Colorado Potato Cultivar Management

Data Summary 2008

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-Comments Welcome-

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MISSION STATEMENT

The mission of the Colorado Potato Cultivar Management and Physiology Program is to develop cultural management guidelines for newly released and existing potato cultivars, as well as advance potato selections that have the potential of being released, through field and laboratory research.

Each potato cultivar or advance selection has its own unique set of cultural management requirements to maximize tuber yield of premium size and grade tubers. Therefore, cultural management practices that maximize the production and quality of individual potato cultivars must be developed.

The best guidelines for fertility practices, irrigation management, plant population management, vine kill management, and other management practices are obtained from field experiments conducted in replicated trials. New cultivars are much more successful when release is accompanied by cultivar specific management guidelines. This information relates growth habit and other plant characteristics to nutrient and other management strategies for yield and quality goals, which are agronomically sound, economically advantageous, and environmentally responsible.

When management guidelines are tailored for individual cultivars it leads to the successful, sustainable, and economic production of the cultivar, which results in the optimization of its genetic potential, while minimizing economic inputs and environmental impact.

Table1 Effect of in-row seed piece spacing on yield and tuber size distribution of CO94035-15RU, 2008.

Seed spacing (inches)	Total	< 4oz	> 4oz	4-16oz	4–10oz	10–16oz	4 – 12oz	6 – 12 oz	6-14oz	6-16oz	12 -16oz	>16oz
	Yield (cwt/ac)											
10	472	145	327	327	324	3	324	138	141	141	3	0
12	455	138	317	317	304	13	317	158	158	158	0	0
14	466	124	342	342	326	16	339	156	160	160	3	0

Table 2 Effect of in-row seed piece spacing on tuber quality of CO94035-15RU, 2008

Seed spacing (inches)	% External Defects[1]	% Internal Defect[2]	Specific Gravity
10	1.1	0	1.082
12	0.8	0	1.083
14	0	0	1.082

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

Table 3 Effect of in-row seed piece spacing on yield and tuber size distribution of CO94035-15RU, (two year average) 2005 and 2008.

Seed spacing (inches)	Total	<4oz	> 4oz	4-16oz	4-10oz	10-16oz	12-16oz	>16oz
	Yield (cwt/ac)							
10	471	96	375	361	288	73	32	14
12	473	91	382	364	330	34	36	18
14	473	84	389	371	316	55	36	18

Table 4 Effect of in-row seed piece spacing on tuber quality of CO94035-15RU, (two year average) 2005 and 2008

Seed spacing (inches)	% External Defects[1]	% Internal Defect[2]	Specific Gravity
10	1.0	7.1	1.086
12	0.7	4.8	1.086
14	0.6	8.4	1.088

[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 distribution of CO94035-15RU, (two year average) 2005 and 2006

Vine kill (DAP)[1]	Total	<4oz	> 4oz	4-16oz	4-10oz	10-16oz	12-16oz	>16oz
				Yield (cwt/ac)				
90	363	107	256	256	251	5	0	0
100	460	96	364	364	323	41	17	0
110	494	72	422	411	317	94	46	11
120	550	78	472	463	351	112	64	9

[1]Days after planting

Table 6 Effect of vine kill date on tuber quality of CO94035-15RU, (two year average) 2005 and 2006

Vine kill (DAP) [1]	% External Defects[1]	% Internal Defect[2]	Specific Gravity
90	0	0.6	1.065
100	0.9	0.3	1.072
110	1.2	2.7	1.077
120	3.2	2.3	1.084

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

Table 7 Effect of in-row seed piece spacing on yield and tuber size distribution of AC96052-1RU, 2008.

