Vine Size[4]		4	3.1	3.0-3.3
Vine Maturity5		4	3.5	3.3-4.0
Blackspot[6]	Bud End	5	4.6	4.2-5.0
	Stem End	5	4.0	3.2-5.0
	Average	5	4.3	
Weight Loss[7]		5	3.2	1.6-6.0
Dormancy[8]		5	72	62-94
Enzymatic Browning[9]		5	4.2	3.8-4.6
Specific Gravity		5	1.082	1.077-1.090
Fry Color[10]	Harvest	5	1.4	1.0-2.0
	Storage	5	2.2	2.0-3.0
Fry Texture[11]	Harvest	5	2.8	2.0-3.0
	Storage	5	2.8	2.0-3.0

Refer to footnotes on page 31.

Table 20. Detailed data summary for All Blue.

Variable		# Trials	Mean	Range
Total Yield (Cwt/A)		10	531	460-639
Yield US #1 (Cwt/A)		10	336	248-422
% US #1		10	63.0	54.0-74.9
Yield >10 oz (Cwt/A)		10	52	6-90
Yield <4 oz (Cwt/A)		10	191	139-280
% External Defects[1]		10	0.7	0.1-1.8
% Hollow Heart[2]		10	0.2	0.0-1.5
% Stand		10	98	97-100
Emergence Uniformity		10	3.4	2.8-3.8
Vine Vigor[3]		10	3.6	2.8-4.0
Stems/Plant		10	4.4	3.0-6.5
Vine Size[4]		10	3.8	3.0-4.3
Vine Maturity5		10	3.0	2.2-3.3
Blackspot[6]	Bud End	---	---	--- ---
	Stem End	---	---	--- ---
	Average	---	---	
Weight Loss[7]		10	2.3	1.1-4.8
Dormancy[8]		10	103	82-167
Enzymatic Browning[9]		---	---	--- ---
Specific Gravity		10	1.085	1.076-1.091
Fry Color[10]	Harvest	---	---	--- ---
	Storage	---	---	--- ---
Fry Texture[11]	Harvest	10	2.7	2.0-4.0
	Storage	10	2.6	2.0-3.0

Refer to footnotes on page 31.

Table 21. Detailed data summary for Mountain Rose.

Variable		# Trials	Mean	Range
Total Yield (Cwt/A)		7	382	288-449
Yield US #1 (Cwt/A)		7	265	150-354
% US #1		7	68.3	51.9-78.8
Yield >10 oz (Cwt/A)		7	25	4-63
Yield <4 oz (Cwt/A)		7	112	91-136
% External Defects[1]		7	1.3	0.7-2.4
% Hollow Heart[2]		7	0.0	0.0-0.0
% Stand		7	98	94-100
Emergence Uniformity		7	3.6	3.0-4.3
Vine Vigor[3]		7	2.7	2.0-3.0
Stems/Plant		7	3.6	2.9-4.9
Vine Size[4]		7	2.6	2.3-3.0
Vine Maturity5		7	2.1	1.5-3.0
Blackspot[6]	Bud End	---	---	--- ---
	Stem End	---	---	--- ---
	Average	---		
Weight Loss[7]		10	4.1	1.3-6.3
Dormancy[8]		10	103	77-153
Enzymatic Browning[9]		---	---	--- ---
Specific Gravity		10	1.081	1.074-1.086
Fry Color[10]	Harvest	---	---	--- ---
	Storage	---	---	--- ---
Fry Texture[11]	Harvest	5	2.4	1.0-3.0
	Storage	5	2.6	2.0 3.0

Refer to footnotes on page 31.

Table 22. Detailed data summary for Purple Majesty.

