

**TUBER YIELD AND QUALITY  
PERFORMANCE OF SOME ADVANCE  
POTATO BREEDING SELECTIONS  
AND RELEASED CULTIVARS**

**2006**

***DR. SAMUEL Y.C. ESSAH, RESEARCH SCIENTIST***

**COLORADO STATE UNIVERSITY  
SAN LUIS VALLEY RESEARCH CENTER  
CENTER, COLORADO**

## TABLE OF CONTENTS

	Page
<b>RUSSETS</b>	
CO94035-15RU	
Vine kill management	2
CO95172-3RU	
Vine kill management	3
Plant population management	4
AC96052-1RU	
Vine kill management	5
Plant population management	6
<b>CO97087-2RU</b>	
Tuber yield and quality	7
CANELA RUSSET (AC92009-4RU)	
Nitrogen application rate	8
Pre-plant nitrogen rate	9
Seed management	10
<b>REDS</b>	
COLORADO ROSE	
Nitrogen application rate	11-12
In-season nitrogen application timing	13-15
Vine kill management	16-17
Seed management	17-18
Plant population management	18-19
RIO COLORADO (NDC5281-2R)	
Seed management	20
Nitrogen rate	21
Plant population management	21
<b>SPECIALTIES</b>	
VC1009-1W/Y	
Tuber yield and quality	22
VC1123-2W/Y	
Tuber yield and quality	23
AC97521-1R/Y	
Tuber yield and quality	24
CO97226-2R/R	
Tuber yield and quality	25
CO97232-1R/Y	
Tuber yield and quality	26
CO97232-2R/Y	
Tuber yield and quality	27
CO97233-3R/Y	
Tuber yield and quality	28
<b>CHIPPERS</b>	
CO96141-4W	
Tuber yield and quality	29
CO97043-14W	
Tuber yield and quality	30
CO97065-7W	
Tuber yield and quality	31

Table 1. Effect of vine kill timing on yield and tuber size distribution of CO94035-15RU, 2006.

Vine kill (DAP) <sup>1</sup>	Total	Yield(cwt/ac)							
		< 4 oz	> 4 oz	4 – 16 oz	4 – 10 oz	10 – 16 oz	6 - 12 oz	12 – 16 oz	> 16 oz
90	402	123	279	279	279	0	128	0	0
100	453	105	348	348	343	5	164	0	0
110	466	100	366	366	341	25	187	10	0
120	461	102	359	359	328	31	195	15	0

<sup>1</sup>Days after planting

Table 2. Effect of vine kill timing on tuber quality of CO94035-15RU, 2006

Vine kill (DAP) <sup>1</sup>	% External Defects <sup>2</sup>		% Internal Defects <sup>3</sup>		Specific Gravity
	0	2.8	0	1.2	
90	0	2.8	0	1.2	1.066
100	0	0.6	0	1.2	1.073
110	0	0.6	0	1.2	1.075
120	0	2.8	0	1.2	1.074

<sup>1</sup>Days after planting

<sup>2</sup>Includes growth cracks, knobs, misshapes

<sup>3</sup>Includes hollow heart, brown center

Table 3. Effect of vine kill timing on yield and tuber size distribution of CO95172-3RU, 2006.

Vine kill (DAP) <sup>1</sup>	Total	Yield(cwt/ac)								
		< 4 oz	> 4 oz	4 – 16 oz	4 – 10 oz	10 – 16 oz	6 - 12 oz	12 – 16 oz	> 16 oz	
90	353	215	138	138	138	0	44	0	0	
100	489	220	269	269	225	44	113	15	0	
110	497	177	320	320	284	36	151	18	0	
120	441	151	290	277	249	28	123	10	13	
<sup>1</sup> Days after planting										

Table 4. Effect of vine kill timing on tuber quality of CO95172-3RU, 2006

Vine kill (DAP) <sup>1</sup>	% External Defects <sup>2</sup>	% Internal Defects <sup>3</sup>	Specific Gravity
90	2.3	0.7	1.065
100	2.7	1.6	1.077
110	1.6	0.6	1.077
120	4.0	1.1	1.079

<sup>1</sup>Days after planting

<sup>2</sup>Includes growth cracks, knobs, misshapes

<sup>3</sup>Includes hollow heart, brown center

Table 5. Effect of seed piece spacing on yield and tuber size distribution of CO95172-3RU, 2006

Seed spacing (inches)	Total	< 4 oz	> 4 oz	Yield (cwt/ac)						
				4 - 16 oz	4 - 10 oz	10 - 16 oz	6 - 12 oz	12 - 16 oz	> 16 oz	
10	420	195	225	225	220	5	87	0	0	
12	405	167	238	238	215	23	103	5	0	
14	387	141	246	246	233	13	97	0	0	

Table 6. Effect of seed piece spacing on tuber quality of CO95172-3RU, 2006

Seed spacing (inches)	% External Defects <sup>1</sup>	% Internal Defects <sup>2</sup>	Specific Gravity
12	1.4	0	1.086
14	1.5	0	1.088

<sup>1</sup>Includes growth cracks, knobs, misshapes

<sup>2</sup>Includes hollow heart, brown center

Table 7. Effect of vine kill timing on yield and tuber size distribution of AC96052-1RU, 2006.

