Colorado Potato Cultivar Specific Management

Data Summary 2005

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-Comments Welcome-

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MISSION STATEMENT

The mission of the potato cultivar specific management and physiology project is to define cultural management practices for the successful, sustainable, and economic production of new cultivars and advance selections, which optimize their genetic potential, while minimizing economic inputs and environmental impact.

Each potato cultivar or advance selection has its own unique set of cultural requirements. Therefore, cultural practices that optimize production of newly introduced cultivars must be identified. Potato cultivars do not necessarily require the same cultural practices to maximize yield of premium size and grade tubers.

The best guidelines for nutrient management practices, irrigation management, plant population management, vine kill management, seed preparation (e.g. pre-cut seed vs. single drops, fresh seed vs. reconditioned seed), seed size, herbicide tolerance, and other cultural management practices are obtained from field experiments conducted in the specific production area.

Information obtained from cultivar specific management research studies are put together as cultivar specific management profiles in the form of a fact sheet. Growers of a new cultivar are much more successful when release is accompanied by such management guidelines.

Table 1. Effect of nitrogen application timing on yield and tuber size profile of Rio Grand Russet (AC89536-5RU) – 2005

Application timing[1]	Total	< 4 oz	> 4 oz	4 – 16 oz	4 – 10 oz	10 – 16 oz	12 – 16 oz	> 16 oz
				Yield (cwt/ac)				
Jun 16 - Jul 28	572	88	487	472	364	108	42	16
Jun 23 - Aug 4	597	96	495	484	365	119	64	11
Jun 30 – Aug 11	653	100	519	508	428	81	8	10

[1] A total of 140 lb N/ac was applied in four split applications. Sixty lb N/ac was applied pre-plant. The June 16, 23, and 30 applications were done 5, 6, and 7 wk after planting, respectively, and subsequent split applications were done at two weeks interval until the total rate of 140 lb N/ac was attained.

Table 2. Effect of nitrogen application timing on tuber quality of Rio Grand Russet (AC89536-5RU) – 2005

Application timing[1]	% External defects[2]	% Internal defects[3]	Specific Gravity
Jun 16 - Jul 28	1.1	0	1.091
Jun 23 - Aug 4	1.0	0	1.089
Jun 30 – Aug 11	1.6	0	1.090

[1] A total of 140 lb N/ac was applied in four split applications. Sixty lb N/ac was applied pre-plant. The June 16, 23, and 30 applications were done 5, 6, and 7 wk after planting, respectively, and subsequent split applications were done at two weeks interval until the total rate of 140 lb N/ac was attained.

[2] Includes growth cracks, knobs, and misshapes

[3] Includes hollow heart and brown center

Table 3. Effect of in-row seed spacing on yield and tuber size profile of Rio Grand Russet (AC89536-5RU) – 2005

Seed Spacing (inches)	Total	< 4 oz	> 4 oz	4 – 16 oz	4 – 10 oz	10 – 16 oz	12 – 16 oz	> 16 oz
				Yield (cwt/ac)				
10	600	147	453	447	373	74	34	6
12	593	99	494	484	376	108	49	10
14	588	113	476	476	411	65	18	0

Table 4. Effect of in-row seed spacing on tuber quality of Rio Grand Russet (AC89536-5RU) – 2005

Seed Spacing (inches)	% External defects[1]	% Internal defects[2]	Specific Gravity
10	0.8	0	1.093
12	0.2	2.4	1.093
14	0.3	1.2	1.097

[1]Includes growth cracks, knobs, and misshapes
[2]Includes hollow heart and brown center

Table 5. Effect of vine kill date on yield and tuber size profile of Rio Grand Russet (AC89536-5RU) – 2005

Vine kill (DAP)[1]	Total	< 4 oz	> 4 oz	4 – 16 oz	4 – 10 oz	10 – 16 oz	12 – 16 oz	> 16 oz
				Yield (cwt/ac)				
90	395	161	233	233	231	3	0	0
100	543	146	397	397	369	28	8	0
110	710	164	541	525	430	95	46	15
120	630	123	507	505	413	92	28	3

[1] Days after planting

Table 6. Effect of vine kill date on tuber quality of Rio Grand Russet (AC89536-5RU) – 2005

Vine kill (DAP)[1]	% External defects[2]	% Internal defects[3]	Specific Gravity
90	0.0	0	1.066
100	1.9	0	1.075
110	1.1	0	1.085
120	0	0	1.093

[1] Days after planting;
[2] Includes growth cracks, knobs, and misshapes
[3] Includes hollow heart and brown center

Table 7. Effect of in-row seed spacing on yield and tuber size profile of CO94035- 15RU - 2005

Seed Spacing (inches)	Total	< oz	> 4 oz	4 - 16 oz	4 - 10 oz	10 - 16 oz	12 - 16 oz	> 16 oz
				Yield (cwt/ac)				
10	468	46	422	394	251	143	61	29
12	489	43	446	411	455	140	71	36
14	478	43	435	399	305	156	69	35

Table 8. Effect of in-row seed spacing on tuber quality of CO94035-15RU - 2005

Seed Spacing (inches)	% External defects[1]	% Internal defects[2]	Specific Gravity
10	0.9	14.2	1.090
12	0.6	9.6	1.088
14	1.2	16.7	1.094

[1]Includes growth cracks, knobs and misshapes
[2]Includes hollow heart and brown center

Table 9. Effect of vine kill date on yield and tuber size profile of CO94035-15RU - 2005

Vine kill (DAP)[1]	Total	< 4 oz	> 4 oz	4 - 16 oz	4 - 10 oz	10 - 16 oz	12 -16 oz	> 16 oz
				Yield (cwt/ac)				
90	323	90	233	233	223	10	0	0
100	466	87	379	379	302	77	33	0
110	520	44	477	456	292	164	82	21
120	638	54	584	566	374	192	113	18

[1] Days after planting

Table 10. Effect of vine kill date on tuber quality of CO94035-15RU - 2005

Vine kill (days after planting)	% External defects[1]	% Internal defects[2]	Specific Gravity
90	0	1.2	1.064
100	1.7	0.5	1.071
110	1.8	4.1	1.079
120	3.6	3.3	1.093

[1]Includes growth cracks, knobs and misshapes
[2]Includes hollow heart and brown center

Table 11. Effect of seed size and age on yield and tuber size profile of AC92009-4RU - 2005

Treatment (seed size/age)	Total	< 4 oz	> 4 oz	4 - 16 oz	4 - 10 oz	10 - 16 oz	12 - 16 oz	> 16 oz
	Yield (cwt/ac)							
2-2.5oz/Cold[1]	592	59	523	499	319	181	97	24
2-2.5oz/Warm[2]	529	41	500	452	246	205	116	48
3-3.5oz/Cold	597	55	542	520	339	180	82	22
3-3.5oz/Warm	519	47	472	447	325	122	70	25

[1] Cold = Seed planted directly from cold storage
[2] Warm = Seed reconditioned at 70 °F for 14 days before planting

Table 12. Effect of seed size and age on tuber quality of AC92009-4RU - 2005

Treatment (seed size/seed age)	% External defects[1]	% Internal defects[2]	Specific Gravity
2 - 2 .5 oz/Cold[3]	0	1.2	1.101
2 - 2. 5 oz/Warm[4]	0.9	0	1.097
3 - 3. 5 oz/Cold	0	0	1.099
3 -3. 5 oz/Warm	1.0	0	1.098

[1] Includes growth cracks, knobs and misshapes
[2] Includes hollow heart and brown center
[3] Cold = Seed planted directly from cold storage
[4] Warm = Seed reconditioned at 70 °F for 14 days before planting

Table 13. Effect of seed size averaged over seed age on yield and tuber size profile of AC92009-4RU - 2005

