Potato Show & Tell
8 December 2010

Contents of this Report

Description of Advanced Selections From Cornell Breeding Program
Based on Cornell trials in 2010 and prior years
Last updated: 30 November 2010

NY138 (Y18-16) = Marcy x NY115 (1998). Late maturity chipstock and tablestock. Large tubers, attractive shape, moderately textured skin.

- Tompkins County marketable yields over the past eight years have averaged 90% of Atlantic (21 trials).

- Yields in Steuben and Wyoming County trials averaged 103% of Atlantic in 2004, 114% in 2005, 102% in 2006, 103% in 2007, 107% in 2008, 90% in 2009, and 103% of Atlantic in 2010. Seven year average: 103%.

- Wayne County (muck soil) yield was 120% of Atlantic in 2006, 81% in 2007, and 118% of Atlantic in 2009.

- Riverhead yields were 84% of Norwis in 2004. Yields were 90% of Reba in 2005, 98% in 2006, 79% in 2007, 107% in 2008, 106% in 2009, and 116% of Reba in 2010.

- Yields in PA were 111% of Atlantic (3 trials) in 2005, 82% in 2006 (3 trials), 100% in 2007 (3 trials), 93% in 2008 (2 trials), and 87% of Atlantic in 2009 (3 trials).

- US#1 yields in 9 states in Snack Food Association trials in 2008 were 91% of Snowden. In 10 SFA trials in 2009, yields averaged 101% of Snowden.

A few pickouts due to growth cracks and misshapes. Large tubers have shown 5-10% hollow heart in most trials. Tuber size is similar to Atlantic. Specific gravity has averaged 0.010 less than Atlantic (36 trials). Moderate resistance to common scab. Chip color out of 44F has been very good to date: visual chip scores over the past six years averaged 3.3 compared to 3.8 for Snowden (lower is better). In eleven SFA trials Agtron scores for NY138 averaged 65, compared to 62 for Snowden. Tubers sometimes darken slightly after boiling. Less susceptible to blackspot bruise than Snowden, presumably because of lower specific gravity. Relatively long tuber dormancy; six weeks longer than Atlantic. Vines have a slow start but soon develop into a nice type. Pale purple flowers, some fruit at end of season. Some resistance to powdery scab has been observed in PA tests. Resistant to race Ro1 of the golden nematode. We have submitted an application for PVP.

NY139 (Y28-9) = NY120 x NY115 (1998). Late season chipstock.

- Marketable yields in Tompkins County over the past eight years have averaged 91% of Atlantic (20 trials).

- Yields in Steuben and Wyoming County trials averaged 96% of Atlantic in 2004, 99% in 2005, 102% in 2006, 104% in 2007, 93% in 2008, 96% in 2009, and 80% of Atlantic in 2010. Seven year average: 96%.

- Wayne County (muck soil) yield was 128% of Atlantic in 2006 and 104% in 2009.

- Riverhead, Long Island yield was 85% of Norwis in 2004. Yield was 106% of Reba in 2005, 88% in 2006, 79% in 2007, 109% in 2008, 103% in 2009, and 129% of Reba in 2010.

- In PA yield averaged 125% of Atlantic in 2004 (2 trials), 83% in 2006 (4 trials), 104% in 2007 (4 trials), 90% in 2008 (2 trials), and 87% of Atlantic in 2009 (3 trials).

- US#1 yields in 9 states in SFA trials in 2008 were 89% of Snowden. Yields in 10 SFA trials in 2009 averaged 99% of Snowden.

A low frequency of pickouts due to misshapes and growth cracks. Very few standard internal defects have been observed. In Ithaca, but not yet elsewhere, we have observed small spots of translucent tissue inside NY139 tubers. Specific gravity has been very good, averaging 0.004 less than Atlantic (33 trials). Chip color out of 44F has been excellent, averaging 3.0 over the past six years, compared to 3.8 for Snowden (lower is better). In eleven SFA trials in 2008 and 2009, Agtron scores averaged 64 for NY139 compared to 62 for Snowden. Moderate resistance to common scab. Less susceptible to blackspot bruise than Snowden. Tubers darken slightly after boiling. Tuber dormancy is one week longer than Atlantic. Very nice light green vines, magenta flowers with white tips, sets many fruit. Resistant to race Ro1 of the golden nematode. We have submitted an application for PVP.

NY140 (Y36-4) = NY121 x NY115 (1998). Late season, dual purpose chip and tablestock. High yields of large tubers, lightly textured skin. Resistant to race Ro1 of the golden nematode and moderately resistant to race Ro2.

- Marketable yields in Tompkins County over the past eight years have averaged 114% of Atlantic (20 trials).

- Yields in Steuben and Wyoming County trials averaged 111% of Atlantic in 2006, 119% in 2007, 117% in 2008, 119% in 2009, and 102% of Atlantic in 2010. Five year average: 114%.

- Yield in Wayne County was 129% of Atlantic in 2008 and 123% of Atlantic in 2009.

- Yields on Long Island were 108% of Norwis in 2004. Yields were 103% of Reba in 2005, 116% in 2006, 91% in 2007, 105% in 2008, 128% in 2009, and 139% of Reba in 2010.

- In PA yields averaged 106% of Atlantic in 2005 (3 trials), 124% in 2007 (4 trials), 119% in 2008 (2 trials), and 104% of Atlantic in 2009 (3 trials).

- Yield in North Carolina averaged 117% of Atlantic in 2009 (3 trials) and 96% of Atlantic in 2010 (2 trials).