Vine kill (DAP) <sup>1</sup>	Total	Yield(cwt/ac)								
		< 4 oz	> 4 oz	4 - 16 oz	4 - 10 oz	10 - 16 oz	6 - 12 oz	12 - 16 oz	> 16 oz	
90	272	128	144	144	144	0	46	0	0	
100	384	105	279	279	248	31	136	15	0	
110	451	82	369	369	315	54	236	15	0	
120	361	64	297	292	274	18	159	10	5	
Days after planting										

Table 8. Effect of vine kill timing on tuber quality of AC96052-1RU, 2006

Vine kill (DAP) <sup>1</sup>	% External Defects <sup>2</sup>	% Internal Defects <sup>3</sup>	Specific Gravity
90	0	0	1.067
100	0	0.7	1.076
110	0.5	0	1.080
120	0	2.9	1.083
Days after planting			

<sup>1</sup>Includes growth cracks, knobs, missshapes

<sup>2</sup>Includes hollow heart, brown center

Table 9. Effect of seed piece spacing on yield and tuber size distribution of AC96052-1RU, 2006

Seed spacing (inches)	Total	Yield (cwt/ac)							
		< 4 oz	> 4 oz	4 - 16 oz	4 - 10 oz	10 - 16 oz	6 - 12 oz	12 - 16 oz	> 16 oz
10	394	120	274	274	264	10	136	10	0
12	405	108	297	297	274	23	146	18	0
14	372	77	295	295	246	49	156	10	0

Table 10. Effect of seed piece spacing on tuber quality of AC96052-1RU, 2006

Seed spacing (inches)	% External Defects <sup>1</sup>		% Internal Defects <sup>2</sup>		Specific Gravity
10	0	0	0	0	1.087
12	0	0	0	0	1.089
14	0	0	0	0	1.089

<sup>1</sup>Includes growth cracks, knobs, misshapes

<sup>2</sup>Includes hollow heart, brown center

Table 11. Yield and tuber size distribution of CO97087-2RU grown under different management practices, 2006.

Field number	Total	< 4 oz	> 4 oz	Yield (cwt/ac)						
				4 - 16 oz	4 - 10 oz	10 - 16 oz	6 - 12 oz	12 - 16 oz	> 16 oz	
1	384	199	185	185	185	0	69	0	0	
2	561	69	492	477	362	115	346	38	15	
3	399	138	261	261	261	0	115	0	0	
4	453	161	292	292	292	0	115	0	0	
5	623	123	500	500	354	146	354	38	0	
6	476	138	338	338	315	23	146	8	0	
<b>Mean</b>	<b>483</b>	<b>138</b>	<b>345</b>	<b>342</b>	<b>295</b>	<b>47</b>	<b>191</b>	<b>14</b>	<b>3</b>	

Table 12. Tuber quality of CO97087-2RU grown under different management practices, 2006.

Field number	% External Defects <sup>1</sup>	% Internal Defects <sup>2</sup>
1	0	2
2	0	0
3	0	0
4	0	0
5	0	0
6	0	0
<b>Mean</b>	<b>0</b>	<b>0.3</b>

<sup>1</sup> Includes growth cracks, knobs, misshapes

<sup>2</sup> Includes hollow heart, brown center



Table 13. Effect of Nitrogen rate on yield and tuber size distribution of Canela Russet (AC92009-4RU), 2006.

Nitrogen rate (lb/ac)	Total	< 4 oz	> 4 oz	Yield(cwt/ac)						
				4 - 16 oz	4 - 10 oz	10 - 16 oz	6 - 12 oz	12 - 16 oz	> 16 oz	
0 N	359	54	305	305	274	31	205	18	0	
60 N	484	38	446	428	323	105	325	33	18	
120 N	418	44	374	364	249	115	220	72	10	
180 N	417	38	379	372	264	108	249	51	8	
240 N	397	51	346	346	264	82	223	36	0	

Table 14. Effect of Nitrogen rate on tuber quality of Canela Russet (AC92009-4RU), 2006.