Seed spacing (inches)	Total	< 4oz	> 4oz	4-16oz	4–10oz	10–16oz	4 – 12oz	6 – 12 oz	6-14oz	6-16oz	12 -16oz	>16oz
	Yield (cwt/ac)											
10	403	193	210	210	207	3	210	43	43	43	0	0
12	389	156	233	233	230	3	233	77	77	77	0	0
14	372	146	226	226	226	0	226	64	64	64	0	0

Table 8 Effect of in-row seed piece spacing on tuber quality of AC96052-1RU, 2008

Seed spacing (inches)	% External Defects[1]	% Internal Defect[2]	Specific Gravity
10	0.7	0	1.091
12	0.7	0	1.093
14	0.4	0	1.092

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

Table 9 Effect of in-row seed piece spacing on yield and tuber size distribution of AC96052-1RU, (two year average) 2006 and 2008.

Seed spacing (inches)	Total	< 4oz	> 4oz	4-16oz	4–10oz	10–16oz	6 – 12 oz	12 -16oz	> 16oz
	Yield (cwt/ac)								
10	399	157	242	242	236	6	90	5	0
12	397	132	265	265	252	13	112	9	0
14	372	111	261	261	236	25	110	5	0

Table 10 Effect of in-row seed piece spacing on tuber quality of AC96052-1RU, (two year average) 2006 and 2008

Seed spacing (inches)	% External Defects[1]	% Internal Defect[2]	Specific Gravity
10	0.4	0	1.089
12	0.4	0	1.091
14	0.2	0	1.091

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

Table 11 Effect of vine kill date on yield and tuber size distribution of AC96052-1RU, 2006.

Vine kill (DAP)[1]	Total	< 4 oz	> 4 oz	4 – 16 oz	4 – 10 oz	10 – 16 oz	6 - 12 oz	12 – 16 oz	> 16 oz
					Yield(cwt/ac)				
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

[1]Days after planting

Table 12 Effect of vine kill date on tuber quality of AC96052-1RU, 2006

Vine kill (DAP)[1]	% External Defects[2]	% Internal Defects[3]	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

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

Table 13 Effect of nitrogen application frequency on yield and tuber size distribution of CO95172-3RU, 2008.

Treatment	Total	< 4oz	> 4oz	4-16oz	4–10oz	10–16oz	4– 12oz	6– 12 oz	6-14oz	6-16oz	12 -16oz	>16oz
	Yield (cwt/ac)											
SPF[1]	453	205	248	248	245	3	245	88	91	91	3	0
CONV.	490	228	262	258	253	5	258	101	101	101	0	4

[1]SPF = Nitrogen applied at 7 days interval during the growing season
CONV = Nitrogen applied at 14 days interval during the growing season

Table 14 Effect of nitrogen application frequency on tuber quality of CO95172-3RU, 2008

Treatment	% External Defects[2]	Internal Defects[3]	Specific Gravity
SPF[1]	0.6	0	1.086
CONV.	5.2	0	1.084

[1]SPF = Nitrogen applied at 7 days interval during the growing season; CONV = Nitrogen applied at 14 days interval during the growing season; [2] Includes growth cracks, knobs and misshapes; [3] Includes hollow heart and brown center

Table 15 Effect of in-row seed piece spacing on yield and tuber size distribution of CO95172-3RU, 2006.

Seed spacing (inches)	Total	< 4oz	> 4oz	4-16oz	4–10oz	10–16oz	6 – 12 oz	12 -16oz	> 16oz
				Yield (cwt/ac)					
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 16 Effect of in-row seed piece spacing on tuber quality of CO95172-3RU 2006

Seed spacing (inches)	% External Defects[1]	% Internal Defects[2]	Specific Gravity
10	1.1	0	1.085
12	1.4	0	1.086
14	1.5	0	1.088

[1]Includes growth cracks, knobs and misshapes [3]Includes hollow heart and brown center

Table 17 Effect of vine kill date on yield and tuber size distribution of CO95172-3RU, 2006.

Vine kill (DAP)[1]	Total	< 4 oz	> 4 oz	4 – 16 oz	4 – 10 oz	10 – 16 oz	6 - 12 oz	12 – 16 oz	> 16 oz
					Yield(cwt/ac)				
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

[1]Days after planting

Table 18 Effect of vine kill date on tuber quality of CO95172-3RU, 2006

Vine kill (DAP)[1]	% External Defects[2]	% Internal Defects[3]	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

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

Table 19 Effect of total nitrogen rate on yield and tuber size distribution of Rio Grande Russet, 2008.