A low frequency of pickouts due to knobs, misshapes and growth cracks. Some internal defects, most commonly hollow heart and internal necrosis, have been observed. Tuber size is unmistakably large, averaging 6.5 ounces per tuber (16 trials). Even at 6 inch spacing, tuber size remains large (2009 and 2010 trials). Specific gravity has averaged 0.012 less than Atlantic (24 trials). This will limit the locations where it could be grown for chips. Chip quality has generally been very good: over the past six years it has averaged 3.9, comparable to Snowden, which averaged 3.8 in the same trials (lower is better). Susceptible to common scab, comparable to Katahdin. Tubers remain white after boiling, and do not slough significantly. Tuber dormancy is about six weeks longer than Atlantic. Nice vines, white flowers, few fruit. Exhibited moderate resistance to late blight as well as early blight in PA trials in 2007 - 2009. Good resistance to blackspot bruise. Resistant to race Ro1 and moderately resistant to race **Ro2** of the golden nematode.

NY141 (Y41-67) = R6-4 x NY115 (1998). Early to mid season tablestock, attractive tubers.

- Marketable yields in Tompkins County over the past eight years have averaged 99% of Atlantic (21 trials).
- Yield in Wayne County was 107% of Atlantic in 2008 and 106% in 2009.
- Yields on Long Island were 82% of Norwis in 2004. Yields were 95% of Reba in 2005, 100% in 2006, 81% in 2007, 111% in 2008, 110% in 2009, and 118% of Reba in 2010.
- Yield in PA in 2005 was 107% of Atlantic in 2005 (1 trial), 92% in 2007 (4 trials), 79% in 2008 (2 trials), and 94% of Atlantic in 2009 (3 trials).

Typically 2 to 3% of tubers have knobs. A low frequency of internal defects, mostly brown center, have also been observed. Has set an average of 6.7 tubers per foot, with an average weight of 6.3 ounces (11 trials). Early yield, assessed at the end of July in Ithaca, has been good: 112% of Superior in 2010, 110% of Atlantic in 2009, 101% of Superior in 2006, and 122% of Superior in 2005. Specific gravity has averaged 0.011 less than Atlantic (21 trials). Does not chip. Good resistance to common scab. Tubers remain white after boiling, and do not slough significantly. Tuber dormancy is about two weeks longer than Atlantic. Nice vines, white flowers, some fruit. Very good resistance to blackspot bruise. Resistant to race Ro1 of the golden nematode.

NY144 (D32-4) = W2-127 x Nordonna (2002). Mid-late season, bright red tablestock, small tubers.

- In eight Tompkins County trials over the past four years, marketable yields (>1.875 inches) averaged 69% of Chieftain. NY144 also produces many smaller tubers; in our Harford yield trial in 2009, we observed 90 cwt per acre of tubers between 1 and 1.875 inches. In 2010, 66 and 68 cwt/acre of tubers between 1 and 1.875 inches were observed in our Ellis Hollow and Harford yield trials, respectively. Typically less than 40% of yield consists of tubers larger than 2.5 inches.
- In a Wayne County (muck soil) trial in 2008, marketable yield was 44% of Chieftain.
- Yield in PA was 84% of Chieftain in 2007 (1 trial) and 100% of Chieftain in 2008 (1 trial).

Bright red and relatively smooth tuber skin. Quite susceptible to skinning when harvested early. A low percentage of pickouts, typically misshapen tubers and growth cracks. Few internal defects. Specific gravity has averaged 0.004 less than Chieftain (8 trials). Moderately resistant to common scab. Tuber flesh remains white or darkens slightly after boiling, and does not slough appreciably. Tuber dormancy is about three weeks less than Chieftain. Many purple flowers and many fruit at harvest. Appears to be <u>susceptible</u> to race Ro1 of the golden nematode.

NY145 (D40-35) = NY121 x NY115 (2002). Mid season chipstock.

- In nine Tompkins County trials over the past four years, marketable yields averaged 91% of Atlantic.
- In trials in Wyoming and Steuben Counties, yield averaged 96% of Atlantic in 2008, 83% in 2009, and 50% of Atlantic in 2010.
- Yield in PA was 108% of Atlantic in 2007 (1 trial), 70% in 2008 (1 trial), and 81% of Atlantic in 2009 (1 trial).

A low frequency of pickouts and hollow heart have been observed. Tuber size is small, averaging 3.5 ounces per tuber (9 trials). Specific gravity has averaged 0.004 less than Atlantic (14 trials). Chip color has been excellent: in 2009, chip color averaged 3.0, better than Snowden at 4.5 in the same trials. In 2008, chip color averaged 1.3, better than Snowden at 2.5. In 2007, chip color averaged 2.3, better than Snowden at 3.7. Moderately resistant to common scab. Tubers remain white or darken slightly after boiling, and can slough considerably. Tuber dormancy is four to five weeks longer than Atlantic. White flowers. Some sensitivity to Sencor. Resistant to race Ro1 of the golden nematode. May be resistant to race Ro2.

NY146 (D40-50) = NY121 x NY115 (2002). Mid-late season tablestock. Round, uniform tubers.

- In ten Tompkins County trials over the past four years, marketable yields averaged 89% of Atlantic.
- In trials in Wyoming and Steuben Counties in 2009, yield averaged 105% of Atlantic.
- In Wayne County (muck soil) trials, yield was 107% of Atlantic in 2008 and 114% of Atlantic in 2009.
- Yield on Long Island was 102% of Reba in 2009 and 132% of Reba in 2010.
- Yield in PA was 108% of Atlantic in 2007 (1 trial) and 69% of Atlantic in 2009 (1 trial).