Nitrogen Rate (lb/ac)	% External Defects <sup>1</sup>	% Internal Defects <sup>2</sup>	Specific Gravity
60 N	0	0	1.096
120 N	0	0	1.095
180 N	1.1	0	1.090
240 N	0	0	1.092

<sup>1</sup> Includes growth cracks, knobs, misshapes

<sup>2</sup> Includes hollow heart, brown center

Table 15. Effect of Pre-plant nitrogen application rate on yield and tuber size distribution of Canela Russet (ACC92009-4RU), 2006

Pre-plant Nitrogen Rate (lb/ac)	Total	< 4 oz	> 4 oz	(cwt/ac)						
				4 - 16 oz	4 - 10 oz	10 - 16 oz	6 - 12 oz	12 - 16 oz	> 16 oz	
0 N	269	51	218	218	185	33	110	5	0	
60 N	348	38	310	297	238	59	208	21	13	
80 N	412	38	374	361	269	92	259	31	13	
100 N	387	49	338	331	267	64	226	15	7	

Table 16. Effect of Pre-plant nitrogen application rate on tuber quality of Canela Russet (ACC92009-4RU), 2006

Pre-plant nitrogen rate (lb/ac)	% External Defects <sup>1</sup>	% Internal Defects <sup>2</sup>	Specific Gravity
0 N	0	0	1.092
60 N	0	0	1.090
80 N	0.6	0	1.093
100 N	0	1.4	1.094

<sup>1</sup> Includes growth cracks, knobs, misshapes

<sup>2</sup> Includes hollow heart, brown center

Table 17. Effect of single drop or cut seed on yield and tuber size distribution of Canela Russet (ACC92009-4RU), 2006

Treatment	Total	< 4 oz	> 4 oz	Yield (cwt/ac)						
				4 - 16 oz	4 - 10 oz	10 - 16 oz	6 - 12 oz	12 - 16 oz	> 16 oz	
Single drop	364	62	302	302	248	54	179	36	0	
Cut seed	371	51	320	320	271	49	205	26	0	

Table 18. Effect of single drop or cut seed on tuber quality of Canela Russet (ACC92009-4RU), 2006

Treatment	% External Defects <sup>1</sup>	% Internal Defects <sup>2</sup>	Specific Gravity
Single drop	0	0	1.092
Cut seed	0	0	1.093

<sup>1</sup>Includes growth cracks, knobs, misshapes

<sup>2</sup>Includes hollow heart, brown center

Table 19. Effect of nitrogen application rate on yield and tuber size distribution of Colorado Rose, 2006.

Nitrogen Rate (lb/ac)	Total	< 4 oz	> 4 oz	Yield(cwt/ac)						
				4 – 16 oz	4 – 10 oz	10 – 16 oz	6 – 12 oz	12 – 16 oz	> 16 oz	
0 N	453	92	361	361	318	44	200	23	0	
60 N	516	85	431	423	320	103	236	67	8	
120 N	548	79	469	448	356	92	269	56	21	
180 N	515	74	441	428	356	72	259	33	13	
240 N	523	90	433	433	351	82	264	33	0	

Table 20. Effect of nitrogen application rate on tuber quality of Colorado Rose, 2006.

Nitrogen rate (lb/ac)	% External Defects <sup>1</sup>	% Internal Defects <sup>2</sup>	Specific Gravity
0 N	1.1	0	1.084
60 N	1.0	0	1.081
120 N	0.8	1.6	1.077
180 N	2.4	0	1.075
240 N	1.0	0	1.076

<sup>1</sup> Includes growth cracks, knobs, misshapes

<sup>2</sup> Includes hollow heart, brown center

Table 21. Effect of nitrogen application rate on tuber diameter of Colorado Rose, 2006

Nitrogen rate (lb/ac)	Yield(cwt/ac)				
	< 2ins. dia. <sup>1</sup>	2 – 4ins. dia.	> 4ins. dia	> 2ins. dia < 10 oz	> 2ins. dia. > 10 oz
0 N	51	397	0	353	44
60 N	51	446	0	338	108
120 N	49	482	0	378	104
180 N	41	456	0	374	82
240 N	49	464	0	387	77

<sup>1</sup> = diameter

Table 22. Effect of in-season nitrogen application timing on yield and tuber size distribution of Colorado Rose, 2006.

Application Timing <sup>1</sup>	Total	< 4 oz	> 4 oz	Yield(cwt/ac)					
				4 - 16 oz	4 - 10 oz	10 - 16 oz	6 - 12 oz	12 - 16 oz	> 16 oz
Pre-tuberization	512	92	420	405	308	97	256	49	15
At tuberization	592	110	482	451	359	92	292	36	31
After tuberization	546	113	433	423	361	62	277	28	10

<sup>1</sup>A total of 140 lb N/ac was applied in four split applications. Sixty pounds N/ac was applied pre-plant. After the initial in-season N application, subsequent split applications were done at two weeks interval until the total rate of 140 lb N/ac was attained.