Nitrogen Rate (lb N/ac)	Total	< 4oz	> 4oz	4-16oz	4–10oz	10–16oz	4– 12oz	6– 12 oz	6-14oz	6-16oz	12 -16oz	>16oz
	Yield (cwt/ac)											
0 (28)[1]	412	189	223	223	219	4	223	85	85	85	0	0
60 (88)	458	177	281	281	254	27	272	114	118	123	9	0
120 (148)	452	171	281	281	263	18	277	111	115	115	4	0
180 (208)	450	158	292	281	277	4	281	110	110	110	0	11
240 (268)	454	206	248	248	233	15	239	95	104	104	9	0

[1]Figures in brackets indicate total available N (applied plus soil and irrigation water N)

Table 20 Effect of total nitrogen rate on tuber quality of Rio Grande Russet, 2008

Nitrogen Rate (lbN/ac)	% External Defects[2]	% Internal Defect[3]	Specific Gravity
0 (28)[1]	1.1	0	1.086
60 (88)	4.6	2.0	1.087
120 (148)	2.8	0	1.082
180 (208)	3.0	0	1.081
240 (268)	3.3	0	1.080

[1]Figures in brackets indicate total available N (applied plus soil and irrigation water N)
[2] Includes growth cracks, knobs and misshapes
[3] Includes hollow heart and brown center

Table 21 Effect of total nitrogen rate on yield and tuber size distribution of Rio Grande Russet, (three year average)

Nitrogen Rate (lb N/ac)	Total	< 4oz	> 4oz	4 – 16oz	4 – 10oz	10–16oz	6-12oz	12-16oz	>16oz
	Yield (cwt/ac)								
0N(57)[1]	399	167	232	229	216	13	105	3	3
60N(117)	464	168	296	293	253	40	136	20	3
120N(177)	440	155	285	282	252	30	138	9	3
180N(237)	461	162	299	293	275	18	124	9	6
240N(297)	453	169	284	284	260	24	141	10	0

[1]Figures in brackets indicate total available N (applied plus soil and irrigation water N)

Table 22 Effect of total nitrogen rate on tuber quality of Rio Grande Russet, (three year average)

Nitrogen Rate (lb N/ac)	% External Defects[2]	% Internal Defects[3]	Specific Gravity
0N(57)[1]	1.3	0	1.087
60N(117)	2.3	1.0	1.086
120N(177)	2.2	0	1.083
180N(237)	2.0	0	1.081
240N(297)	2.3	0	1.081

[1]Figures in brackets indicate total available N (applied plus soil and irrigation water N)
[2] Includes growth cracks, knobs and misshapes
[3] Includes hollow heart and brown center

Table 23 Effect of total nitrogen rate on yield and tuber size distribution of Canela Russet, 2008.

Nitrogen Rate (lbN/ac)	Total	< 4oz	> 4oz	4-16oz	4–10oz	10–16oz	4 – 12oz	6 – 12 oz	6-14oz	6-16oz	12 -16oz	> 16oz
	Yield (cwt/ac)											
0 (28)[1]	402	64	338	338	323	15	338	168	168	168	0	0
60 (88)	413	71	342	335	301	34	325	199	209	209	9	7
120 (148)	409	91	318	318	296	22	299	151	165	170	19	0
180 (208)	423	86	337	337	314	23	332	182	182	187	5	0
240 (268)	377	79	298	292	288	4	292	167	167	167	0	6

[1]Figures in brackets indicate total available N (applied plus soil and irrigation water N)

Table 24 Effect of total nitrogen rate on tuber quality of Canela Russet, 2008

Nitrogen Rate (lbN/ac)	% External Defects[2]	% Internal Defect[3]	Specific Gravity
0 (28)[1]	0.3	0	1.100
60 (88)	1.2	0.2	1.100
120 (148)	0	0	1.092
180 (208)	1.3	0	1.093
240 (268)	1.3	0	1.087