Variable		# Trials	Mean	Range
Total Yield (Cwt/A)		7	485	404-606
Yield US #1 (Cwt/A)		7	313	203-401
% US #1		7	63.8	43.6-72.3
Yield >10 oz (Cwt/A)		7	31	14-61
Yield <4 oz (Cwt/A)		7	168	122-244
% External Defects[1]		7	0.8	0.0-1.7
% Hollow Heart[2]		7	1.7	0.5-3.4
% Stand		7	98	94-99
Emergence Uniformity		7	3.4	3.0-4.0
Vine Vigor[3]		7	3.5	2.8-4.0
Stems/Plant		7	4.3	3.5-6.1
Vine Size[4]		7	2.8	2.3-3.0
Vine Maturity5		7	2.0	1.5-2.8
Blackspot[6]	Bud End	---	---	--- ---
	Stem End	---	---	--- ---
	Average	---	---	
Weight Loss[7]		10	3.6	1.1-6.8
Dormancy[8]		10	67	48-85
Enzymatic Browning[9]		---	---	--- ---
Specific Gravity		10	1.083	1.076-1.088
Fry Color[10]	Harvest	---	---	--- ---
	Storage	---	---	--- ---
Fry Texture[11]	Harvest	5	1.8	1.0-3.0
	Storage	5	2.2	2.0 3.0

Refer to footnotes on page 31.

Table 23. Detailed data summary for Yukon Gold.

Variable		# Trials	Mean	Range
Total Yield (Cwt/A)		18	407	321-513
Yield US #1 (Cwt/A)		18	359	293-439
% US #1		18	88.2	81.6-94.3
Yield >10 oz (Cwt/A)		18	163	93-248
Yield <4 oz (Cwt/A)		18	39	22-66
% External Defects[1]		18	2.0	0.6-4.4
% Hollow Heart[2]		18	0.7	0.0-2.2
% Stand		18	96	94-100
Emergence Uniformity		18	3.3	2.5-3.8
Vine Vigor[3]		18	3.7	3.0-4.0
Stems/Plant		18	2.3	1.6-3.4
Vine Size[4]		18	3.0	2.5-3.3
Vine Maturity5		18	1.8	1.0-2.8
Blackspot[6]	Bud End	25	4.0	2.0-5.0
	Stem End	25	3.8	2.4-5.0
	Average	25	3.9	
Weight Loss[7]		25	2.4	1.0-4.3
Dormancy[8]		25	90	69-132
Enzymatic Browning[9]		25	4.4	3.8 5.0
Specific Gravity		25	1.085	1.079-1.091
Fry Color[10]	Harvest	25	1.6	1.0-3.0
	Storage	25	2.8	1.0-4.0
Fry Texture[11]	Harvest	25	3.0	1.0-4.0
	Storage	25	2.9	1.0-4.0

Refer to footnotes on page 31.

Table 24. Detailed data summary for CO95051-7W.

Variable		# Trials	Mean	Range
Total Yield (Cwt/A)		6	418	372-469
Yield US #1 (Cwt/A)		6	362	295-411
% US #1		6	86.5	79.1-90.0
Yield >10 oz (Cwt/A)		6	85	28-145
Yield <4 oz (Cwt/A)		6	53	37-75
% External Defects[1]		6	1.1	0.6-1.6
% Hollow Heart[2]		6	0.3	0.0-0.9
% Stand		6	94	82-99
Emergence Uniformity		6	3.1	3.0-3.5
Vine Vigor[3]		6	3.0	3.0-3.3
Stems/Plant		6	3.0	2.6-3.9
Vine Size[4]		6	3.5	3.0-4.0
Vine Maturity5		6	3.4	3.0 4.0
Blackspot[6]	Bud End	13	4.2	3.1-4.9
	Stem End	13	2.8	1.6-4.2
	Average	13	3.5	
Weight Loss[7]		13	5.2	1.7-11.0
Dormancy[8]		13	75	62-99
Enzymatic Browning[9]		13	3.6	1.8-4.4
Specific Gravity		14	1.098	1.089-1.110
Chip Color[10]	40	14	3.4	2.5-4.5
	40R	14	2.7	1.0-4.0
	50	14	2.2	1.0-4.0
	50R	14	2.0	1.0-3.5

Refer to footnotes on page 31.

Table 25. Detailed data summary for CO96141-4W.