Treatment (seed size)	Total	< 4 oz	> 4 oz	4 - 16 oz	4 - 10 oz	10 - 16 oz	12 - 16 oz	> 16 oz
	Yield (cwt/ac)							
2 - 2 .5 oz	561	50	511	475	283	193	107	36
3 -3. 5 oz	558	51	507	484	332	151	76	24

Table 14. Effect of seed size averaged over seed age on tuber quality of AC92009-4RU - 2005

Treatment (seed size)	% External defects[1]	% Internal defects[2]	Specific Gravity
2 - 2 .5 oz	0.5	0.6	1.099
3 -3. 5 oz	0.5	0	1.099

[1] Includes growth cracks, knobs and misshapes
[2] Includes hollow heart and brown center

Table 15. Effect of seed age averaged over seed size on yield and tuber size profile of AC92009-4RU - 2005

Treatment	Total	< 4 oz	> 4 oz	4 - 16 oz	4 - 10 oz	10 - 16 oz	12 - 16 oz	> 16 oz
	Yield (cwt/ac)							
Cold[1]	594	57	533	509.5	329	180.5	89.5	23
Warm[2]	524	44	486	449.5	285.5	163.5	93	36.5

[1] Cold = Seed planted directly from cold storage
[2] Warm = Seed reconditioned at 70 °F for 14 days before planting

Table 16. Effect of seed age averaged over seed size on tuber quality of AC92009-4RU - 2005

Treatment (size age)	% External defects[1]	% Internal defects[2]	Specific Gravity
Cold[3]	0	0.6	1.1
Warm[4]	1	0	1.098

[1] Includes growth cracks, knobs and misshapes
[2] Includes hollow heart and brown center
[3] Cold = Seed planted directly from cold storage
[4] Warm = Seed reconditioned at 70 °F for 14 days before planting

Table 17. Effect of seed size and age on stem number, tuber number, and mean tuber weight of AC92009-4RU – 2005

Treatment (Seed size/age)	Stems/Plant	Tubers/Plant	Mean tuber weight (g)
2-2.5oz/Cold[1]	2	7	204
2-2.5oz/Warm[2]	2	6	222
3-3.5oz/Cold	2	8	195
3-3.5oz/Warm	3	9	185

[1] Cold = Seed planted directly from cold storage
[2] Warm = Seed reconditioned at 70 °F for 14 days before planting

Table 18. Effect of seed size averaged over seed age on stem number, tuber number, and mean tuber weight of AC92009-4RU – 2005

Treatment (Seed size)	Stems/Plant	Tubers/Plant	Mean tuber weight (g)
2 – 2.5 oz	2	7	213
3 – 3.5 oz	3	8	190

Table 19. Effect of seed age averaged over seed size on stem number, tuber number, and mean tuber weight of AC92009-4RU – 2005

Treatment (Seed age)	Stems/Plant	Tubers/Plant	Mean tuber weight (g)
Cold[1]	2	8	200
Warm[2]	3	8	204

[1] Cold = Seed planted directly from cold storage
[2] Warm = Seed reconditioned at 70 °F for 14 days before planting

Table 20. Effect of in-row seed spacing on yield and tuber size distribution of CO93001-11RU - 2005

Seed spacing (inches)	Total	< 4 oz	>4 oz	4 - 16 oz	4 -10 oz	10 - 16 oz	12 - 16 oz	> 16 oz
				Yield (cwt/ac)				
10	435	69	366	366	284	82	27	0
12	349	64	284	279	211	68	17	5
14	405	55	350	344	236	108	55	6

Table 21. Effect of in-row seed spacing on tuber quality of CO93001-11RU - 2005

Seed spacing (inches)	% External defects[1]	% Internal defects[2]	Specific Gravity
10	2.0	0	1.068
12	1.1	0	1.066
14	3.7	1.0	1.067

[1]Includes growth cracks, knobs and misshapes
[2]Includes hollow heart and brown center

Table 22. Effect of vine kill date on yield and tuber size profile of CO93001-11RU - 2005

Vine kill (DAP) [1]	Total	< 4 oz	> 4 oz	4 - 16 oz	4 - 10 oz	10 -16 oz	12 - 16 oz	> 16 oz
				Yield (cwt/ac)				
90	423	105	318	318	272	46	21	0
100	461	64	397	397	349	49	0	0
110	538	74	464	454	333	120	36	10
120	543	59	484	464	354	110	36	21

[1] Days after planting

Table 23. Effect of vine kill date on tuber quality of CO93001 -11RU – 2005

Vine kill (Days after planting)	% External defects[1]	% Internal defects[2]	Specific Gravity
90	2.3	0	1.069
100	3.9	0	1.073
110	3.9	0	1.075
120	4.2	0	1.070

[1]Includes growth cracks, knobs, and misshapes
[2]Includes hollow heart and brown center

Table 24. Effect of vine kill date on yield and tuber size profile of Klamath Russet - 2005

Vine kill (DAP)[1]	Total	< 4 oz	> 4 oz	4 -16 oz	4 - 10 oz	10 - 16 oz	12 - 16 oz	> 16 oz
				Yield (cwt/ac)				
90	338	110	228	228	228	0	0	0
100	569	69	500	477	402	74	26	23
110	628	100	528	474	308	167	74	54
120	753	90	664	582	390	192	97	82

[1] Days after planting

Table 25. Effect of vine kill date on tuber quality of Klamath Russet - 2005

Vine kill (days after planting)	% External defects[1]	% Internal defects[2]	Specific Gravity
90	0.8	0	1.069
100	3.1	2.0	1.075
110	1.1	1.5	1.085
120	2.0	5.5	1.087

[1]Includes growth cracks, knobs and misshapes
[2]Includes hollow heart and brown center

Table 26. Effect of in-row seed spacing on yield and tuber size profile of Russet Norkotah (sel.8) - 2005

Seed Spacing (inches)	Total	< 4 oz	> 4 oz	4 - 16 oz	4 - 10 oz	10 - 16 oz	12 - 16 oz	> 16 oz
	Yield (cwt/ac)							
10	591	27	564	500	304	196	78	64
12	579	20	559	429	196	233	132	130
14	539	31	508	432	282	150	87	76

Table 27. Effect of in-row seed spacing on tuber quality of Russet Norkotah (sel.8) - 2005

Seed Spacing (inches)	% External defects[1]	% Internal defects[2]	Specific Gravity
10	0.5	3.0	1.083
12	3.9	4.1	1.080
14	1.9	1.0	1.082

[1] Includes growth cracks, knobs and misshapes
[2] Includes hollow heart and brown center

Table 28. Effect of vine kill date on yield and tuber size profile of Russet Norkotah (sel.8) - 2005

Vine kill (DAP)[1]	Total	< 4 oz	> 4 oz	4 - 16 oz	4 - 10 oz	10 -16 oz	12 - 16 oz	> 16 oz
	Yield (cwt/ac)							
90	379	79	300	295	256	38	5	5
100	536	54	482	477	331	146	69	5
110	587	54	533	528	343	185	105	5
120	687	44	643	564	331	233	92	79

[1] Days after planting

Table 29. Effect of vine kill date on tuber quality of Russet Norkotah (sel.8) - 2005

Vine Kill (days after planting)	% External defects[1]	% Internal defects[2]	Specific Gravity
90	3.5	0	1.067
100	2.9	1.0	1.073
110	1.2	0	1.080
120	4.1	4.2	1.080

[1] Includes growth cracks, knobs and misshapes
[2] Includes hollow heart and brown center

Table 30. Effect of location and different management practice on yield performance of CO95086-8RU – 2005

Location[1]	Total	< 4 oz	> 4 oz	4 – 16 oz	4 – 10 oz	10 – 16 oz	12 – 16 oz	> 16 oz
	Yield (cwt/ac)							
Mitchell Farms	388	135	254	254	249	5	0	0
Entz Farms	497	161	336	336	318	19	19	0
Rocky Top Farms	378	75	304	294	243	51	26	10

[1] Different grower farms with different management practices.