[1]Figures in brackets indicate total available N (applied plus soil and irrigation water N)
[2] Includes growth cracks, knobs and misshapes
[3] Includes hollow heart and brown center

Table 25.Effect of total nitrogen rate on yield and tuber size distribution of Canela Russet, (three year average)

Nitrogen Rate (lb N/ac)	Total	< 4oz	> 4oz	4 – 16oz	4 – 10oz	10–16oz	6-12oz	12-16oz	>16oz
	Yield (cwt/ac)								
0N(57)[1]	348	64	284	284	268	16	153	5	0
60N(117)	414	62	352	342	291	51	226	14	10
120N(177)	417	75	342	338	284	54	182	34	4
180N(237)	408	72	336	333	279	54	195	24	3
240N(297)	381	70	311	308	272	36	183	16	3

[1]Figures in brackets indicate total available N (applied plus soil and irrigation water N)

Table 26 Effect of total nitrogen rate on tuber quality of Canela Russet, (three year average)

Nitrogen Rate (lb N/ac)	% External Defects[2]	% Internal Defects[3]	Specific Gravity
0N(57)[1]	0.2	0	1.101
60N(117)	0.7	0.1	1.100
120N(177)	0	0	1.094
180N(237)	1.4	0	1.092
240N(297)	0.7	0	1.088

[1]Figures in brackets indicate total available N (applied plus soil and irrigation water N)
[2] Includes growth cracks, knobs and misshapes; [3] Includes hollow heart and brown center

Table 27 Effect of in-season nitrogen application timing on yield and tuber size distribution of Canela Russet, 2008

Treatment (application time)	Total	< 4oz	> 4oz	4 – 16oz	4 – 10oz	10–16oz	4-12oz	6-12oz	6-14oz	6-16oz	12-16oz	>16oz
	Yield (cwt/ac)											
Early[1]	410	74	336	332	294	38	316	169	178	186	17	4
Mid	398	78	320	320	294	26	307	152	162	166	13	0
Late	376	92	284	284	271	13	281	155	158	158	3	0

[1]Early = N application, July 7 – 25; Mid = N application, July 17 – 30; Late = N application, July 25 – August 7

Table 28 Effect of in-season nitrogen application timing on tuber quality of Canela Russet, 2008

Treatment (application time)	% External Defects[2]	% Internal Defects[3]	Specific Gravity
Early[1]	0	0	1.094
Mid	0	0	1.094
Late	0	0	1.097

[1]Early = N application July 7 – 25; Mid = N application July 17 – 30; Late = N application July 25 – August 7
[2]Includes growth cracks, knobs and misshapes
[3]Includes hollow heart and brown center

Table 29 Effect of seed size and seed reconditioning on stem and tuber number of Canela Russet, 2008

Treatment (Seed size and age)	Stems/Plant	Tubers/Plant
2.0-2.5oz cold[1]	2	7
2.0-2.5oz warm 7d[2]	2	8
2.0-2.5oz warm 14d[3]	3	9
3.0-3.5oz cold	3	10
3.0-3.5oz warm 7d	3	10
3.0-3.5oz warm 14d	3	11

[1]Cold = Seed planted directly from cold storage
[2]Warm 7d = Seed reconditioned at 55 ^{0}F for 7 days before planting
[3]Warm14d = Seed reconditioned at 55 ^{0}F for 14 days before planting