Variable		# Trials	Mean	Range
Total Yield (Cwt/A)		5	421	397-460
Yield US #1 (Cwt/A)		5	375	361-398
% US #1		5	89.2	81.0-95.0
Yield >10 oz (Cwt/A)		5	131	104-176
Yield <4 oz (Cwt/A)		5	39	15-78
% External Defects[1]		5	1.5	1.0-2.0
% Hollow Heart[2]		5	0.0	0.0-0.0
% Stand		5	97	93-99
Emergence Uniformity		5	3.2	3.0-3.5
Vine Vigor[3]		5	2.7	2.3-3.0
Stems/Plant		5	2.6	2.1-3.2
Vine Size[4]		5	2.7	2.3-3.0
Vine Maturity5		5	2.8	2.5-3.0
Blackspot[6]	Bud End	11	4.3	2.6-5.0
	Stem End	11	3.5	2.3-5.0
	Average	11	3.9	
Weight Loss[7]		11	3.6	1.2-7.3
Dormancy[8]		11	87	69-105
Enzymatic Browning[9]		11	4.0	2.8-5.0
Specific Gravity		12	1.087	1.081-1.092
Chip Color[10]	40	12	4.0	2.5-4.5
	40R	12	3.3	2.5-4.0
	50	12	2.3	2.0-3.0
	50R	12	2.3	1.0-3.0

Refer to footnotes on page 31.

Table 26. Detailed data summary for CO97043-14W.

Variable		# Trials	Mean	Range
Total Yield (Cwt/A)		4	418	351-483
Yield US #1 (Cwt/A)		4	359	297-428
% US #1		4	85.9	84.4-88.5
Yield >10 oz (Cwt/A)		4	129	101-187
Yield <4 oz (Cwt/A)		4	51	44-64
% External Defects[1]		4	1.8	0.8-2.4
% Hollow Heart[2]		4	0.5	0.0-1.3
% Stand		4	83	69-97
Emergence Uniformity		4	2.6	1.0-3.5
Vine Vigor[3]		4	2.9	2.8-3.0
Stems/Plant		4	2.8	2.5-3.3
Vine Size[4]		4	2.9	2.8-3.0
Vine Maturity5		4	2.9	2.5-3.3
Blackspot[6]	Bud End	9	4.0	3.2-4.6
	Stem End	9	3.4	2.4-4.4
	Average	9	3.7	
Weight Loss[7]		9	4.0	1.3-7.7
Dormancy[8]		9	105	84-160
Enzymatic Browning[9]		9	4.3	3.8-4.8
Specific Gravity		10	1.088	1.083-1.093
Chip Color[10]	40	10	3.9	3.5-4.5
	40R	10	3.3	2.5-4.0
	50	10	1.9	1.0-2.5
	50R	10	2.0	1.5-2.5

Refer to footnotes on page 31.

Table 27. Detailed data summary for CO97065-7W.

Variable		# Trials	Mean	Range
Total Yield (Cwt/A)		4	418	389-443
Yield US #1 (Cwt/A)		4	367	337-393
% US #1		4	87.8	86.4-88.8
Yield >10 oz (Cwt/A)		4	106	78-123
Yield <4 oz (Cwt/A)		4	46	41-49
% External Defects[1]		4	0.9	0.2-1.6
% Hollow Heart[2]		4	0.2	0.0-0.8
% Stand		4	96	95-96
Emergence Uniformity		4	3.1	3.0-3.5
Vine Vigor[3]		4	3.4	3.3-3.5
Stems/Plant		4	3.1	2.5-4.2
Vine Size[4]		4	3.1	3.0-3.3
Vine Maturity5		4	2.6	2.0-3.0
Blackspot[6]	Bud End	9	4.5	3.9-4.9
	Stem End	9	3.4	1.9-4.6
	Average	9	3.9	
Weight Loss[7]		9	2.9	1.3-6.4
Dormancy[8]		9	124	90-160
Enzymatic Browning[9]		9	4.5	4.0-5.0
Specific Gravity		10	1.098	1.093-1.103
Chip Color[10]	40	10	4.1	3.0-5.0
	40R	10	3.4	3.0-4.0
	50	10	2.1	1.0-3.0
	50R	10	2.1	1.5-3.0

Refer to footnotes on page 31.