Table 23. Effect of in-season nitrogen application timing on tuber quality of Colorado Rose, 2006.

Nitrogen Application Timing <sup>1</sup>	% External Defects <sup>2</sup>	% Internal Defects <sup>3</sup>	Specific Gravity
Pre-tuberization	1.1	0	1.077
At tuberization	3.8	0	1.077
After tuberization	0	0	1.075

<sup>1</sup>A total of 140 lb N/ac was applied in four split applications. Sixty pounds N/ac was applied pre-plant. After the initial in-season N application, subsequent split applications were done at two weeks interval until the total rate of 140 lb N/ac was attained.

<sup>2</sup>Includes growth cracks, knobs, misshapes

<sup>3</sup>Includes hollow heart, brown center

Table 24. Effect of in-season nitrogen application timing on tuber diameter of Colorado Rose, 2006.

Nitrogen Application Timing <sup>1</sup>	< 2ins. dia. <sup>2</sup>	Yield(cwt/ac)					> 2ins. dia. > 10 oz
		2 – 4ins. dia.	> 4ins. dia	> 2ins. dia < 10 oz	> 2ins. dia. > 10 oz		
Pre-tuberization	49	448	10	355	103		
At tuberization	51	518	8	406	120		
After tuberization	82	459	0	390	69		

<sup>1</sup>A total of 140 lb N/ac was applied in four split applications. Sixty pounds N/ac was applied pre-plant. After the initial in-season N application, subsequent split applications were done at two weeks interval until the total rate of 140 lb N/ac was attained.  
<sup>2</sup> = diameter

Table 25. Effect of in-season nitrogen application timing on yield and tuber size distribution of Colorado Rose, two year average (2005 and 2006)

Nitrogen Application Timing <sup>1</sup>	Total	(cwt/ac)						
		< 4 oz	> 4 oz	4 – 16 oz	4 – 10 oz	10 – 16 oz	12 – 16 oz	> 16 oz
Pre-tuberization	610	101	509	478	344	134	60	31
At tuberization	657	120	537	516	380	136	69	21
After tuberization	642	107	535	517	394	123	48	18

<sup>1</sup>A total of 140 lb N/ac was applied in four split applications. Sixty pounds N/ac was applied pre-plant. After the initial in-season N application, subsequent split applications were done at two weeks interval until the total rate of 140 lb N/ac was attained.

Table 26. Effect of in-season nitrogen application timing on tuber quality of Colorado Rose, two year average (2005 and 2006)

Nitrogen Application Timing <sup>1</sup>	% External Defects <sup>2</sup>	% Internal Defects <sup>3</sup>	Specific Gravity
Pre-tuberization	0.8	0	1.080
At tuberization	2.2	0	1.079
After tuberization	1.0	0.5	1.080

<sup>1</sup> A total of 140 lb N/ac was applied in four split applications. Sixty pounds N/ac was applied pre-plant. After the initial in-season N application, subsequent split applications were done at two weeks interval until the total rate of 140 lb N/ac was attained.

<sup>2</sup> Includes growth cracks, knobs, missshapes

<sup>3</sup> Includes hollow heart, brown center

Table 27. Effect of in-season nitrogen application timing on tuber diameter of Colorado Rose, two year average (2005 and 2006)

Nitrogen Application Timing <sup>1</sup>	< 2ins. dia. <sup>2</sup>	2 – 4ins. dia.	Yield (cwt/ac)		
			> 4ins. dia	> 2ins. dia < 10 oz	> 2ins. dia. > 10 oz
Pre-tuberization	59	547	9	395	161
At tuberization	61	587	4	434	157
After tuberization	67	584	5	454	135

<sup>1</sup> A total of 140 lb N/ac was applied in four split applications. Sixty pounds N/ac was applied pre-plant. After the initial in-season N application, subsequent split applications were done at two weeks interval until the total rate of 140 lb N/ac was attained.

<sup>2</sup> = diameter



Table 28. Effect of vine kill timing on yield and tuber size distribution of Colorado Rose, 2006.