Table 31. Effect of location and different management practice on yield performance of CO95172-3RU – 2005

Location[1]	Total	< 4 oz	> 4 oz	4 – 16 oz	4 – 10 oz	10 – 16 oz	12 – 16 oz	> 16 oz
	Yield (cwt/ac)							
Mitchell Farms	530	182	348	348	335	12	7	0
Entz Farms	658	175	483	483	428	55	13	0
Rocky Top Farms	408	107	301	301	286	15	0	0

[1] Different grower farms with different management practices.

Table 32. Effect of location and different management practice on yield performance of AC96052-1RU – 2005

Location[1]	Total	< 4 oz	> 4 oz	4 – 16 oz	4 – 10 oz	10 – 16 oz	12 – 16 oz	> 16 oz
	Yield (cwt/ac)							
Mitchell Farms	451	154	297	297	285	12	0	0
Entz Farms	514	138	377	368	346	22	7	9
Rocky Top Farms	415	79	336	328	271	57	26	8

[1] Different grower farms with different management practices.

Table 33. Effect of location and different management practice on yield performance of Russet Norkotah – 2005

Location[1]	Total	< 4 oz	> 4 oz	4 – 16 oz	4 – 10 oz	10 – 16 oz	12 – 16 oz	> 16 oz
	Yield (cwt/ac)							
Mitchell Farms	540	57	483	483	389	94	18	0
Entz Farms	627	65	562	544	434	110	52	19
Rocky Top Farms	557	33	524	416	238	178	127	108

[1] Different grower farms with different management practices.

Table 34. Effect of nitrogen application timing on yield and tuber size profile of Colorado Rose (CO89097-2R) – 2005

Application timing[1]	Total	< 4 oz	> 4 oz	4 – 16 oz	4 – 10 oz	10 – 16 oz	12 – 16 oz	> 16 oz
	Yield (cwt/ac)							
Jun 16 - Jul 28	668	109	598	550	380	170	70	48
Jun 23 - Aug 4	683	131	591	580	400	180	101	12
Jun 30 – Aug 11	738	102	636	610	426	184	67	26

[1] A total of 140 lb N/ac was applied in four split applications. Sixty lb N/ac was applied pre-plant. The June 16, 23, and 30 applications were done 5, 6, and 7 wk after planting, respectively, and subsequent split applications were done at two weeks interval until the total rate of 140 lb N/ac was attained.

Table 35. Effect of nitrogen application timing on tuber quality of Colorado Rose (CO89097-2R) – 2005

Application timing[1]	% External defects[2]	% Internal defects[3]	Specific Gravity
Jun 16 - Jul 28	0.5	0	1.083
Jun 23 - Aug 4	0.6	0	1.081
Jun 30 – Aug 11	1.9	1.0	1.084

[1] A total of 140 lb N/ac was applied in four split applications. Sixty lb N/ac was applied pre-plant. The June 16, 23, and 30 applications were done 5, 6, and 7 wk after planting, respectively, and subsequent split applications were done at two weeks interval until the total rate of 140 lb N/ac was attained.

[2] Includes growth cracks, knobs, and misshapes

[3] Includes hollow heart and brown center

Table 36. Effect of nitrogen application timing on tuber diameter of Colorado Rose (CO89097-2R) – 2005

Application timing[1]	< 2 in. dia.[2]	2 – 4 in. dia.	> 4 in. dia.	> 2in. dia.< 10 oz	> 2 in. dia.>10 oz
			Yield (cwt/ac)		
Jun 16 - Jul 28	68	644	8	434	218
Jun 23 - Aug 4	71	657	0	464	193
Jun 30 – Aug 11	51	709	9	518	200

[1] A total of 140 lb N/ac was applied in four split applications. Sixty lb N/ac was applied pre-plant. The June 16, 23, and 30 applications were done 5, 6, and 7 wk after planting, respectively, and subsequent split applications were done at two weeks interval until the total rate of 140 lb N/ac was attained.

[2] dia. = diameter

Table 37. Effect of in-row seed spacing on yield and tuber size profile of Colorado Rose (CO89097-2R) – 2005

Seed Spacing (inches)	Total	< 4 oz	> 4 oz	4 – 16 oz	4 – 10 oz	10 – 16 oz	12 – 16 oz	> 16 oz
				Yield (cwt/ac)				
10	559	139	420	415	346	69	34	5
12	604	100	504	473	340	132	70	31
14	649	92	557	545	424	121	56	11

Table 38. Effect of in-row seed spacing on tuber quality of Colorado Rose (CO89097-2R) – 2005

Seed Spacing (inches)	% External defects[1]	% Internal defects[2]	Specific Gravity
10	0	0	1.083
12	0.2	0	1.088
14	1.7	0	1.089

[1]Includes growth cracks, knobs, and misshapes
[2]Includes hollow heart and brown center

Table 39. Effect of in-row seed spacing on tuber diameter of Colorado Rose (CO89097-2R) – 2005

Seed spacing (inches)	< 2 in. dia.[1]	2 – 4 in. dia.	> 4 in. dia.	> 2in. dia.< 10 oz	> 2 in. dia.>10 oz
			Yield (cwt/ac)		
10	74	483	0	410	73
12	62	540	0	377	163
14	58	589	0	458	131

[1]dia. = diameter

Table 40. Effect of vine kill date on yield and tuber size profile of Colorado Rose (CO89097-2R) – 2005

Vine kill (DAP)[1]	Total	< 4 oz	> 4 oz	4 – 16 oz	4 – 10 oz	10 – 16 oz	12 – 16 oz	> 16 oz
				Yield (cwt/ac)				
90	422	177	245	245	238	7	5	0
100	559	123	436	436	399	37	12	0
110	746	133	612	607	499	109	49	5
120	721	92	628	628	503	126	49	0

[1] Days after planting

Table 41. Effect of vine kill date on tuber quality of Colorado Rose (CO89097-2R) – 2005

Vine kill (DAP)[1]	% External defects[2]	% Internal defects[3]	Specific Gravity
90	1.7	1.7	1.064
100	1.8	0.5	1.072
110	0.6	0.7	1.085
120	0.3	0.8	1.084

[1] Days after planting;
[2] Includes growth cracks, knobs, and misshapes
[3] Includes hollow heart and brown center

Table 42. Effect of vine kill date on tuber diameter of Colorado Rose (CO89097-2R) – 2005

(DAP)[1]	< 2 in. dia.[2]	2 – 4 in. dia.	> 4 in. dia.	> 2in. dia.< 10 oz	> 2 in. dia.>10 oz
			Yield (cwt/ac)		
90	97	320	0	315	5
100	67	484	0	448	36
110	97	641	0	561	79
120	67	648	0	543	105

Days after planting
[2] dia. = diameter

Table 43. Effect of in-row seed spacing on yield and tuber size profile of Durango Red (CO86218-2R) - 2005

Seed Spacing (inches)	Total	< 4 oz	> 4 oz	4 - 16 oz	4 - 10 oz	10 - 16 oz	12 - 16 oz	> 16 oz
				Yield (cwt/ac)				
10	545	113	433	409	281	128	62	24
12	517	92	425	388	260	128	65	37
14	518	83	435	395	249	146	78	40

Table 44. Effect of in-row seed spacing on tuber quality of Durango Red (CO86218-2R) - 2005

Seed Spacing (inches)	% External defects[1]	% Internal defects[2]	Specific Gravity
10	2.1	0	1.084
12	3.9	0	1.084
14	4.6	2.2	1.082

[1] Includes growth cracks, knobs and misshapes
[2] Includes hollow heart and brown center

Table 45. Effect of in-row seed spacing on tuber diameter of Durango Red (CO86218-2R) - 2005