Table 28. Detailed data summary for Atlantic.

Variable		# Trials	Mean	Range
Total Yield (Cwt/A)		31	455	307-597
Yield US #1 (Cwt/A)		31	396	265-512
% US #1		31	87.2	79.0-93.2
Yield >10 oz (Cwt/A)		31	158	58-290
Yield <4 oz (Cwt/A)		31	45	19-96
% External Defects[1]		31	2.8	0.1-9.1
% Hollow Heart[2]		31	5.6	0.3-16.4
% Stand		31	96	88-99
Emergence Uniformity		25	3.6	3.0-4.3
Vine Vigor[3]		25	3.4	2.8-4.3
Stems/Plant		31	3.0	2.2-4.2
Vine Size[4]		25	3.1	2.2-4.0
Vine Maturity5		31	3.2	2.8-4.0
Blackspot[6]	Bud End	44	3.1	1.8-5.0
	Stem End	44	2.7	1.4-4.3
	Average	45	2.9	
Weight Loss[7]		45	4.7	1.1-7.9
Dormancy[8]		42	84	62-116
Enzymatic Browning[9]		43	4.5	3.8-5.0
Specific Gravity		46	1.097	1.083-1.120
Chip Color[10]	40	46	3.9	2.0-5.0
	40R	46	3.3	1.5-4.5
	50	46	2.6	1.0-4.0
	50R	46	2.4	1.0-4.0

Refer to footnotes on page 31.

Table 29. Detailed data summary for Chipeta.

Variable		# Trials	Mean	Range
Total Yield (Cwt/A)		29	533	399-757
Yield US #1 (Cwt/A)		29	448	306-606
% US #1		29	83.7	70.6-90.4
Yield >10 oz (Cwt/A)		29	169	52-388
Yield <4 oz (Cwt/A)		29	55	22-119
% External Defects[1]		29	5.5	1.1-13.0
% Hollow Heart[2]		29	0.6	0.0-4.0
% Stand		29	98	95-100
Emergence Uniformity		22	3.5	3.0-4.3
Vine Vigor[3]		22	4.0	3.2-5.0
Stems/Plant		28	3.5	2.5-4.9
Vine Size[4]		22	4.2	4.0-4.5
Vine Maturity5		29	3.3	3.0-4.0
Blackspot[6]	Bud End	41	3.8	2.2-5.0
	Stem End	41	3.6	1.4-4.9
	Average	43	3.7	
Weight Loss[7]		43	3.4	1.0-8.0
Dormancy[8]		39	103	77-153
Enzymatic Browning[9]		40	3.9	2.8-5.0
Specific Gravity		43	1.089	1.073-1.102
Chip Color[10]	40	43	4.4	3.0-5.0
	40R	43	3.6	1.5-5.0
	50	43	2.5	1.0-4.0
	50R	43	2.2	1.0-4.0

Refer to footnotes on page 31.

Footnotes for Tables 2-29:

[1]Percent external defects based on the proportion of the total sample weight with significant defects.

[2]Percent hollow heart calculated as follows: (Weight of tubers >10 ounces with defects/total sample weight) x 100.

[3]Vine vigor is rated on a 1 to 5 scale, with 5 indicating very vigorous vines.

[4]Vine size is rated on a 1 to 5 scale, with 5 indicating very large vines.

[5]Vine maturity is rated on the following basis: 1=very early; 2=early; 3=medium; 4=late; and 5=very late.

[6]Blackspot was rated on a 1 to 5 scale, with 5 indicating no discoloration.

[7]Tubers were stored at 45F for approximately 3 months.

[8]Days from harvest to first visible growth. Tubers were stored at 45F.

[9]Degree of darkening rated at 60 minutes after slicing fresh lengthwise. Rated on a 1 to 5 scale, with 5 indicating no discoloration.

[10]Chip 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.

[11]Fry 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 and recently named cultivars - 2006.