Vine kill (DAP) <sup>1</sup>	Total	Yield (cwt/ac)							
		< 4 oz	> 4 oz	4 – 16 oz	4 – 10 oz	10 – 16 oz	6 – 12 oz	12 – 16 oz	> 16 oz
90	453	105	348	348	317	31	202	10	0
100	499	95	404	394	343	51	226	21	10
110	535	87	448	430	369	61	269	28	18
120	566	125	441	433	348	85	236	54	8
<sup>1</sup> Days after planting									

Table 29. Effect of vine kill timing on tuber quality of Colorado Rose, 2006

Vine kill (DAP) <sup>1</sup>	% External Defects <sup>2</sup>	% Internal Defects <sup>3</sup>	Specific Gravity
90	1.7	0	1.069
100	0	0	1.075
110	2.6	0.8	1.078
120	0.4	1.5	1.078
<sup>1</sup> Days after planting			
<sup>2</sup> Includes growth cracks, knobs, misshapes			
<sup>3</sup> Includes hollow heart, brown center			

Table 30. Effect of vine kill timing on tuber diameter of Colorado Rose, 2006

Vine kill (DAP) <sup>1</sup>	< 2 ins dia. <sup>2</sup>	2 -4 ins dia	> 4 ins dia	> 2 ins < 10 oz	> 2 ins > 10 oz
90	51	390	0	364	26
100	51	428	5	372	61
110	33	456	8	382	82
120	56	495	0	410	85

<sup>1</sup> Days after planting  
<sup>2</sup> dia =Diameter

Table 31. Effect of single drop or cut seed on yield and tuber size distribution of Colorado Rose, 2006

Treatment	Total	< 4 oz	> 4 oz	4 - 16 oz	4 - 10 oz	10 - 16 oz	6 - 12 oz	12 - 16 oz	> 16 oz
Single drop	484	166	318	318	313	5	164	0	0
Cut seed	494	105	389	374	323	51	243	21	15
					Yield (cwt/ac)				

Table 32. Effect of single drop or cut seed on tuber quality of Colorado Rose, 2006

Treatment	% External Defects <sup>1</sup>	% Internal Defects <sup>2</sup>	Specific Gravity
Single drop	1.7	0	1.075
Cut seed	0.6	0	1.076

<sup>1</sup>Includes growth cracks, knobs, misshapes

<sup>2</sup>Includes hollow heart, brown center

Table 33. Effect of single drop or cut seed on tuber diameter of Colorado Rose, 2006

Treatment	< 2 ins dia. <sup>1</sup>	2-4 ins dia	> 4 ins dia	> 2 ins < 10 oz	> 2 ins > 10 oz
Single drop	92	387	0	382	5
Cut seed	59	410	8	359	59

<sup>1</sup>dia = Diameter

Table 34. Effect of seed piece spacing on yield and tuber size distribution of Colorado Rose, 2006

Seed spacing (inches)	Total	< 4 oz	> 4 oz	Yield (cwt/ac)						
				4 - 16 oz	4 - 10 oz	10 - 16 oz	6 - 12 oz	12 - 16 oz	> 16 oz	
10	443	113	330	322	284	38	149	21	8	
12	346	108	238	238	225	13	120	13	0	
14	361	100	261	261	223	38	159	18	0	

Table 35. Effect of seed piece spacing on tuber quality of Colorado Rose, 2006

Seed spacing (inches)	% External Defects <sup>1</sup>	% Internal Defects <sup>2</sup>	Specific Gravity
10	1.6	0	1.079
12	0	0	1.080
14	0	0	1.082

<sup>1</sup>Includes growth cracks, knobs, misshapes

<sup>2</sup>Includes hollow heart, brown center

Table 36. Effect of seed piece spacing on tuber diameter of Colorado Rose, 2006

Seed spacing (inches)	< 2 ins dia. <sup>1</sup>	2 -4 ins dia	> 4 ins dia	> 2 ins < 10 oz	> 2 ins > 10 oz
10	64	361	0	330	31
12	69	271	0	261	10
14	62	295	0	259	36

<sup>1</sup>dia = Diameter

Table 37. Effect of single drop or cut seed on yield and tuber size distribution of Rio Colorado (NDC5281-2R), 2006

Treatment	Total	< 4 oz	> 4 oz	Yield (cwt/ac)					
				4 - 16 oz	4 - 10 oz	10 - 16 oz	6 - 12 oz	12 - 16 oz	> 16 oz
Single drop	438	236	202	202	202	0	41	0	0
Cut seed	369	184	185	185	180	5	56	0	0

Table 38. Effect of single drop or cut seed on tuber quality of Rio Colorado (NDC5281-2R), 2006

Treatment	% External Defects <sup>1</sup>	% Internal Defects <sup>2</sup>	Specific Gravity
Single drop	0.6	0	1.077
Cut seed	0.7	0.7	1.077

<sup>1</sup>Includes growth cracks, knobs, missshapes

<sup>2</sup>Includes hollow heart, brown center

Table 39. Effect of single drop or cut seed on tuber diameter of Rio Colorado (NDC5281-2R), 2006

Treatment	< 2 ins dia. <sup>1</sup>	2 -4 ins dia	> 4 ins dia	> 2 ins < 10 oz	> 2 ins > 10 oz
Single	149	284	0	284	0
Cut	113	251	0	246	5

<sup>1</sup>dia = Diameter

Table 40. Effect of nitrogen application rate averaged over in-row seed piece spacing on Rio Colorado (NDC5281-2R), two year average (2004 and 2005).