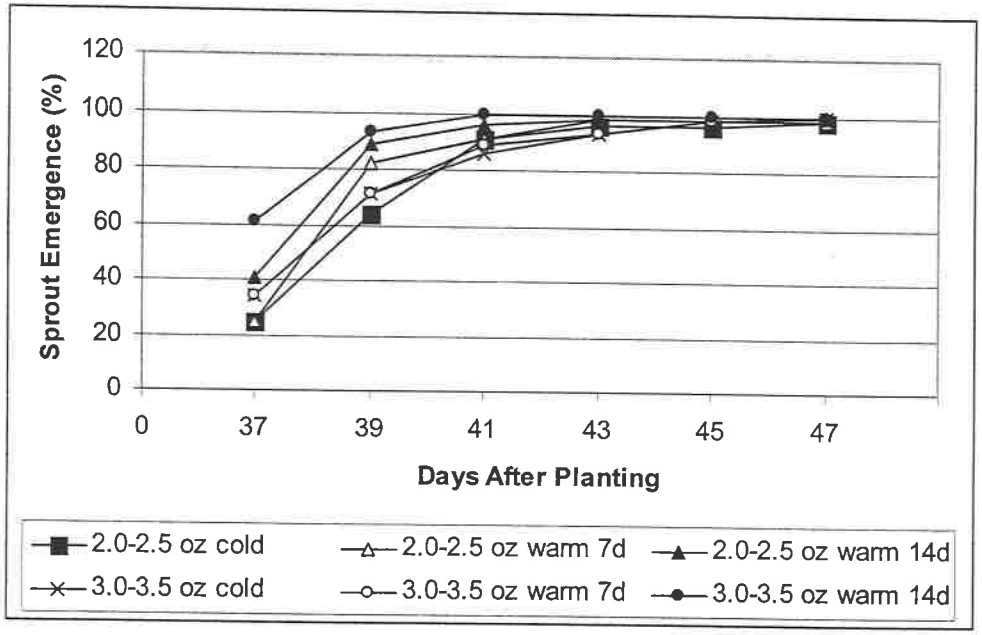

Fig. 1. Effect of seed size and seed reconditioning on field emergence of Canela Russet, 2008.

Cold = Seed planted directly from cold storage
Warm 7d = Seed reconditioned at 55 ^{0}F for 7 days before planting
Warm14d = Seed reconditioned at 55 ^{0}F for 14 days before planting

Table 30 Effect of seed size and reconditioning on yield and tuber size distribution of Canela Russet, 2008

Treatment (seed size & age)	Total	< 4oz	> 4oz	4 -16oz	4–10oz	10–16oz	4-12oz	6-12oz	6-14oz	6-16oz	12-16oz	>16oz
	Yield (cwt/ac)											
2.0-2.5oz cold[1]	465	53	412	409	330	79	390	264	283	283	19	3
2.0-2.5oz warm 7d[2]	477	66	411	407	367	40	400	281	288	288	7	4
2.0-2.5oz warm 14d[3]	492	70	422	422	362	60	395	256	275	283	26	0
3.0-3.5oz cold	486	67	419	415	353	62	390	240	264	265	25	4
3.0-3.5oz warm 7d	492	78	414	414	376	38	397	231	245	248	17	0
3.0-3.5oz warm 14d	531	73	458	458	416	42	441	269	286	286	17	0

[1]Cold = Seed planted directly from cold storage; [2]Warm 7d = Seed reconditioned at 55 ^{0}F for 7 days before planting
[3]Warm14d = Seed reconditioned at 55 ^{0}F for 14 days before planting

Table 31 Effect of seed size and reconditioned seed on tuber quality of Canela Russet, 2008

Treatment (seed size & age)	% External Defects[4]	% Internal Defects[5]	Specific Gravity
2.0-2.5oz cold[1]	2.0	0	1.096
2.0-2.5oz warm 7d[2]	0	0	1.096
2.0-2.5oz warm 14d[3]	0.8	0	1.097
3.0-3.5oz cold	1.2	0	1.095
3.0-3.5oz warm 7d	0.6	0	1.095
3.0-3.5oz warm 14d	0.6	0	1.096

[1]Cold = Seed planted directly from cold storage; [2]Warm 7d = Seed reconditioned at 55 ^{0}F for 7 days before planting
[3]Warm14d = Seed reconditioned at 55 ^{0}F for 14 days before planting; [4]Includes growth cracks, knobs and misshapes
[5]Includes hollow heart and brown center

Table 32 Interactive effect of compost tea, fungicide application, and nitrogen application rate on yield and tuber size distribution of Russet Norkotah (sel.8), 2008