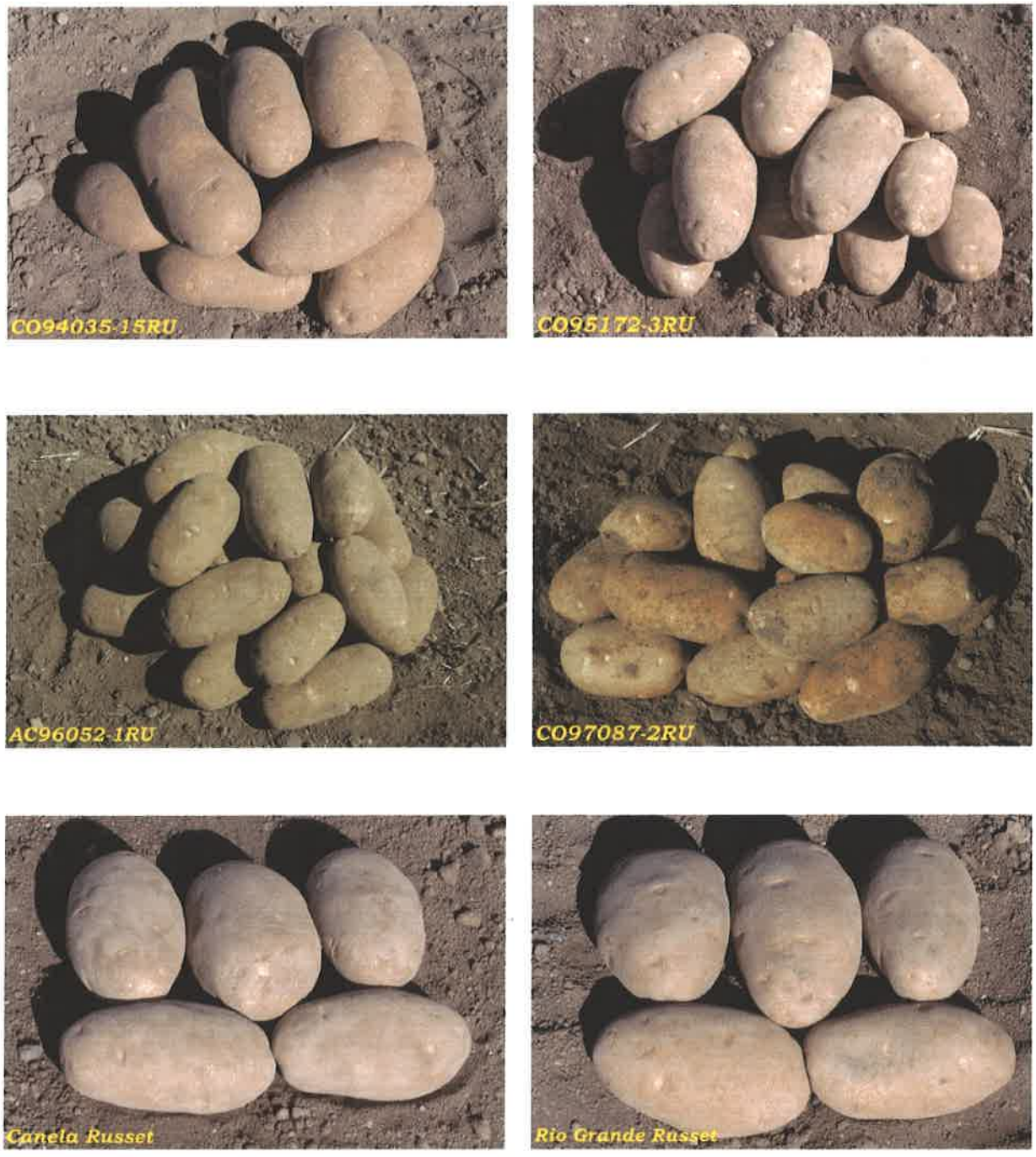

Figure 1 (cont'd). Photographs of advanced selections and recently named cultivars - 2006.