Nitrogen Rate (lb / ac)	Total	Yield (cwt/ac)						
		< 4 oz	> 4 oz	4 - 16 oz	4 - 10 oz	10 - 16 oz	12 - 16 oz	> 16
0	350	175	175	174	168	6	1	1
60	446	216	230	230	224	6	1	0
120	427	211	216	216	207	9	2	0
180	437	200	237	237	224	13	6	0
240	413	203	210	210	202	8	2	0

Table 41. Effect of in-row seed piece spacing averaged over nitrogen rate on Rio Colorado (NDC5281-2R), two year average (2004 and 2005)

Seed spacing (inches)	Total	Yield (cwt/ac)						
		< 4 oz	> 4 oz	4 - 16 oz	4 - 10 oz	10 - 16 oz	12 - 16 oz	> 16
10	422	211	211	211	201	10	3	0
12	437	213	224	224	212	11	2	1
14	385	180	205	205	201	5	1	0

Table 42. Yield and tuber size distribution of VC1009-1W/Y grown under different management practice, 2006.

Field number	Total	< 4 oz	> 4 oz	Yield(cwt/ac)						
				4 - 16 oz	4 - 10 oz	10 - 16 oz	6 - 12 oz	12 - 16 oz	> 16 oz	
1	446	261	185	185	185	0	62	0	0	
2	645	223	422	422	384	38	238	23	0	
3	438	253	185	185	185	0	54	0	0	
4	461	230	231	231	231	0	100	0	0	
5	500	192	308	308	277	31	131	0	0	
6	653	307	346	346	346	0	92	0	0	
<b>Mean</b>	<b>524</b>	<b>244</b>	<b>280</b>	<b>280</b>	<b>268</b>	<b>12</b>	<b>113</b>	<b>4</b>	<b>0</b>	

Table 43. Tuber quality of VC1009-1W/Y grown under different management practice, 2006

Field number	% External Defects <sup>1</sup>	% Internal Defects <sup>2</sup>
1	0	0
2	1.2	0
3	0	0
4	3.3	0
5	0	0
6	0	0
<b>Mean</b>	<b>0.8</b>	<b>0</b>

<sup>1</sup> Includes growth cracks, knobs, misshapes

<sup>2</sup> Includes hollow heart, brown center

Table 44. Yield and tuber size distribution of VC1123-2W/Y grown under different management practice, 2006.

Field number	Total	< 4 oz	> 4 oz	Yield (cwt/ac)					
				4 - 16 oz	4 - 10 oz	10 - 16 oz	6 - 12 oz	12 - 16 oz	> 16 oz
1	600	131	469	469	438	31	277	0	0
2	561	100	461	461	369	92	377	15	0
3	407	123	284	284	261	23	131	0	0
4	507	161	346	346	346	0	138	0	0
5	515	77	438	438	307	131	185	92	0
6	653	100	553	553	507	46	377	15	0
<b>Mean</b>	<b>540</b>	<b>115</b>	<b>425</b>	<b>425</b>	<b>371</b>	<b>54</b>	<b>248</b>	<b>20</b>	<b>0</b>

Table 45. Tuber quality of VC1123-2W/Y grown under different management practice, 2006

Field number	% External Defects <sup>1</sup>	% Internal Defects <sup>2</sup>
1	1.3	0
2	0	2.7
3	0	0
4	3.0	0
5	0	0
6	2.4	0
<b>Mean</b>	<b>1.1</b>	<b>0.5</b>

<sup>1</sup> Includes growth cracks, knobs, misshapes

<sup>2</sup> Includes hollow heart, brown center



Table 46. Yield and tuber size distribution of AC97521-1R/Y grown under different management practice, 2006.

Field number	Total	< 4 oz	> 4 oz	Yield(cwt/ac)						
				4 - 16 oz	4 - 10 oz	10 - 16 oz	6 - 12 oz	12 - 16 oz	> 16 oz	
1	384	269	115	115	115	0	31	0	0	
2	445	85	360	360	307	53	200	23	0	
3	353	215	138	138	138	0	46	0	0	
4	469	177	292	292	277	15	154	0	0	
5	477	169	308	308	308	0	85	0	0	
6	569	246	323	323	323	0	161	0	0	
<b>Mean</b>	<b>450</b>	<b>194</b>	<b>256</b>	<b>256</b>	<b>245</b>	<b>11</b>	<b>113</b>	<b>4</b>	<b>0</b>	

Table 47. Tuber quality of AC97521-1R/Y grown under different management practice, 2006

Field number	% External Defects <sup>1</sup>	% Internal Defects <sup>2</sup>
1	0	4
2	1.7	0
3	0	0
4	3.2	1.6
5	0	3.2
6	0	1.4
<b>Mean</b>	<b>0.8</b>	<b>1.7</b>

<sup>1</sup> Includes growth cracks, knobs, misshapes

<sup>2</sup> Includes hollow heart, brown center

Table 48. Yield and tuber size distribution of CO97226-2R/R grown under different management practice, 2006.