Few pickouts or internal defects have been observed. Tuber weight has averaged 4.5 ounces (6 trials). Specific gravity is low and has averaged 0.015 less than Atlantic (13 trials). Did not chip well in 2007 or 2009. Moderately susceptible to common scab. Tubers remain white or darken slightly after boiling, and do not slough appreciably. Tuber dormancy has averaged seven weeks longer than Atlantic. Pale purple flowers. Resistant to race Ro1 of the golden nematode. May be resistant to race Ro2.

NY147 (D40-263) = NY121 x NY115 (2002). Mid-season tablestock.

- In ten Tompkins County trials over the past four years, marketable yields averaged 90% of Atlantic.
- In Wayne County (muck soil) trials, yield was 104% of Atlantic in 2008 and 104% of Atlantic in 2009.
- Yield on Long Island was 106% of Reba in 2009 and 127% of Reba in 2010.
- Yield in PA was 108% of Atlantic in 2007 (1 trial) and 108% of Atlantic in 2009 (1 trial).

A low frequency of pickouts, mostly growth cracks, and a low frequency of internal defects, mostly internal necrosis, have been observed. Specific gravity has averaged 0.021 less than Atlantic 11 trials). Does not chip. Moderately susceptible to common scab. Tubers darken slightly after boiling, and do not slough appreciably. Tuber dormancy is two to three weeks longer than Atlantic. Pale purple flowers. Resistant to race Ro1 of the golden nematode. May be resistant to race Ro2.

E106-4 = NY128 x Marcy (2003). Late season, high gravity, scab-resistant chipstock.

- In seven Tompkins County trials over the past three years, marketable yields averaged 106% of Atlantic.
- In trials in Wyoming and Steuben Counties, yield averaged 112% of Atlantic in 2009 and 81% of Atlantic in 2010.

In general, few pickouts or internal defects have been observed – but in 2010, two-thirds of tubers exhibited internal necrosis in one yield trial (Harford). Tuber size is similar to Snowden, averaging 4.8 ounces per tuber (6 trials). Scurfy tuber skin. Specific gravity is high and has averaged only 0.002 less than Atlantic (12 trials). In 2008, chip color from December, January and February averaged 3.5, not as good as Snowden at 2.3 in the same trials. In 2009, chip color averaged 3.8, better than Snowden at 4.5. Has exhibited moderate resistance to common scab to date. Tubers darken slightly after boiling, and do not slough appreciably. Tuber dormancy is comparable to Atlantic. Many white flowers. Resistant to race Ro1 of the golden nematode.

E43-10 = NY130 x V75-9 (2003). Mid-late season tablestock, mid-sized, with bright-skin.

- In seven Tompkins County trials over the past three years, marketable yields averaged 105% of Atlantic.

Few pickouts have been observed. In some trials, a small percentage of tubers have been hollow. Specific gravity has averaged 0.023 less than Atlantic (7 trials). Moderately susceptible to common scab. Tubers darken slightly or not at all after boiling, and do not slough appreciably. Tuber dormancy is comparable to Atlantic. Resistant to race Ro1 of the golden nematode.

F11-1 = Yukon Gold x Keuka Gold. Mid-late season yellow-fleshed tablestock, with slightly-textured skin and pink eyes.

- In four Tompkins County trials over the past two years, marketable yields averaged 88% of Atlantic.

Yellow flesh color comparable to Yukon Gold. A low level of pickouts, mostly misshapes, have been observed. Generally free of internal defects. Specific gravity has averaged 0.011 less than Atlantic (4 trials). Moderately resistant to common scab. Tubers do not darken, and only exhibit slight sloughing, after boiling. Tuber dormancy is about 1 week longer than Atlantic. Resistant to race Ro1 of the golden nematode.

F52-1 = NY121 x Jacqueline Lee. Niche-market, early season tablestock. Produces many small tubers with bright white skin.

- In four Tompkins County trials over the past two years, yields of tubers between 1 and 1.875 inches averaged 157 cwt/acre, while yields of tubers between 1.875 and 2.5 inches in diameter averaged 187 cwt. acre. In the same trials yield of tubers greater than 2.5 inches averaged only 26 cwt/acre. For comparison, marketable yield of Atlantic (>1.875 inches) in the same trials averaged 356 cwt/acre.

Few pickouts (mostly mishapes) or internal defects have been observed. Specific gravity has averaged 0.012 less than Atlantic (4 trials). Moderately resistant to common scab. Tubers do not darken or slough appreciably after boiling. Tuber dormancy is about 2 weeks longer than Atlantic. Resistant to race Ro1 of the golden nematode.

2010 Summary of Yield Trials

Marketable yield larger than 1 7/8" (including green tubers).

Performance given as % of check variety.

	Ellis Hollow				Harford	Freeville						County	
	Advanced Trial	Intermed Trial	Red Trial	Early Trial	Advanced Trial	CU Trial	Early Trial	Med Trial	Med-late Trial	Late Trial	Red Trial	Steuben Arkport	Wyoming North Java
Atlantic	**100**			100	**100**	**100**	**100**	**100**	**100**	**100**		**100**	**100**
Snowden	90				106	105		123	87	97		97	85
Superior				**100**		53							
Reba	102				99			90					
Andover	81			116	82								
Andover GH2	101			92	119								
NY138	94			72	74					60		108	98
NY139	96			94	86				89			90	71
NY140	104			84	109					97		104	101
NY141	97			112	104		88						
NY145	80				83			92				56	43
NY146	91				78			59					
NY147	95				90			54					
E39-3	88				94	67							
E43-10	85				94	110							
E50-8	72				88	78						82	59
E50-9	73				87	37							
E105-16	104				98	106							
E106-4	95				101	118						87	75
E107-1	97				94	72							
F11-1		79				85							
F29-1		85				74							
F47-3		77				73						76	67
F47-5		83				70						84	70
F48-4		77				56						80	60
F52-1		26				21							
F57-3		71				92						57	68