Seed Spacing (inches)	< 2 in.	2 - 4 in.	> 4 in.	> 2 in. < 10 oz	> 2in. > 10 oz
			Yield (cwt/ac)		
10	53	485	5	343	148
12	43	461	14	310	166
14	43	477	0	293	184

Table 46. Effect of vine kill date on yield and tuber size profile of Durango Red (CO86218-2R) - 2005

Vine kill (DAP) [1]	Total	< 4 oz	> 4 oz	4 - 16 oz	4 - 10 oz	10 - 16 oz	12 - 16 oz	> 16 oz
				Yield (cwt/ac)				
90	400	167	233	233	215	18	0	0
100	472	154	318	292	238	54	28	26
110	579	156	423	423	325	97	67	0
120	554	100	454	420	328	92	28	33

[1]Days after planting

Table 47. Effect of vine kill date on tuber quality of Durango Red (CO86218-2R) - 2005

Vine kill (days after planting)	% External defects[1]	% Internal defects[2]	Specific Gravity
90	3.3	0	1.063
100	7.0	0	1.071
110	2.6	0	1.077
120	5.1	0	1.083

[1] Includes growth cracks, knobs and misshapes
[2] Includes hollow heart and brown center

Table 48. Effect of vine kill date on tuber diameter of Durango Red (CO86218-2R) - 2005

Vine kill (DAP)[1]	< 2 in.	2 - 4 in.	> 4 in.	> 2 in. < 10 oz	> 2 in. > 10 oz
			Yield (cwt/ac)		
90	77	318	0	300	18
100	67	407	5	331	81
110	74	482	0	407	75
120	41	500	15	387	128

[1] Days after planting

Table 49. Effect of nitrogen rate and seed spacing on yield and tuber size distribution of NDC5281-2R - 2005

Seed spacing / Nitrogen Rate (in./lbs per ac)	Total	< 4 oz	> 4 oz	4 - 16 oz	4 - 10 oz	10 - 16 oz	12 - 16 oz	>16 oz
			Yield (cwt/ac)					
10" 0N	406	181	225	225	217	8	0	0
10" 60N	607	249	358	358	352	6	0	0
10" 120N	644	315	330	330	317	13	0	0
10" 180N	577	240	337	337	299	37	24	0
10" 240N	595	304	291	291	279	11	5	0
12" 0N	501	193	309	303	281	22	4	6
12" 60N	674	307	368	368	355	13	0	0
12" 120N	599	254	345	345	313	32	8	0
12" 180N	688	300	388	388	363	25	5	0
12" 240N	574	246	328	328	310	18	4	0
14" 0N	413	188	225	225	222	3	0	0
14" 60N	523	245	278	278	267	11	5	0
14" 120N	530	230	300	300	294	7	4	0
14" 180N	548	238	310	310	303	7	0	0
14" 240N	536	242	294	294	280	13	0	0

Table 50. Effect of nitrogen rate and seed spacing on tuber quality of NDC5281-2R - 2005

Seed spacing / Nitrogen rate (inches/ lbs per acre)	% External defects[1]	% Internal defects[2]	Specific Gravity
10" 0N	0	0	1.080
10" 60N	0.7	0	1.082
10" 120N	0.1	0	1.076
10" 180N	0.2	0	1.081
10" 240N	0	0	1.079
12" 0N	1.9	0	1.080
12" 60N	2.3	0.6	1.082
12" 120N	0.7	0	1.082
12" 180N	0.7	0	1.078
12" 240N	1.5	0	1.081
14" 0N	0.2	0	1.083
14" 60N	2.9	0.7	1.081
14" 120N	0.7	0	1.077
14" 180N	0.8	0	1.080
14" 240N	0	0	1.080

[1] Includes growth cracks, knobs and misshapes
[2] Includes hollow heart and brown center

Table 51. Effect of nitrogen rate and seed spacing on tuber diameter of NDC5281-2R - 2005

Seed spacing/Nitrogen rate (inches/lbs per acre)	< 2 in. dia[1]	2 - 4 in. dia.	> 4 in. dia.	> 2 in. dia. < 10 oz	> 2in. dia. > 10 oz
				Yield (cwt/ac)	
10" 0N	92	311	0	311	0
10" 60N	137	470	0	463	7
10" 120N	173	474	0	461	13
10" 180N	129	448	0	429	19
10" 240N	175	417	0	405	12
12" 0N	105	403	0	376	27
12" 60N	182	494	0	480	14
12" 120N	141	459	0	427	32
12" 180N	173	516	0	494	22
12" 240N	149	416	0	397	19
14" 0N	97	318	0	318	0
14" 60N	139	385	0	374	11
14" 120N	134	401	0	394	7
14" 180N	155	392	0	385	7
14" 240N	146	390	0	381	9

[1]dia = diameter

Table 52. Effect of seed spacing averaged across nitrogen rates on yield and tuber size distribution of NDC5281-2R - 2005

Seed Spacing (inches)	Total	< 4 oz	> 4 oz	4 - 16 oz	4 - 10 oz	10 - 16 oz	12 - 16 oz	> 16 oz
					Yield (cwt/ac)			
10	566	258	308	308	293	15	6	0
12	607	260	348	346	324	22	4	1
14	510	229	281	281	273	8	2	0

Table 53. Effect of seed spacing averaged across nitrogen rates on tuber quality of NDC5281-2R - 2005

Seed Spacing (inches)	% External defects[1]	% Internal defects[2]	Specific Gravity
10	0.2	0	1.080
12	1.4	0.1	1.081
14	0.9	0.1	1.080

[1]Includes growth cracks, knobs and misshapes
[2]Includes hollow heart and brown center

Table 54. Effect of seed spacing averaged across nitrogen rates on tuber diameter of NDC5281-2R - 2005

Seed Spacing (inches)	< 2 in.dia[1]	2 - 4 in. dia.	> 4 in.dia.	> 2 in.dia.< 10 oz	> 2 in.dia. > 10 oz
			Yield (cwt/ac)		
10	141	424	0	414	10
12	150	458	0	435	23
14	134	377	0	371	6

[1]dia = diameter

Table 55. Effect of nitrogen rate averaged across in-row seed spacing on yield and tuber size distribution of NDC5281-2R - 2005

Nitrogen Rate (lbs/ac)	Total	< 4 oz	> 4 oz	4 - 16 oz	4 - 10 oz	10 - 16 oz	12 - 16 oz	> 16 oz
					Yield (cwt/ac)			
0	440	187	253	251	240	11	1	2
60	601	267	335	335	325	10	2	0
120	591	266	325	325	308	17	4	0
180	604	259	345	345	322	23	10	0
240	568	264	304	304	290	14	3	0

Table 56. Effect of nitrogen rate averaged across in-row seed spacing on tuber quality of NDC5281-2R - 2005

Nitrogen Rate (lbs/ac)	% External defects[1]	% Internal defects[2]	Specific Gravity
0	0.7	0	1.081
60	2.0	0.4	1.082
120	0.5	0	1.078
180	0.6	0	1.080
240	0.5	0	1.080

[1]Includes growth cracks, knobs and misshapes
[2]Includes hollow heart and brown center

Table 57. Effect of nitrogen rate averaged across in-row seed spacing on tuber diameter of NDC5281-2R - 2005

Nitrogen (lb/ac)	< 2 in.dia[1]	2 - 4 in. dia.	> 4 in.dia.	> 2 in.dia.< 10 oz	> 2 in.dia. > 10 oz
			Yield (cwt/ac)		
0	98	344	0	335	9
60	153	450	0	439	11
120	149	445	0	428	17
180	152	452	0	436	16
240	157	408	0	396	12

[1]dia = diameter

Table 58. Effect of nitrogen rate and seed spacing on yield and tuber size distribution of Sangre - 2005