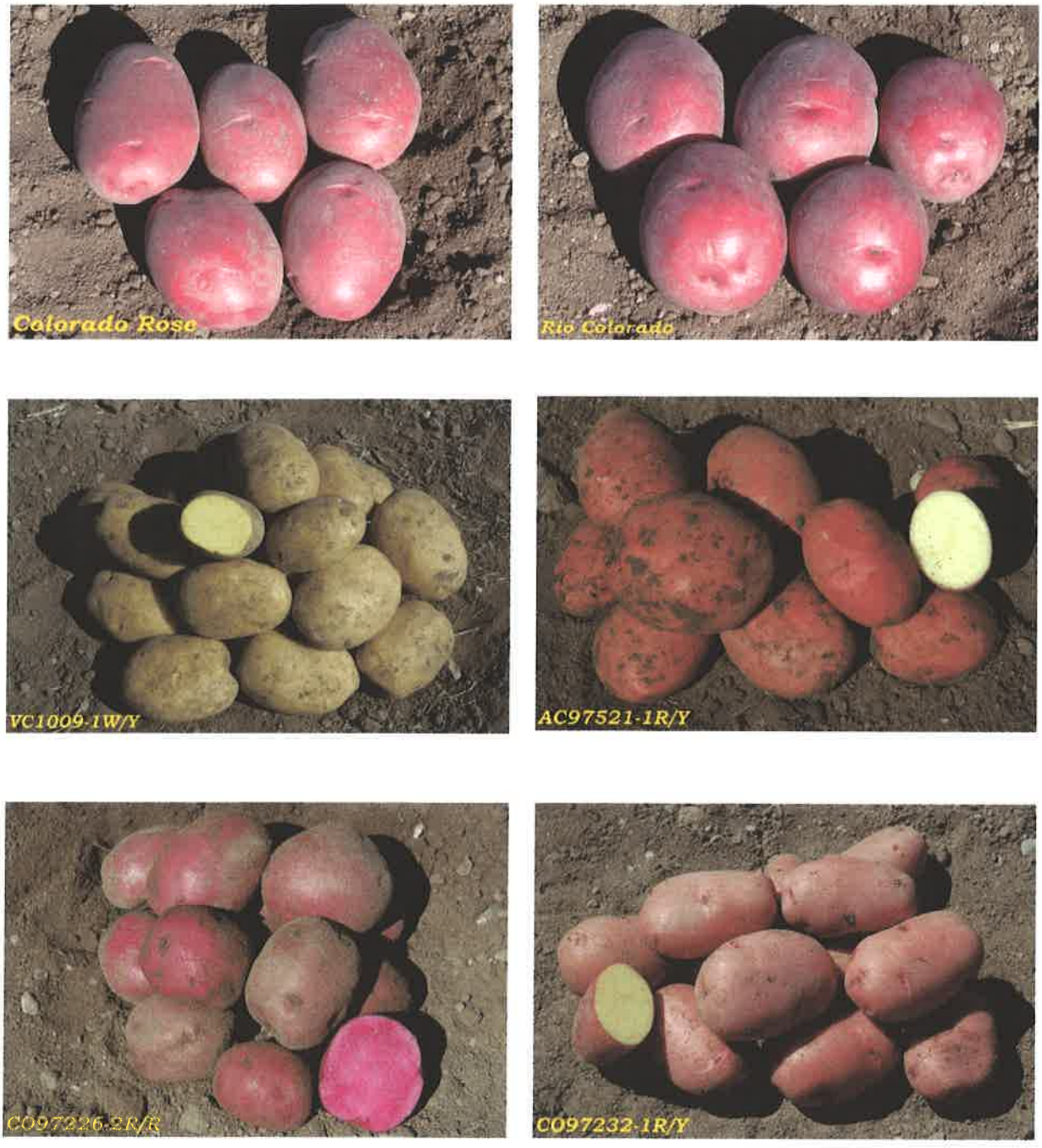

Figure 1 (cont'd). Photographs of advanced selections and recently named cultivars - 2006.

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