Chieftain			**100**		**100**						**100**		
Nordonna			82		87						59		
DR Norland											80		
Red Maria (NY129)			88		99								
NY136 (RED)			95		100						97		
NY144 (RED)			67		76						61		

2010 Summary of Specific Gravities

Entries show differences (in units of 0.001) from Atlantic or Snowden

	Ellis Hollow		Harford	Freeville					County	
	Advanced Trial	Intermed. Trial	Advanced Trial	CU E+F Trial	Early Trial	Med Trial	Med-late Trial	Late Trial	Steuben Arkport	Wyoming North Java
Atlantic	**1.095**	**1.091**	**1.088**	**1.093**	**1.093**	**1.086**	**1.088**	**1.091**	**1.082**	**1.097**
Snowden	-1	-3	-5	-5		-4	-6	-8	-2	-4
Reba	-17	-12	-13			-14				
Andover	-12		-7							
Andover GH2	-7		-12							
NY138	-10		-14					-13	-6	-16
NY139	-5		-10				-8		-3	-7
NY140	-14		-14					-19	-11	-14
NY141	-12		-11		-15					
NY145	-1		-4			-6			-4	-9
NY146	-13		-13			-16				
NY147	-20		-21			-23				
E39-3	-27		-25	-33						
E43-10	-22		-23	-27						
E50-8	-4		-9	-3					0	-2
E50-9	-9		-8	-14						
E105-16	-18		-21	-16						
E106-4	-1		-4	-2					-2	-2
E107-1	-11		-17	-22						
F11-1		-11		-15						
F29-1		-10		-18						
F47-3		-6		-11					+2	-8
F47-5		-8		-10					-6	-11
F48-4		-7		-13					-6	-11
F52-1		-9		-15						
F57-3		-8		-13					-8	-11

Results from Cornell Breeding Program Trials

Walter De Jong and Robert Plaisted

2010 Advanced Stage Yield Trial, Ellis Hollow

Plots 2 rows x 20', hills spaced at 8.2"
4 Replicates (unless indicated otherwise in parentheses)
Planted April 22, vines burned down on August 25, harvested September 3

	cwt/acre		%	pickout		% internal defects			appear.	specific
	>1 7/8"	>2 1/2"	>2 1/2"	cwt/A	type	HHT	IN	BC	score	gravity
Andover	335	201	60	1	gc	0	0	0	3.8	1.083
Andover GH2	419	300	72	0	-	0	0	0	3.7	1.088
Atlantic	415	301	72	1	k	0	23	3	3.4	1.095
Reba	422	326	77	0	-	0	0	0	3.4	1.078
Snowden	375	198	53	0	-	0	0	0	2.8	1.094
NY138	391	299	76	1	k	0	0	0	3.7	1.085
NY139 (Uihlein Seed)	400	323	81	0	-	0	0	0	3.5	1.090
NY139 (Breeder's Seed)	334	275	82	1	gc	0	0	0	3.4	1.087
NY140 (8.2")	433	344	80	0	-	0	0	0	3.6	1.081
NY140 (6")	547	429	78	0	-	0	0	0	3.5	1.081
NY141	402	321	80	6	k	0	0	0	3.5	1.083
NY145	334	136	41	0	-	0	0	0	3.3	1.094
NY146	378	302	80	0	-	0	5	0	3.5	1.082
NY147	394	299	76	4	2°g, k	5	0	0	3.5	1.075
E39-3	364	218	60	0	-	0	0	0	3.5	1.068
E43-10	353*	139	39	0	-	0	0	0	3.6	1.073
E50-8	300	223	74	0	-	0	0	3	3.3	1.091
E50-9	304	144	47	0	-	0	0	0	3.5	1.086
E105-16	432	265	61	0	-	0	0	0	3.5	1.077
E106-4	395	204	52	0	-	0	15	0	3.0	1.094
E107-1	402**	189	47	0	-	0	0	0	3.4	1.084

* E43-10 yielded an additional 69 pounds/acre of potatoes less than 1.875 inches
** E107-1 yielded an additional 56 pounds/acre of potatoes less than 1.875 inches

2010 Intermediate Stage Yield Trial, Ellis Hollow

Plots 2 rows x 20', hills spaced at 8.2".

Three replicates, unless indicated otherwise following clone name

Planted April 22, harvested September 20. Vines burned down on August 25.

	cwt/acre		%	pickout		% internal defects			appear.	specific
	>1 7/8"	>2 1/2"	>2 1/2"	cwt/A	type	HHT	IN	BC	score	gravity
Atlantic	413	288	70	2	gc, k	0	3	3	3.2	1.091
Reba	416	321	77	0	-	0	0	0	3.2	1.079
Snowden (4)	378	202	54	0	-	0	0	0	2.8	1.088
Yukon Gold	340	276	81	0	-	0	0	0	3.3	1.077
F11-1 (yellow)	325	138	43	0	-	0	0	0	3.6	1.080
F29-1	349	188	54	7	k	0	0	0	3.6	1.081
F47-3	317	112	35	1	mis	0	0	0	3.2	1.085
F47-5	343	145	42	0	-	0	0	0	3.5	1.083
F48-4	317	164	52	0	-	0	0	0	3.5	1.084
F52-1*	109	3	2	2	k	0	0	0	3.2	1.082
F57-3	295	144	49	1	k	0	0	0	3.5	1.083