Seed spacing / Nitrogen Rate (in./lbs per ac)	Total	< 4 oz	> 4 oz	4 - 16 oz	4 - 10 oz	10 - 16 oz	12 - 16 oz	> 16 oz
				Yield (cwt/ac)				
10" 0N	620	97	523	513	356	156	69	10
10" 60N	769	100	669	648	413	236	138	21
10" 120N	728	113	615	551	374	177	103	64
10" 180N	756	133	623	605	423	182	87	18
10" 240N	712	100	612	523	290	233	118	90
12" 0N	710	105	605	561	351	210	92	44
12" 60N	725	126	600	561	392	169	79	38
12" 120N	776	120	656	587	395	192	110	69
12" 180N	677	120	556	513	328	185	87	44
12" 240N	774	131	643	592	372	220	108	51
14" 0N	653	95	559	515	336	179	92	44
14" 60N	753	103	651	610	374	236	126	41
14" 120N	738	123	615	538	351	187	85	77
14" 180N	715	115	600	543	354	190	103	56
14" 240N	743	110	633	567	354	213	140	66

Table 59. Effect of nitrogen rate and seed spacing on tuber quality of Sangre - 2005

Seed spacing / Nitrogen rate (inches/ lbs per acre)	% External defects[1]	% Internal defects[2]	Specific Gravity
10" 0N	1.9	2.6	1.089
10" 60N	2.4	3.2	1.084
10" 120N	0.7	3.7	1.081
10" 180N	2.2	1.8	1.075
10" 240N	7.4	4.4	1.075
12" 0N	1.1	1.4	1.086
12" 60N	1.5	0.7	1.086
12" 120N	4.1	1.9	1.082
12" 180N	1.5	2.7	1.083
12" 240N	2.0	0.7	1.078
14" 0N	4.1	2.7	1.084
14" 60N	4.1	3.8	1.081
14" 120N	5.8	2.7	1.078
14" 180N	4.9	0.9	1.080
14" 240N	3.3	3.8	1.076

[1] Includes growth cracks, knobs and misshapes
[2] Includes hollow heart and brown center

Table 60. Effect of nitrogen rate and seed spacing on tuber diameter of Sangre - 2005

Seed spacing/Nitrogen rate (inches/lbs per acre)	< 2 in. dia[1]	2 - 4 in. dia.	> 4 in. dia.	> 2 in. dia. < 10 oz	> 2in. dia. > 10 oz
			Yield (cwt/ac)		
10" 0N	44	577	0	405	172
10" 60N	54	725	0	469	256
10" 120N	56	661	18	436	243
10" 180N	62	700	0	492	208
10" 240N	44	648	23	356	315
12" 0N	56	646	8	405	249
12" 60N	67	671	0	446	225
12" 120N	59	715	26	469	272
12" 180N	64	620	0	395	225
12" 240N	67	705	0	431	274
14" 0N	41	620	8	402	226
14" 60N	51	692	8	421	279
14" 120N	54	679	8	426	261
14" 180N	56	666	0	415	251
14" 240N	72	666	5	395	276

[1]dia = diameter

Table 61. Effect of seed spacing averaged across nitrogen rates on yield and tuber size distribution of Sangre - 2005

Seed Spacing (inches)	Total	< 4 oz	> 4 oz	4 - 16 oz	4 - 10 oz	10 - 16 oz	12 - 16 oz	> 16 oz
				Yield (cwt/ac)				
10	717	109	608	568	371	197	103	41
12	732	120	612	563	368	195	95	49
14	720	109	612	555	354	201	109	57

Table 62. Effect of seed spacing averaged across nitrogen rates on tuber quality of Sangre - 2005

Seed Spacing (inches)	% External defects[1]	% Internal defects[2]	Specific Gravity
10	2.9	3.1	1.081
12	2.0	1.5	1.083
14	4.0	2.8	1.080

[1]Includes growth cracks, knobs and misshapes
[2]Includes hollow heart and brown center

Table 63. Effect of seed spacing averaged across nitrogen rates on tuber diameter of Sangre - 2005

Seed Spacing (inches)	< 2 in.dia[1]	2 - 4 in. dia.	> 4 in.dia.	> 2 in.dia.< 10 oz	> 2 in.dia. > 10 oz
			Yield (cwt/ac)		
10	52	662	8	432	239
12	63	671	7	429	249
14	55	665	6	411	259

[1]dia = diameter

Table 64. Effect of nitrogen rate averaged across in-row seed spacing on yield and tuber size distribution of Sangre - 2005

Nitrogen Rate (lbs/ac)	Total	< 4 oz	> 4 oz	4 - 16 oz	4 - 10 oz	10 - 16 oz	12 - 16 oz	> 16 oz
				Yield (cwt/ac)				
0	661	99	562	530	348	182	84	33
60	749	110	640	606	393	214	114	33
120	747	119	629	559	373	185	99	70
180	716	123	593	554	368	186	92	39
240	743	114	629	561	339	222	122	69

Table 65. Effect of nitrogen rate averaged across in-row seed spacing on tuber quality of Sangre - 2005

Nitrogen Rate lbs/ac)	% External defects[1]	% Internal defects[2]	Specific Gravity
0	2.4	2.2	1.086
60	2.7	2.7	1.084
120	3.5	2.8	1.080
180	2.9	1.8	1.079
240	4.2	3.0	1.076

[1]Includes growth cracks, knobs and misshapes
[2]Includes hollow heart and brown center

Table 66. Effect of nitrogen rate averaged across in-row seed spacing on tuber diameter of Sangre - 2005

Nitrogen rate (lbs/ac)	< 2 in.dia[1]	2 - 4 in. dia.	> 4 in.dia.	> 2 in.dia.< 10 oz	> 2 in.dia. > 10 oz
			Yield (cwt/ac)		
0	47	613	5	402	216
60	57	696	3	445	254
120	56	685	17	443	259
180	61	662	0	434	228
240	61	673	9	394	288

[1]dia = diameter

Table 67. Effect of weedone application rate on yield and tuber size profile of Cherry Red - 2005

Application rate (fl. oz./ac)	Total	< 4 oz	> 4 oz	4 - 16 oz	4 - 10 oz	10 - 16 oz	12 - 16 oz	> 16 oz
					Yield (cwt/ac)			
Control	317	153	157	157	157	0	0	0
2.3	333	156	171	171	171	0	0	0
3.5	354	186	158	158	155	3	0	0
4.6	328	174	149	149	149	0	0	0

Table 68. Effect of weedone application rate on skin color of Cherry Red – 2005

Application rate (fl. oz/ac)	Tuber skin color (visual assessment)
Control	1.25[1]
2.3	3.00
3.5	3.00
4.6	3.00

[1] 1 = very light pink; 4 = very dark red

Table 69. Effect of weedone application on yield and tuber size profile of Sangre and Colorado Rose (CO89097-2R) - 2005

Treatment	Total	< 4 oz	> 4 oz	4 - 16 oz	4 - 10 oz	10 - 16 oz	12 - 16 oz	> 16 oz
	Yield (cwt/ac)							
Sangre, weedone	636	125	489	481	388	92	40	9
Sangre, no weedone	683	92	591	579	366	213	113	12
Colorado Rose, weedone	655	147	507	504	457	47	14	4
Colorado Rose, no weedone.	704	78	627	616	459	157	62	11

Table 70. Effect of weedone application on tuber quality of Sangre and Colorado Rose (CO89097-2R) - 2005

Treatment	% External defects[1]	% Internal defects[2]	Specific Gravity
Sangre, weedone	1.3	0	1.078
Sangre, no weedone	2.7	0.5	1.078
Colorado Rose, weedone	2.7	0	1.084
Colorado Rose, no weedone	1.0	0.9	1.086

[1] Includes growth cracks, knobs and misshapes
[2] Includes hollow heart and brown center

Table 71. Effect of weedone application on tuber diameter of Sangre and Colorado Rose (CO89097-2R) - 2005