Treatment	Total	< 4oz	> 4oz	4 -16oz	4–10oz	10–16oz	4-12oz	6-12oz	6-14oz	6-16oz	12-16oz	>16oz
	Yield (cwt/ac)											
80N[1]	413	67	346	341	267	74	329	240	252	253	13	5
120N	400	47	353	344	251	93	307	223	261	261	37	9
80N-CT	348	61	287	283	241	42	269	188	198	201	13	4
120N-CT	388	52	336	332	269	63	308	215	225	238	24	4
80N-F	423	62	361	347	266	81	311	225	247	261	36	14
120N-F	382	50	332	328	263	65	312	221	234	237	16	4

[1]N= Nitrogen rate (lb N/ac) CT = Compost Tea Applied F = Fungicide Applied

Table 33 Interactive effect of compost tea, fungicide application, and nitrogen application rate on tuber quality of Russet Norkotah (sel.8), 2008

Treatment	% External Defects[2]	% Internal Defects[3]	Specific Gravity
80N[1]	5.0	0	1.076
120N	2.6	0	1.074
80N-CT	3.6	1.6	1.074
120N-CT	2.3	0.8	1.074
80N-F	0.8	0	1.077
120N-F	2.2	0.6	1.075

[1]N= Nitrogen rate (lb N/ac), CT = Compost Tea Applied, F = Fungicide Applied; [2]Includes growth cracks, knobs and misshapes
[3]Includes hollow heart and brown center

Table 34 Interactive effect of compost tea, fungicide application, and nitrogen application rate on yield and tuber size distribution of Russet Norkotah (sel.8), (two year average) 2007 and 2008

Treatment	Total	< 4oz	> 4oz	4 -16oz	4–10oz	10–16oz	4-12oz	6-12oz	12-16oz	>16oz
	Yield (cwt/ac)									
80N[1]	376	65	311	307	232	75	282	201	26	4
120N	362	46	316	303	218	85	267	195	36	13
80N-CT	340	57	283	278	226	52	256	177	22	5
120N-CT	353	44	309	305	238	67	276	196	29	4
80N-F	374	54	320	308	227	81	271	201	37	12
120N-F	382	49	333	318	236	82	281	202	37	15

[1]N= Nitrogen rate (lb N/ac) CT = Compost Tea Applied F = Fungicide Applied

Table 35 Interactive effect of compost tea, fungicide application, and nitrogen application rate on tuber quality of Russet Norkotah (sel.8), (two year average) 2007 and 2008

Treatment	% External Defects[2]	% Internal Defects[3]	Specific Gravity
80N[1]	3.7	0	1.078
120N	1.9	1.0	1.077
80N-CT	3.2	2.2	1.079
120N-CT	2.1	0.4	1.077
80N-F	1.3	0.3	1.081
120N-F	2.4	1.2	1.079

[1]N= Nitrogen rate (lb N/ac) CT = Compost Tea Applied F = Fungicide Applied
[2]Includes growth cracks, knobs and misshapes
[3]Includes hollow heart and brown center

Table 36 Interactive effect of compost tea, fungicide application, and nitrogen application rate on yield and tuber size distribution of Russet Nugget, 2008

Treatment	Total	< 4oz	> 4oz	4 -16oz	4–10oz	10–16oz	4-12oz	6-12oz	6-14oz	6-16oz	12-16oz	>16oz
	Yield (cwt/ac)											
80N[1]	364	133	231	231	225	6	231	103	103	103	0	0
120N	369	98	271	271	233	38	267	139	139	143	4	0
80N-CT	383	108	275	271	253	18	267	118	118	122	4	4
120N-CT	399	113	286	286	280	6	283	112	115	115	3	0
80N-F	342	111	231	231	213	18	223	95	98	102	7	0
120N-F	388	137	251	251	243	8	248	100	103	103	3	0

[1]N= Nitrogen rate (lb N/ac) CT = Compost Tea Applied F = Fungicide Applied

Table 37 Interactive effect of compost tea, fungicide application, and nitrogen application rate on tuber quality of Russet Nugget, 2008