*An additional 180 cwt/acre were less than 1.875 inches in diameter; this bright-skinned clone produces many small tubers

2010 First Stage Yield Trial, Ellis Hollow

Plots 2 rows x 15', hills spaced at 8.2"
3 Replicates (unless indicate dotherwise in parentheses)
Planted April 23, harvested September 7. Vines burned down on August 25.

	cwt/acre		%	pickout		% internal defects			appear.	specific
	>1 7/8"	>2 1/2"	>2 1/2"	cwt/A	type	HHT	IN	BC	score	gravity
Atlantic (4)	430	285	66	2	gc,k	0	0	0	3.4	1.094
Reba	419	309	74	0	-	0	0	0	3.1	1.079
Snowden (4)	391	188	48	0	-	0	0	0	2.9	1.094
G20-4	326	180	55	0	-	0	0	0	3.3	1.079
G20-5 (2)	332	163	49	0	-	5	0	0	3.4	1.079
G20-12	305	172	56	0	-	0	0	0	3.7	1.074
G20-13	295	89	30	0	-	0	0	0	3.4	1.080
G20-30	281	168	60	1	k	3	0	0	3.5	1.080
G20-31	340	165	49	0	-	0	0	0	3.3	1.085
G20-33	279	99	35	0	-	0	3	0	3.4	1.077
G20-41	344	169	49	0	-	0	0	0	3.3	1.086
G20-44	289	148	51	2	k	0	0	0	3.4	1.087
G20-55	363	223	61	2	gc	0	0	0	3.6	1.083
G20-56	300	222	74	3	gc	0	0	0	2.9	1.088
G20-58	286	174	61	0	-	0	0	0	3.5	1.088
G20-63	376	262	70	1	k	3	0	0	3.4	1.083
G27-1	370	156	42	0	-	0	0	0	3.1	1.096
G70-3	398	229	58	0	-	3	0	0	3.6	1.072
G73-1	448	301	67	1	gc	0	0	3	3.5	1.073
G77-4	291	87	30	0	-	0	0	0	3.5	1.075
G86-1	321	167	52	0	-	0	0	0	3.5	1.084
G87-3	331	145	44	0	-	0	0	0	3.5	1.088
G89-2	352	169	48	0	-	7	3	0	3.5	1.089
G101-2	378	135	36	8	k	10	0	0	3.5	1.082

2010 Advanced and Intermediate Stage Yield Trials, Harford

Plots 2 rows x 15', hills spaced at 8.2". 3 Replicates (unless indicated in parentheses)
Planted May 3, vine killer applied September 14, harvested September 23
This trial site is not irrigated.

	cwt/A		%	pickout		% internal defects			appear.	specific
	>1 7/8"	>2 1/2"	>2 1/2"	cwt/A	type	HHT	IN	BC	score	gravity
Andover	458	312	68	0	-	0	0	0	3.6	1.081
Andover GH2	661	580	88	0	-	7	7	3	3.7	1.076
Atlantic	556	444	80	1	2°g	3	3	10	3.3	1.088
Pike (1)	579	439	76	0	-	0	20	0	3.3	1.082
Reba	550	496	90	3	gc	0	10	0	3.2	1.075
Snowden	589	424	72	1	k	3	0	0	2.8	1.083
NY138	413	349	85	3	gc	0	3	0	3.6	1.074
NY139 (Uihlein)	479	426	89	11	gc	0	7	0	3.5	1.078
NY139 (Breeder's)(1)	505	438	87	6	gc	0	0	0	3.4	1.081
NY140 (8.2")	607	547	90	3	mis	0	13	0	3.2	1.074
NY140 (6")	716	632	88	2	mis	3	10	0	3.2	1.074
NY141	576	514	89	14	k	0	0	0	3.8	1.077
NY145	462	238	51	0	-	0	0	0	3.4	1.084
NY146	435	367	84	0	-	0	10	0	3.6	1.075
NY147	502	417	83	2	mis	0	20	0	3.4	1.067
E39-3	525	385	73	0	-	0	0	0	3.5	1.063
E43-10	525	296	56	0	-	3	3	0	3.5	1.065
E50-8	487	393	81	12	gc	7	0	0	3.3	1.079
E50-9	485	325	67	0	-	0	3	3	3.6	1.080
E105-16	547	439	80	1	k	0	27	0	3.4	1.067
E106-4	561	427	76	2	k	0	67	0	2.9	1.084
E107-1	524	327	62	4	k	0	0	0	3.4	1.071
The following are red-skinned clones										
Chieftain	518	421	81	7	gc	0	50	3	3.5	1.070
Nordonna	451	263	58	3	mis	0	0	0	3.2	1.070
Red Maria	513	424	83	2	gc	3	0	3	3.4	1.069
NY136	517	393	76	5	gc	0	0	0	3.4	1.069
NY144	396**	170	43	14	k	3	0	0	3.4	1.068

** NY144 also produced an additional 68 cwt/acre of tubers less than 1.875 inches in diameter.

2010 Red Trial, Ellis Hollow

Plots 2 rows x 15', hills spaced at 8.2"

3 replicates (unless indicated otherwise in parentheses)

Planted April 23, harvested September 8. Vine killer applied August 25.

	cwt/acre		%	pickout		% internal defects			appear.	specific
	>1 7/8"	>2 1/2"	>2 1/2"	cwt/A	type	HHT	IN	BC	score	gravity
Chieftain	425	293	69	1	gc	0	20	0	3.2	1.069
Nordonna	347	178	51	3	2°g	0	0	0	3.1	1.072
Red Maria	374	237	63	0	-	0	0	0	3.3	1.067
NY136	405	247	61	0	-	0	0	0	3.0	1.079
NY144	286*	92	32	2	k	0	0	0	3.4	1.070
F36-3 (2)	237	114	48	1	gc	0	0	0	3.3	1.065
G1-11	131**	27	20	4	mis	0	0	0	2.5	1.065

* NY144 also produced an additional 66 cwt/acre of tubers less than 1.875 inches in diameter.