Treatment	< 2 in.	2 - 4in.	> 4 in.	> 2 in. < 10 oz	> 2in > 10 oz
			Yield (cwt/ac)		
Sangre, weedone	63	539	0	430	109
Sangre, no weedone	45	607	0	400	207
Colorado Rose, weedone	87	559	0	512	46
Colorado Rose, no weedone	53	649	0	489	160

Table 72. Effect of weedone application on skin color of Sangre and Colorado Rose (CO89097-2R) – 2005

Treatment	Colorimeter reading	Visual assessment
	Tuber skin color	
Sangre, weedone	15.8	3.5[1]
Sangre, no weedone	14.7	1.6
Colorado Rose, weedone	13.1	3.3
Colorado Rose, no weedone	14.4	3.0

[1] 1 = very light pink; 4 = very dark red

Table 73. Effect of nitrogen rate and seed spacing on yield and tuber size distribution of Purple Majesty (CO94165-3P/P) – 2005

Seed spacing/ Nitrogen Rate (in./lbs per ac)	Total	< 4 oz	> 4 oz	4 – 16 oz	4 – 10 oz	10 – 16 oz	12 – 16 oz	> 16 oz
				Yield (cwt/ac)				
10" 0N	454	319	135	135	133	2	0	0
10" 60N	556	326	229	229	227	2	0	0
10" 120N	567	371	196	196	184	12	0	0
10" 180N	595	358	237	237	206	31	14	0
10" 240N	463	301	161	161	154	7	5	0
12" 0N	404	242	163	163	155	8	5	0
12" 60N	500	331	169	169	169	0	0	0
12" 120N	592	389	200	200	190	10	0	0
12" 180N	540	315	224	224	196	28	9	0
12" 240N	581	378	202	202	194	8	0	0
14" 0N	446	290	156	156	151	5	0	0
14" 60N	524	356	169	169	165	4	0	0
14" 120N	455	277	178	178	171	7	5	0
14" 180N	551	343	209	201	193	8	0	8
14" 240N	495	269	226	226	200	26	10	0

Table 74. Effect of nitrogen rate and seed spacing on tuber quality of Purple Majesty (CO94165-3P/P) – 2005

Seed spacing/Nitrogen rate (inches/lbs per acre)	% External defects[1]	% Internal defects[2]	Specific Gravity
10" 0N	0	1.7	1.081
10" 60N	0	1.8	1.082
10" 120N	0	0.4	1.077
10" 180N	0	1.3	1.080
10" 240N	1.4	0	1.077
12" 0N	0.6	0	1.082
12" 60N	0	0.3	1.082
12" 120N	0.2	0.4	1.078
12" 180N	0.5	1.1	1.078
12" 240N	0.2	0	1.076
14" 0N	0	1.0	1.085
14" 60N	0.5	1.0	1.085
14" 120N	0	0.9	1.082
14" 180N	0.6	2.2	1.081
14" 240N	1.2	3.2	1.080

[1]Includes growth cracks, knobs, and misshapes
[2]Includes hollow heart and brown center

Table 75. Effect of seed spacing averaged across nitrogen rates on yield and tuber size distribution of Purple Majesty (CO94165-3P/P) – 2005

Seed Spacing (inches)	Total	< 4 oz	> 4 oz	4 – 16 oz	4 – 10 oz	10 – 16 oz	12 – 16 oz	> 16 oz
				Yield (cwt/ac)				
10	527	335	192	192	181	11	4	0
12	523	331	192	192	181	11	3	0
14	494	307	188	186	176	10	3	2

Table 76. Effect of seed spacing averaged across nitrogen rates on tuber quality of Purple Majesty (CO94165-3P/P) – 2005

Seed Spacing (inches)	% External defects[1]	% Internal defects[2]	Specific Gravity
10	0.3	1	1.079
12	0.3	0.4	1.079
14	0.5	1.7	1.083

[1]Includes growth cracks, knobs, and misshapes
[2]Includes hollow heart and brown center

Table 77. Effect of nitrogen rate averaged across in-row seed spacing on yield and tuber size distribution of Purple Majesty (CO94165-3P/P) – 2005

Nitrogen Rate (lbs/ac)	Total	< 4 oz	> 4 oz	4 – 16 oz	4 – 10 oz	10 – 16 oz	12 – 16 oz	> 16 oz
				Yield (cwt/ac)				
0	435	284	151	151	146	5	2	0
60	527	338	189	189	187	2	0	0
120	538	346	191	191	182	9	2	0
180	562	339	223	221	198	23	8	3
240	513	316	196	196	183	13	5	0

Table 78. Effect of nitrogen rate averaged across in-row seed spacing on tuber quality of Purple Majesty (CO94165-3P/P) – 2005

Nitrogen Rate (lbs/ac)	% External defects[1]	% Internal defects[2]	Specific Gravity
0	0.2	0.9	1.083
60	0.2	1.0	1.083
120	0.1	0.6	1.079
180	0.4	1.5	1.080
240	0.9	1.1	1.078

[1]Includes growth cracks, knobs, and misshapes
[2]Includes hollow heart and brown center

Table 79. Effect of nitrogen rate and seed spacing on yield and tuber size distribution of Mountain Rose (CO94183-1R/R) – 2005

Seed spacing/ Nitrogen Rate (in./lbs per ac)	Total	< 4 oz	> 4 oz	4 – 16 oz	4 – 10 oz	10 – 16 oz	12 – 16 oz	> 16 oz
				Yield (cwt/ac)				
10" 0N	345	149	196	196	196	0	0	0
10" 60N	484	136	348	348	325	23	8	0
10" 120N	499	142	357	357	329	28	9	0
10" 180N	461	139	327	322	279	43	5	5
10" 240N	489	157	333	333	329	4	0	0
12" 0N	402	149	253	253	241	11	0	0
12" 60N	495	130	365	365	346	18	0	0
12" 120N	437	122	315	315	280	35	9	0
12" 180N	440	120	319	314	299	15	0	5
12" 240N	386	130	257	257	243	13	4	0
14" 0N	373	128	246	246	240	5	0	0
14" 60N	355	89	266	266	241	25	12	0
14" 120N	396	113	283	283	259	24	0	0
14" 180N	462	128	335	335	300	34	8	0
14" 240N	366	106	260	260	242	18	0	0

Table 80. Effect of nitrogen rate and seed spacing on tuber quality of Mountain Rose (CO94183-1R/R) – 2005

Seed spacing/Nitrogen rate (inches/lbs per acre)	% External defects[1]	% Internal defects[2]	Specific Gravity
10" 0N	0	0	1.077
10" 60N	0.8	0	1.078
10" 120N	0.7	0	1.074
10" 180N	0	0	1.072
10" 240N	1.1	0	1.074
12" 0N	0.6	0	1.075
12" 60N	0.6	0	1.074
12" 120N	0	0	1.073
12" 180N	0.1	0	1.072
12" 240N	0	0	1.073
14" 0N	0	0	1.076
14" 60N	0	0	1.074
14" 120N	0.2	0	1.074
14" 180N	0.2	0	1.075
14" 240N	0	0	1.073

[1]Includes growth cracks, knobs, and misshapes
[2]Includes hollow heart and brown center

Table 81. Effect of nitrogen rate and seed spacing on tuber diameter of Mountain Rose (CO94183-1R/R) – 2005

Seed spacing/Nitrogen rate (inches/lbs per acre)	< 2 in. dia.[1]	2 – 4 in. dia.	> 4 in. dia.	> 2in. dia.< 10 oz	> 2 in. dia.>10 oz
		Yield (cwt/ac)			
10" 0N	70	275	0	275	0
10" 60N	54	430	0	407	23
10" 120N	68	423	8	408	23
10" 180N	56	405	0	357	48
10" 240N	58	431	0	427	4
12" 0N	71	331	0	320	11
12" 60N	66	429	0	406	23
12" 120N	60	377	0	341	36
12" 180N	57	379	0	360	19
12" 240N	46	340	0	330	10
14" 0N	62	311	0	306	5
14" 60N	43	312	0	290	22
14" 120N	58	341	0	317	24
14" 180N	73	390	0	350	40
14" 240N	27	315	3	312	6