Field number	Total	Yield(cwt/ac)							
		< 4 oz	> 4 oz	4 - 16 oz	4 - 10 oz	10 - 16 oz	6 - 12 oz	12 -16 oz	> 16 oz
1	369	338	31	31	31	0	15	0	0
2	338	238	100	100	100	0	15	0	0
3	338	315	23	23	23	0	0	0	0
4	384	307	77	77	77	0	8	0	0
5	415	369	46	46	46	0	7	0	0
6	369	308	61	61	61	0	0	0	0
<b>Mean</b>	<b>369</b>	<b>313</b>	<b>56</b>	<b>56</b>	<b>56</b>	<b>0</b>	<b>8</b>	<b>0</b>	<b>0</b>

Table 49. Tuber quality of CO97226-2R/R grown under different management practice, 2006

Field number	% External Defects <sup>1</sup>	% Internal Defects <sup>2</sup>
1	8.0	0
2	0	0
3	0	0
4	4.0	0
5	0	0
6	0	0
<b>Mean</b>	<b>2.0</b>	<b>0</b>

<sup>1</sup> Includes growth cracks, knobs, misshapes

<sup>2</sup> Includes hollow heart, brown center

Table 50. Yield and tuber size distribution of CO97232-1R/Y grown under different management practice, 2006.

Field number	Total	< 4 oz	> 4 oz	Yield(cwt/ac)						
				4 - 16 oz	4 - 10 oz	10 - 16 oz	6 - 12 oz	12 - 16 oz	> 16 oz	
1	292	192	100	100	100	0	23	0	0	
2	346	131	215	215	200	15	108	0	0	
3	315	184	131	131	131	0	38	0	0	
4	377	231	146	146	146	0	38	0	0	
5	577	269	308	308	308	0	92	0	0	
6	392	169	223	223	208	15	77	0	0	
<b>Mean</b>	<b>383</b>	<b>196</b>	<b>187</b>	<b>187</b>	<b>182</b>	<b>5</b>	<b>63</b>	<b>0</b>	<b>0</b>	

Table 51. Tuber quality of CO97232-1R/Y grown under different management practice, 2006

Field number	% External Defects <sup>1</sup>	% Internal Defects <sup>2</sup>
1	0	0
2	6.7	0
3	0	0
4	4.1	0
5	0	0
6	3.9	0
<b>Mean</b>	<b>2.5</b>	<b>0</b>

<sup>1</sup> Includes growth cracks, knobs, misshapes

<sup>2</sup> Includes hollow heart, brown center

Table 52. Yield and tuber size distribution of CO97232-2R/Y grown under different management practice, 2006.

Field Number	Total	< 4 oz	> 4 oz	Yield (cwt/ac)						
				4 - 16 oz	4 - 10 oz	10 - 16 oz	6 - 12 oz	12 - 16 oz	> 16 oz	
1	292	223	69	69	69	0	8	0	0	
2	407	107	300	300	276	24	131	23	0	
3	415	138	277	277	277	0	131	0	0	
4	369	192	177	177	177	0	69	0	0	
5	261	138	123	123	123	0	38	0	0	
6	523	254	269	269	254	15	77	0	0	
<b>Mean</b>	<b>378</b>	<b>175</b>	<b>203</b>	<b>203</b>	<b>196</b>	<b>7</b>	<b>76</b>	<b>4</b>	<b>0</b>	

Table 53. Tuber quality of CO97232-2R/Y grown under different management practice, 2006

Field number	% External Defects <sup>1</sup>	% Internal Defects <sup>2</sup>
1	2.6	0
2	5.7	3.8
3	0	0
4	0	0
5	0	0
6	4.4	0
<b>Mean</b>	<b>2.1</b>	<b>0.6</b>

<sup>1</sup> Includes growth cracks, knobs, misshapes

<sup>2</sup> Includes hollow heart, brown center

Table 54. Yield and tuber size distribution of CO97233-3R/Y grown under different management practice, 2006.