** G11-1 also produced an additional 130 cwt/acre of tubers less than 1.875 inches in diameter.

2010 Early Harvest Trial, Ellis Hollow

Plots 2 rows x 15', hills spaced at 8.2"
Planted April 23, harvested July 20. No vine killer applied.
3 Replicates (unless indicated otherwise in parentheses)

	cwt/A			%	pickout		% internal defects			appear.
	<1 7/8"	>1 7/8"	>2 1/2"	>2 1/2"	cwt/A	type	HHT	IN	BC	score
Andover	22	206	66	32	0		0	0	0	3.6
Andover GH2	29	163	42	26	0		0	0	0	3.5
Atlantic	21	177	70	39	1		0	0	3	3.1
Eramosa (1)	11	200	123	62	1		0	0	0	3.5
Superior	16	177	75	42	0		0	0	10	3.1
NY138	15	128	61	48	0		0	3	0	3.4
NY139	12	160	80	50	0		0	0	0	3.2
NY140	21	149	56	38	0		0	0	0	3.4
NY141	11	198	116	58	3		0	0	0	3.4
NY144	43	77	1	2	0		0	0	0	3.1

2009 Crop Season Chip Color Scores - University Trials

44F Storage

Average of Two Sites (Harford and Ellis Hollow)

	VISUAL SCORES			
	DEC*	JAN	FEB	Average 3 MONTHS
SNOWDEN	5.0	5.0	3.5	4.5
NY138	5.0	5.0	3.5	4.5
NY139	6.0	4.5	3.5	4.7
NY140	5.0	6.0	4.0	5.0
E106-4	4.0	4.5	3.0	3.8

VISUAL CHIP SCALE: 1 - 10
1 = best
4 = marginal
5 and over = not acceptable

Samples were reconditioned for 14 days before chipping.
*Harford only

Average Chip Color over Two Years - University Trials

Out of 44F storage: 2008 and 2009 crop seasons.
Reconditioned 1-2 weeks at room temperature

	VISUAL SCORES (2 YEARS, 2 LOCATIONS*)			
	DEC	JAN	FEB	AVG
SNOWDEN	3.8	3.5	3.0	3.4
NY138	3.5	3.3	3.0	3.3
NY139	3.5	3.0	3.0	3.2
NY140	3.8	4.5	3.3	3.9
E106-4	3.5	3.8	3.0	3.4

VISUAL CHIP SCALE: 1 - 10

1 = best
4 = marginal
5 and over = not acceptable

* Locations are Ellis Hollow and Harford (both in Tompkins County).

Scab Score Summary

Tubers evaluated at harvest from scab-infested plots in Ellis Hollow (EH) and Varna (V)

0 = free of scab, 5 = very susceptible

LOCATION:	2010 EH	2009 V	2009 EH	08 V	08 EH	07 V	07 EH	06 V	06 EH	05 V	05 EH	04 V	04 EH	03 V	03 EH	02 V	02 EH	01 V	01 EH
ATLANTIC				4.0	4.0	3.3	4.3	2.3	3.0	3.3	4.0	3.0		4.0	4.0	3.0	3.0	3.0	3.0
CHIEFTAIN	5.0	1.0	3.0		3.5	1.3	3.7	1.5	2.5	3.0	3.0	1.0		1.8	2.3	1.0	2.0		
CHIPPEWA	5.0	4.3	5.0	4.7	5.0	4.3	5.0	4.0	4.3		5.0			4.3	4.0	4.5	4.8	4.3	5.0
KATAHDIN	4.8	3.7	4.3	4.3	4.0	4.0	4.3	2.6	4.3	3.3	4.5	3.8		3.5		3.3	3.0	2.0	3.0
LEHIGH				2.0	3.0	2.7	2.7	1.7	2.0	3.0	2.5	1.8	3.0	2.0	1.8	1.3	1.3	0.0	1.5
MARCY				2.7	2.0	2.7	2.7	1.3	2.3	3.0	2.4			2.0	2.8	2.8	1.8	2.7	2.5
NORDONNA				1.0	1.5	1.7	1.0	2.0	2.0										
PIKE	1.7	1.3	1.7	1.5	2.0	2.7	2.7	1.8	1.6	3.0	2.5			2.0	1.8	1.8	1.3	0.7	1.5
REBA	4.0	2.0	3.0			2.7	3.3	1.7	3.0			1.2		2.5				2.3	3.0
SNOWDEN	5.0	1.7	4.0		3.0	4.0	3.7	2.7	3.0	4.5	3.8	2.3		3.3	3.8	3.0	4.0	3.3	3.0
SUPERIOR	2.3	2.0	2.7	1.7	2.0	3.0	2.0	1.6	1.6	2.0	1.0	2.2	2.0	2.5	1.8	1.8	2.0	3.0	2.0
NY115					4.0	3.0	3.7	2.3	2.7									2.7	5.0
RED MARIA	4.0	2.0	3.0	1.0	3.0	1.0	2.7	1.7	3.0	1.3	1.5	1.0	3.5	2.0	2.7	1.0	2.0	0.8	1.0
NY136	4.7					1.7	3.3	2.0	2.5	2.7	3.0	2.0	4.0	3.0	3.0				1.0
NY138	2.3	2.0	1.0	1.3	2.3	3.0	3.3	2.0	2.0	2.5	3.0	2.0	1.5	3.5					
NY139	2.3	1.3	2.7	2.3	2.3	2.7	3.3	1.5	2.0	2.0	2.5	1.2	3.5	3.0					
NY140	4.7	2.7	3.3	3.0	3.7	3.7	4.3	3.0	4.0	3.8	4.0	3.0	3.5	4.5					
NY141	3.0	1.3	1.7	2.7	2.7	3.0	3.1	2.3	3.0	2.8	3.5	2.5	3.5	4.5					
NY143		1.3	3.0	2.7	2.3	2.3	3.0	2.0	3.5	4.0	3.5								
NY144	4.0	1.0	3.5	3.0	3.3		3.0												
NY145	2.0	1.3	2.0	1.7	2.7		3.3												
NY146	4.3	2.3	3.3	3	4.0														
NY147	4.0	3.3	2.7	3.3	3.0		3.7												
B13-1		1.0	4.0	2.5	2.5	2.0	3.0	1.0	2.0	2.0	3.0								
E43-10	3.7	3.0	4.0																
E105-16	1.3	1.5	2.0																
E106-4	2.7	2.5	1.5																
F11-1	3.0																		
F52-1	2.3																		