[1] dia. = diameter

Table 82. Effect of seed spacing averaged across nitrogen rates on yield and tuber size distribution of Mountain Rose (CO94183-1R/R) – 2005

Seed Spacing (inches)	Total	< 4 oz	> 4 oz	4 – 16 oz	4 – 10 oz	10 – 16 oz	12 – 16 oz	> 16 oz
				Yield (cwt/ac)				
10	456	145	312	311	292	20	4	1
12	432	130	302	301	282	18	3	1
14	390	113	278	278	256	21	4	0

Table 83. Effect of seed spacing averaged across nitrogen rates on tuber quality of Mountain Rose (CO94183-1R/R) – 2005

Seed Spacing (inches)	% External defects[1]	% Internal defects[2]	Specific Gravity
10	0.5	0	1.075
12	0.3	0	1.074
14	0.1	0	1.074

[1]Includes growth cracks, knobs, and misshapes
[2]Includes hollow heart and brown center

Table 84. Effect of seed spacing averaged across nitrogen rates on tuber diameter of Mountain Rose (CO94183-1R/R) – 2005

Seed Spacing (inches)	< 2 in. dia.[1]	2 – 4 in. dia.	> 4 in. dia.	> 2 in. dia. < 10oz	> 2 in. dia. > 10oz
10	62	392	2	374	20
12	60	372	0	351	21
14	54	334	1	315	20

[1] diameter

Table 85. Effect of nitrogen rate averaged across in-row seed spacing on yield and tuber size distribution of Mountain Rose (CO94183-1R/R) – 2005

Nitrogen Rate (lbs/ac)	Total	< 4 oz	> 4 oz	4 – 16 oz	4 – 10 oz	10 – 16 oz	12 – 16 oz	> 16 oz
				Yield (cwt/ac)				
0	373	142	232	232	226	5	0	0
60	445	118	326	326	304	22	7	0
120	444	126	318	318	289	29	6	0
180	454	129	327	324	293	31	4	3
240	414	131	283	283	271	12	1	0

Table 86. Effect of nitrogen rate averaged across in-row seed spacing on tuber quality of Mountain Rose (CO94183-1R/R) – 2005

Nitrogen Rate (lbs/ac)	% External defects[1]	% Internal defects[2]	Specific Gravity
0	0.2	0	1.076
60	0.5	0	1.075
120	0.3	0	1.074
180	0.1	0	1.073
240	0.4	0	1.073

[1]Includes growth cracks, knobs, and misshapes
[2]Includes hollow heart and brown center

Table 87. Effect of nitrogen rate averaged across in-row seed piece spacing on tuber diameter of Mountain Rose (CO94183-1R/R) – 2005

Nitrogen rate (lb/ac)	< 2 in. dia.[1]	2 – 4 in. dia.	> 4 in. dia.	> 2 in. dia. < 10oz	> 2 in. dia. > 10oz
0	67	306	0	299	7
60	55	390	0	367	23
120	62	378	3	354	28
180	63	391	0	356	35
240	46	367	1	358	10

[1] diameter

Table 88. Effect of nitrogen rate and seed spacing on yield and tuber size distribution of All Blue – 2005

Seed spacing/ Nitrogen Rate (in./lbs per ac)	Total	< 4 oz	> 4 oz	4 – 16 oz	4 – 10 oz	10 – 16 oz	12 – 16 oz	> 16 oz
				Yield (cwt/ac)				
10" 0N	453	185	268	268	248	20	0	0
10" 60N	522	203	324	319	277	43	14	5
10" 120N	526	182	344	344	277	67	24	0
10" 180N	588	262	325	320	253	68	30	5
10" 240N	645	261	384	384	332	52	26	0
12" 0N	533	197	336	336	302	34	12	0
12" 60N	639	243	395	387	346	42	17	8
12" 120N	492	205	287	287	245	42	12	0
12" 180N	535	209	325	320	245	76	47	5
12" 240N	548	256	292	292	243	48	23	0
14" 0N	548	308	246	241	228	13	5	5
14" 60N	543	310	233	233	213	20	5	0
14" 120N	544	252	292	292	256	36	9	0
14" 180N	541	234	308	295	260	34	14	13
14" 240N	475	226	250	245	216	28	9	5

Table 89. Effect of nitrogen rate and seed spacing on tuber quality of All Blue – 2005

Seed spacing/Nitrogen rate (inches/lbs per acre)	% External defects[1]	% Internal defects[2]	Specific Gravity
10" 0N	1.7	0.6	1.094
10" 60N	2.5	0	1.092
10" 120N	0.7	0.5	1.086
10" 180N	3.1	0	1.085
10" 240N	1.2	0.5	1.086
12" 0N	1.8	0	1.090
12" 60N	2.2	0	1.095
12" 120N	1.5	0	1.084
12" 180N	0.7	0	1.084
12" 240N	1.0	0	1.083
14" 0N	1.6	1.2	1.091
14" 60N	0	0	1.089
14" 120N	1.1	0	1.087
14" 180N	1.7	0	1.084
14" 240N	0	0	1.083

[1]Includes growth cracks, knobs, and misshapes
[2]Includes hollow heart and brown center

Table 90. Effect of seed spacing averaged across nitrogen rates on yield and tuber size distribution of All Blue – 2005

Seed Spacing (inches)	Total	< 4 oz	> 4 oz	4 – 16 oz	4 – 10 oz	10 – 16 oz	12 – 16 oz	> 16 oz
				Yield (cwt/ac)				
10	547	219	329	327	277	50	19	2
12	549	222	327	324	276	48	22	3
14	530	266	266	261	235	26	8	5

Table 91. Effect of seed spacing averaged across nitrogen rates on tuber quality of All Blue – 2005

Seed Spacing (inches)	% External defects[1]	% Internal defects[2]	Specific Gravity
10	1.8	0.3	1.089
12	1.4	0	1.087
14	0.9	0.2	1.087

[1]Includes growth cracks, knobs, and misshapes
[2]Includes hollow heart and brown center

Table 92. Effect of nitrogen rate averaged across in-row seed spacing on yield and tuber size distribution of All Blue – 2005

Nitrogen Rate (lbs/ac)	Total	< 4 oz	> 4 oz	4 – 16 oz	4 – 10 oz	10 – 16 oz	12 – 16 oz	> 16 oz
				Yield (cwt/ac)				
0	511	230	283	282	259	22	6	2
60	568	252	317	313	279	35	12	4
120	521	213	308	308	259	48	15	0
180	555	235	319	312	253	59	30	8
240	556	248	309	307	264	43	19	2

Table 93. Effect of nitrogen rate averaged across in-row seed spacing on tuber quality of All Blue – 2005

Nitrogen Rate (lbs/ac)	% External defects[1]	% Internal defects[2]	Specific Gravity
0	1.7	0.6	1.092
60	1.6	0	1.092
120	1.1	0.2	1.086
180	1.8	0	1.084
240	0.7	0.2	1.084

[1]Includes growth cracks, knobs, and misshapes
[2]Includes hollow heart and brown center

Table 94. Effect of in-row seed spacing on yield and tuber size profile of VC0967-2R/Y - 2005

Seed Spacing (inches)	Total	< 4 oz	> 4 oz	4 - 16 oz	4 - 10 oz	10 - 16 oz	12 - 16 oz	> 16 oz
			Yield (cwt/ac)					
10	567	89	478	478	425	53	17	0
12	521	98	421	421	337	84	29	0
14	544	71	473	473	392	81	22	0