Treatment	% External Defects[2]	% Internal Defects[3]	Specific Gravity
80N[1]	0.7	0	1.097
120N	1.0	0	1.096
80N-CT	1.5	0	1.102
120N-CT	1.0	0	1.098
80N-F	2.0	0	1.103
120N-F	1.0	0	1.097

[1]N= Nitrogen rate (lb N/ac) CT = Compost Tea Applied F = Fungicide Applied
[2]Includes growth cracks, knobs and misshapes
[3]Includes hollow heart and brown center

Table 38 Interactive effect of compost tea, fungicide application, and nitrogen application rate on yield and tuber size distribution of Russet Nugget (two year average) 2007 and 2008

Treatment	Total	< 4oz	> 4oz	4 -16oz	4–10oz	10–16oz	4-12oz	6-12oz	12-16oz	>16oz
	Yield (cwt/ac)									
80N[1]	325	143	182	182	174	8	180	76	2	0
120N	324	123	201	200	176	24	196	92	4	1
80N-CT	338	123	215	213	202	11	211	86	2	2
120N-CT	334	121	213	213	207	6	211	83	3	0
80N-F	322	128	194	194	181	13	188	71	6	0
120N-F	356	141	215	215	200	15	211	91	4	0

[1]N= Nitrogen rate (lb N/ac) CT = Compost Tea Applied F = Fungicide Applied

Table 39 Interactive effect of compost tea, fungicide application, and nitrogen application rate on tuber quality of Russet Nugget, (two year average) 2007 and 2008

Treatment	% External Defects[2]	% Internal Defects[3]	Specific Gravity
80N[1]	1.6	0	1.093
120N	0.8	0	1.093
80N-CT	0.9	0	1.096
120N-CT	1.9	0	1.093
80N-F	1.6	0	1.098
120N-F	0.9	0	1.094

[1]N= Nitrogen rate (lb N/ac) CT = Compost Tea Applied F = Fungicide Applied
[2]Includes growth cracks, knobs and misshapes
[3]Includes hollow heart and brown center

Table 40 Response of Russet Norkotah (sel. 3) to different green manure cover crops, 2008

Treatment Cover crop	Total	< 4oz	> 4oz	4 -16oz	4–10oz	10–16oz	4-12oz	6-12oz	6-14oz	6-16oz	12-16oz	>16oz
						Yield (cwt/ac)						
Fallow	447	117	330	330	314	16	325	173	178	178	5	0
Barley	526	132	394	387	359	28	371	204	213	220	16	7
Barley + Compost	415	75	340	337	296	41	327	224	234	234	10	3
Sunflower	464	95	369	369	314	55	351	227	239	245	19	0
Sordan 79	518	155	363	363	344	19	349	149	156	163	13	0
Sordan Hay Removed	563	139	424	417	378	39	410	233	237	239	7	7
Sorghum Sudan (Honey Sweet)	434	99	335	332	295	37	311	176	188	197	21	3
Canola	449	105	344	344	306	38	325	186	201	204	19	0
Mustard	419	81	338	335	313	22	333	205	208	208	3	3
Peas	496	132	364	364	317	47	341	192	209	215	23	0
Rye grass	510	105	405	405	349	56	391	214	222	228	14	0
Fallow + Zinc	492	148	344	344	321	23	342	176	178	178	3	0

Table 41 Effect of different green manure cover crops on tuber quality of Russet Norkotah (sel.3), 2008

Cover crops	% External Defects[1]	% Internal Defects[2]	Specific Gravity
Fallow	1.8	0	1.079
Barley	0.9	0	1.078
Barley + Compost	0.9	0	1.079
Sunflower	0.6	0	1.079
Sordan 79	0.2	0	1.076
Sordan Hay Removed	0.8	0	1.077
Sorghum Sudan (Honey Sweet)	0.9	0	1.078
Canola	0.6	0	1.081
Mustard	0.2	0	1.080
Peas	1.0	0	1.076
Rye grass	0.9	0	1.077
Fallow + Zinc	0.4	0	1.078

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