Scab pressure was especially strong in our trial in 2010

Tuber Dormancy Relative to Atlantic

Replicate 10 tuber samples from each clone were stored in the dark at room temperature.
The number of weeks that each clone sprouted earlier (-) or later (+) than Atlantic is shown.
Atlantic typically breaks dormancy in late October to mid November

Dormancy is considered broken when half or more of the sample has 1/4" long sprouts.

	2009	2008	2007	2006	2005	2004	2003	2002	2001	2000	1999
Round whites:											
ANDOVER	3		4	4	3		1	4	1	2	4
ATLANTIC	0	0	0	0	0	0	0	0	0	0	0
EVA							9	8	7	7	9
KATAHDIN		1								1	2
KING HARRY			0	0		-1	-2	0	-1	0	-1
LEHIGH		3	3	3	3	1	2	3	1	2	2
MARCY			4	4	3	2	2	2	2	2	4
MONONA									-1	1	3
PIKE		4	5			2	4	3	2	2	5
REBA	5	4	6	7	5	3	4	3	2	3	5
SALEM									3	2	
SNOWDEN	2	1	4	2	0	0	0	1	1	1	2
SUPERIOR		2					-1	1			1
NY125				0	-1	-1	-1	-1	-1	-1	-2
NY138	8	6	8	7	5	6					
NY139	1	1	2	3	-1	1					
NY140	7	5	6	6	5	5					
NY141	2	2	3	3	1	2					
E43-10	1	0									
E106-4	0	0									
F11-1	1										
F52-1	2										
Reds and purples:											
CHIEFTAIN	1	1	0	2	2	1	1	1	2	1	0
NORLAND DR		-3	-3		-2	-2	-2	-1	3		
NORDONNA	2	0	0	1	1	0					
RED MARIA	3	3	4	4	1	4	3	2	2	3	3
NY136			4	4	5	4	3	2			
NY144	-3	-3	-3								
AD. BLUE			2	2	1	-1		2	0	1	-1
AD. RED			2	1	5			3	2	1	-1

Results from Freeville Research Farm *and* Upstate County Farm Trials

Don Halseth

Upstate New York Table 2. Total yield, marketable yield, percentage of yield by grade size distribution, mean tuber number per foot and weight, and specific gravity for the early maturity trial grown at Freeville, New York - 2010.

Genotype	Total	Mkt. Yield		Size Distribution[1]					Size Distrib. (%)				
Variety	Yield		% of	(% of total yield)					1-7/8"	2-1/2"	Mean Tuber		Spec.
or Clone	Cwt/A	Cwt/A	Std.	1	2	3	4	5	to 4"	to 4 "	#/ft.	wt.(oz.)	Grav.
ALBANE	442	383	119	3	39	51	5	2	95	56	8.2	5.6	71
ANDOVER	205	181	56	4	33	63	1	0	96	64	4.0	5.4	80
ATLANTIC-CU	349	313	97	2	23	68	5	2	96	73	6.0	6.0	91
ATLANTIC-NE1031	367	321	100	1	19	62	13	5	94	75	5.8	6.6	93
APOLLINE	525	309	96	3	26	46	18	7	90	64	8.1	6.8	62
AF2873-1	147	108	34	13	70	17	0	0	87	17	4.6	3.3	74
CARRERA	311	197	61	6	40	51	3	0	94	53	6.6	4.9	58
CHIPPEWA	414	367	114	8	47	44	1	0	92	46	10.3	4.2	69
KING HARRY (NY131)	260	240	75	3	30	62	3	2	95	65	5.1	5.3	74
MSQ425-4Y	280	265	83	4	45	50	1	0	96	50	6.6	4.4	75
NY141	314	286	89	2	35	62	1	0	98	63	5.8	5.6	78
SATINA	417	347	108	5	31	58	5	1	94	63	8.2	5.3	70
SUPERIOR	180	157	49	3	38	59	0	0	97	59	3.8	5.0	73
W2978-3	236	217	68	6	44	49	1	0	94	50	5.6	4.4	73
YUKON GOLD	214	201	62	2	20	71	6	1	97	76	3.7	6.0	80
Average:	311	259	81	4	36	54	4	1	94	58	6.2	5.3	75
Maximum:	525	383	119	13	70	71	18	7	98	76	10.3	6.8	93
Minimum:	147	108	34	1	19	17	0	0	87	17	3.7	3.3	58
Waller-Duncan													
LSD (k=100)	xx	xx									xx	xx	xx
C.V. (%)	(xx)	(xx)									(xx)	(xx)	(xx)

[1]Tuber size classes: 1 = 1" to 1-7/8", 2 = 1-7/8" to 2-1/2", 3 = 2-1/2" to 3-1/4", 4 = 3-1/4" to 4", and 5 = over 4" dia.