Field Number	Total	Yield (cwt/ac)							
		< 4 oz	> 4 oz	4 - 16 oz	4 - 10 oz	10 - 16 oz	6 - 12 oz	12 - 16 oz	> 16 oz
1	553	292	261	261	261	0	100	0	0
2	553	169	384	369	346	23	200	0	15
3	384	161	223	223	223	0	77	0	0
4	469	192	277	277	231	46	123	23	0
5	415	84	331	308	308	0	169	0	23
6	577	284	293	293	292	0	115	0	0
<b>Mean</b>	<b>492</b>	<b>197</b>	<b>295</b>	<b>289</b>	<b>277</b>	<b>12</b>	<b>131</b>	<b>4</b>	<b>6</b>

Table 55. Tuber quality of CO97233-3R/Y grown under different management practice, 2006

Field number	% External Defects <sup>1</sup>	% Internal Defects <sup>2</sup>
1	2.8	1.4
2	1.4	1.4
3	2.0	0
4	4.9	3.3
5	0	5.5
6	1.3	1.3
<b>Mean</b>	<b>2.1</b>	<b>2.2</b>

<sup>1</sup> Includes growth cracks, knobs, missshapes

<sup>2</sup> Includes hollow heart, brown center

Table 56. Yield and tuber size distribution of CO96141-4W grown under different management practice, 2006.

Field Number	Total	< 4 oz	> 4 oz	Yield(cwt/ac)					
				4 - 16 oz	4 - 10 oz	10 - 16 oz	6 - 12 oz	12 - 16 oz	> 16 oz
1	423	92	331	331	315	15	177	0	0
2	369	61	308	308	254	54	208	0	0
3	400	100	300	300	300	0	169	0	0
4	361	115	246	246	223	23	123	0	0
5	453	54	399	384	323	61	246	31	15
6	507	46	461	446	392	54	300	0	15
<b>Mean</b>	<b>419</b>	<b>78</b>	<b>341</b>	<b>336</b>	<b>301</b>	<b>35</b>	<b>204</b>	<b>5</b>	<b>5</b>

Table 57. Tuber quality of CO96141-4W grown under different management practice, 2006

Field number	% External Defects <sup>1</sup>	% Internal Defects <sup>2</sup>
1	0	0
2	0	0
3	0	0
4	0	0
5	3.4	0
6	0	0
<b>Mean</b>	<b>0.6</b>	<b>0</b>

<sup>1</sup> Includes growth cracks, knobs, misshapes

<sup>2</sup> Includes hollow heart, brown center

Table 58. Yield and tuber size distribution of CO97043-14W grown under different management practice, 2006.

Field Number	Total	< 4 oz	> 4 oz	Yield(cwt/ac)						
				4 - 16 oz	4 - 10 oz	10 - 16 oz	6 - 12 oz	12 - 16 oz	> 16 oz	
1	431	177	254	254	231	23	146	0	0	
2	431	100	331	331	292	39	177	15	0	
3	453	92	361	361	346	15	161	0	0	
4	438	108	330	315	215	100	177	38	15	
5	438	92	346	346	300	46	215	15	0	
6	446	131	315	315	300	15	192	0	0	
<b>Mean</b>	<b>440</b>	<b>117</b>	<b>323</b>	<b>320</b>	<b>280</b>	<b>40</b>	<b>178</b>	<b>11</b>	<b>3</b>	

Table 59. Tuber quality of CO97043-14W grown under different management practice, 2006

Field number	% External Defects <sup>1</sup>	% Internal Defects <sup>2</sup>
1	0	0
2	3.6	0
3	0	0
4	0	0
5	0	0
6	0	0
<b>Mean</b>	<b>0.6</b>	<b>0</b>

<sup>1</sup> Includes growth cracks, knobs, misshapes

<sup>2</sup> Includes hollow heart, brown center

Table 60. Yield and tuber size distribution of CO97065-7W grown under different management practice, 2006.

Field number	Total	Yield(cwt/lac)							
		< 4 oz	> 4 oz	4 - 16 oz	4 - 10 oz	10 - 16 oz	6 - 12 oz	12 - 16 oz	> 16 oz
1	338	200	138	138	107	31	69	0	0
2	423	131	292	292	246	46	223	0	0
3	384	123	261	261	261	0	85	0	0
4	407	100	307	307	307	0	115	0	0
5	484	130	354	354	354	0	231	0	0
6	384	115	269	269	261	8	115	0	0
<b>Mean</b>	<b>403</b>	<b>133</b>	<b>270</b>	<b>270</b>	<b>256</b>	<b>14</b>	<b>140</b>	<b>0</b>	<b>0</b>

Table 61. Tuber quality of CO97065-7W grown under different management practice, 2006

Field number	% External Defects <sup>1</sup>	% Internal Defects <sup>2</sup>
1	2.3	0
2	0	0
3	4.0	0
4	0	0
5	0	0
6	0	0
<b>Mean</b>	<b>1.1</b>	<b>0</b>

<sup>1</sup>Includes growth cracks, knobs, misshapes

<sup>2</sup>Includes hollow heart, brown center