Table 95. Effect of in-row seed spacing on tuber quality of VC0967-2R/Y - 2005

Seed Spacing (inches)	% External defects[1]	% Internal defects[2]	Specific Gravity
10	2.2	0	1.077
12	2.3	0	1.075
14	0.7	0	1.072

[1] Includes growth cracks, knobs and misshapes
[2] Includes hollow heart and brown center

Table 96. Effect of in-row seed spacing on tuber diameter of VC0967-2R/Y - 2005

Seed Spacing (inches)	< 2 in.	2 - 4 in.	> 4 in.	> 2 in. < 10 oz	> 2 in. > 10 oz
			Yield (cwt/ac)		
10	36	530	0	475	55
12	40	474	9	398	85
14	35	503	4	424	83

Table 97. Effect of vine kill date on yield and tuber size profile of VC0967- 2R/Y - 2005

Vine kill (DAP)[1]	Total	< 4 oz	> 4 oz	4 - 16 oz	4 - 10 oz	10 - 16 oz	12 - 16 oz	> 16 oz
				Yield (cwt/ac)				
90	384	136	249	249	231	18	5	0
100	402	110	292	292	284	8	5	0
110	520	110	410	410	374	36	13	0
120	484	92	392	384	325	59	26	8

[1] Days after planting

Table 98. Effect of vine kill date on tuber quality of VC0967 -2R/Y - 2005

Vine kill (days after planting)	% External defects[1]	% Internal defects[2]	Specific Gravity
90	0	0	1.066
100	0	0	1.068
110	1.5	0	1.072
120	2.1	0	1.071

[1] Includes growth cracks, knobs and misshapes
[2] Includes hollow heart and brown center

Table 99. Effect of vine kill date on tuber diameter of VC0967- 2R/Y - 2005

Vine kill (DAP)[1]	< 2 in.	2 - 4 in.	> 4 in.	> 2in. < 10 oz	> 2 in. > 10 oz
			Yield (cwt/ac)		
90	67	325	0	313	13
100	46	356	0	349	8
110	46	472	5	438	38
120	54	441	0	369	72

[1] Days after planting

Table 100. Effect of in-row seed spacing on yield and tuber size profile of VC1002-3W/Y - 2005

Seed Spacing (inches)	Total	< 4 oz	> 4 oz	4 - 16 oz	4 - 10 oz	10 -16 oz	12 - 16 oz	> 16 oz
				Yield(cwt/ac)				
10	408	274	135	135	135	0	0	0
12	445	268	177	177	177	0	0	0
14	445	264	180	180	180	0	0	0

Table 101. Effect of in-row seed spacing on tuber quality of VC1002-3W/Y - 2005

Seed Spacing (inches)	% External defects[1]	% Internal defects[2]	Specific Gravity
10	0	0	1.096
12	2.2	0	1.099
14	0	0.5	1.099

[1] Includes growth cracks, knobs and misshapes
[2] Includes hollow heart and brown center

Table 102. Effect of vine kill date on yield and tuber size profile of VC1002-3W/Y - 2005

Vine kill (DAP)[1]	Total	< 4 oz	> 4 oz	4 - 16 oz	4 - 10 oz	10 - 16 oz	12 - 16 oz	> 16 oz
				Yield(cwt/ac)				
90	308	256	51	51	51	0	0	0
100	400	305	95	95	95	0	0	0
110	510	300	210	210	200	10	5	0
120	551	251	300	300	287	13	8	0

[1] Days after planting

Table 103. Effect of vine kill date on tuber quality of VC1002-3W/Y - 2005

Vine kill (days after planting)	% External defects[1]	% Internal defects[2]	Specific Gravity
90	1.0	0	1.075
100	0	0	1.081
110	2.8	0	1.098
120	0.5	0	1.097

[1] Includes growth cracks, knobs and misshapes
[2] Includes hollow heart and brown center

Table 104. Effect of location and different management practice on yield performance of VC1009-1W/Y – 2005

Location[1]	Total	< 4 oz	> 4 oz	4 – 16 oz	4 – 10 oz	10 – 16 oz	12 – 16 oz	> 16 oz
	Yield (cwt/ac)							
Mitchell Farms	643	188	455	447	411	36	0	9
Entz Farms	800	328	477	469	454	15	0	8
Rocky Top Farms	412	185	227	216	202	14	8	11

[1] Different grower farms with different management practices.

Table 105. Effect of location and different management practice on yield performance of VC1015-7R/Y – 2005

Location[1]	Total	< 4 oz	> 4 oz	4 – 16 oz	4 – 10 oz	10 – 16 oz	12 – 16 oz	> 16 oz
	Yield (cwt/ac)							
Mitchell Farms	409	190	219	219	219	0	0	0
Entz Farms	601	138	463	463	423	41	19	0
Rocky Top Farms	191	63	128	119	105	14	0	9

[1] Different grower farms with different management practices.

Table 106. Effect of location and different management practice on yield performance of CO94157-2W/Y – 2005

Location[1]	Total	< 4 oz	> 4 oz	4 – 16 oz	4 – 10 oz	10 – 16 oz	12 – 16 oz	> 16 oz
	Yield (cwt/ac)							
Mitchell Farms	441	235	205	205	195	10	0	0
Entz Farms	485	225	261	261	255	6	0	0
Rocky Top Farms	411	128	283	283	271	12	0	0

[1] Different grower farms with different management practices.

Table 107. Effect of location and different management practice on yield performance of VC1123-2W/Y – 2005

Location[1]	Total	< 4 oz	> 4 oz	4 – 16 oz	4 – 10 oz	10 – 16 oz	12 – 16 oz	> 16 oz
	Yield (cwt/ac)							
Mitchell Farms	579	162	417	417	404	13	0	0
Entz Farms	697	145	552	552	515	37	11	0
Rocky Top Farms	471	69	402	387	339	48	28	15

[1] Different grower farms with different management practices.

Table 108. Effect of location and different management practice on yield performance of Yukon Gold – 2005

Location[1]	Total	< 4 oz	> 4 oz	4 – 16 oz	4 – 10 oz	10 – 16 oz	12 – 16 oz	> 16 oz
	Yield (cwt/ac)							
Mitchell Farms	492	68	424	424	363	62	32	0
Entz Farms	557	88	470	462	341	121	52	8
Rocky Top Farms	427	58	368	360	252	108	72	9

[1] Different grower farms with different management practices.

Table 109. Effect of location and different management practice on yield performance of CO95051-7W – 2005

Location[1]	Total	< 4 oz	> 4 oz	4 – 16 oz	4 – 10 oz	10 – 16 oz	12 – 16 oz	> 16 oz
	Yield (cwt/ac)							
Mitchell Farms	465	92	373	373	361	12	7	0
Entz Farms	476	65	411	411	387	24	0	0
Rocky Top Farms	335	55	281	281	251	30	6	0

[1] Different grower farms with different management practices.

Table 110. Effect of location and different management practice on yield performance of CO96141-4W – 2005

Location[1]	Total	< 4 oz	> 4 oz	4 – 16 oz	4 – 10 oz	10 – 16 oz	12 – 16 oz	> 16 oz
	Yield (cwt/ac)							
Mitchell Farms	470	62	408	391	344	46	19	17
Entz Farms	574	85	490	482	452	30	8	8
Rocky Top Farms	339	65	274	258	213	45	19	17

[1] Different grower farms with different management practices.

Table 111. Effect of location and different management practice on yield performance of Chipeta – 2005

Location[1]	Total	< 4 oz	> 4 oz	4 – 16 oz	4 – 10 oz	10 – 16 oz	12 – 16 oz	> 16 oz
	Yield (cwt/ac)							
Mitchell Farms	640	38	602	587	484	104	25	15
Entz Farms	733	135	598	582	494	88	37	16
Rocky Top Farms	481	37	444	414	337	78	42	30

[1] Different grower farms with different management practices.