Plant Date: Apr 30 Maturity Ratings: Jul 28 Vinekill (Mow) Date: Aug 30 Harvest Date: Aug 31

Upstate New York Table 3. Plant maturity, tuber shape and appearance, percentage of external and internal tuber defects, and scab rating for the early maturity trial grown at Freeville, New York - 2010.

Genotype	Plant[1]	Tuber Attributes[1]			External Tuber Defects (%)					Int. Tuber Defects (%)[2]				Scab
Variety or Clone	Mat. At Vinekill	Tuber Shape	Skin Text.	Tuber Appear.	Total Defects	Sun-Green	Mis-shapen	Growth Cracks	Rot	Holl. Heart	Brn. Center	Vasc. Disc.	Int. Nec.	Rating
ALBANE	7.5	8	7	3.8	8.5	0.1	4.8	3.5	0.2	0.0	0.0	2.5	0.0	2.3
ANDOVER	6.3	3	5	6.4	8.4	0.0	1.8	5.7	0.8	2.5	0.0	0.0	0.0	0.4
ATLANTIC-CU	7.3	2	5	6.1	6.7	0.3	2.3	2.9	1.2	5.0	0.0	12.5	0.0	0.9
ATLANTIC-NE1031	8.0	2	5	6.1	6.7	1.4	1.9	2.9	0.5	27.5	0.0	7.5	0.0	0.6
APOLLINE	8.3	8	9	2.5	31.2	1.1	16.0	12.1	2.0	0.0	0.0	25.0	30.0	4.5
AF2873-1	5.0	2	6	6.3	13.5	0.2	4.1	9.3	0.0	0.0	0.0	2.5	2.5	1.8
CARRERA	7.3	2	8	7.3	30.5	2.4	26.5	1.0	0.7	0.0	0.0	10.0	0.0	0.6
CHIPPEWA	7.8	2	8	6.9	3.7	0.9	1.7	0.5	0.5	0.0	0.0	27.5	0.0	3.6
KING HARRY (NY131)	5.3	2	6	5.8	2.6	0.4	1.3	1.0	0.0	0.0	0.0	0.0	0.0	1.0
MSQ425-4Y	7.0	3	7	7.9	0.9	0.1	0.6	0.2	0.0	0.0	0.0	2.5	0.0	0.1
NY141	6.8	3	7	7.0	6.6	0.0	5.2	1.0	0.4	0.0	0.0	2.5	0.0	0.3
SATINA	8.0	3	5	5.6	10.9	0.1	9.3	1.5	0.0	0.0	0.0	2.5	0.0	2.0
SUPERIOR	4.8	6	6	4.0	9.2	0.3	4.7	3.9	0.4	0.0	0.0	17.5	10.0	0.8
W2978-3	6.3	1	8	7.0	2.1	0.1	0.5	1.4	0.0	0.0	0.0	0.0	0.0	0.9
YUKON GOLD	6.0	3	9	6.0	3.5	0.0	0.8	2.4	0.2	5.0	0.0	15.0	0.0	2.9
Average:	7	3	7	6	9.7	0.5	5.4	3.3	0.5	2.7	0.0	8.5	2.8	1.5
Maximum:	8	8	9	8	31.2	2.4	26.5	12.1	2.0	27.5	0.0	27.5	30.0	4.5
Minimum:	5	1	5	3	0.9	0.0	0.5	0.2	0.0	0.0	0.0	0.0	0.0	0.1

[1]See the standard NE1031 rating system for a key to these rating scales in the appendix in the rear of this report.
[2]Based on a 10-tuber sample from each replication. The tubers were taken from the size 3 and 4 categories.

Upstate New York Table 4. Total yield, marketable yield, percentage of yield by grade size distribution, mean tuber number per foot and weight, and specific gravity for the medium maturity trial grown at Freeville, New York - 2010.

Genotype Variety or Clone	Total Yield Cwt/A	Mkt. Yield Cwt/A	Mkt. Yield % of Std.	Size Distribution[1] (% of total yield) 1	2	3	4	5	Size Distrib. (%) 1-7/8" to 4"	2-1/2" to 4 "	Mean Tuber #/ft.	Mean Tuber wt.(oz.)	Spec. Grav.
ATLANTIC-CU	303	271	111	4	32	56	6	1	94	62	5.6	5.6	90
ATLANTIC-NE1031	286	244	100	3	31	54	11	0	97	66	5.0	5.9	86
A00188-3C *	330	284	116	8	58	33	1	0	92	34	8.2	4.2	82
AF0338-17 *	253	224	92	4	22	64	10	0	96	74	4.3	6.2	77
AF2873-2	152	103	42	9	54	35	2	0	91	37	3.7	4.3	76
CO99045-1W/Y	299	242	99	6	43	43	6	2	92	49	6.2	5.0	78
EVA	173	159	65	5	37	57	1	0	95	58	3.7	4.8	70
LEHIGH	312	282	115	2	26	60	10	1	96	70	5.2	6.2	78
MSL228-1SPL	241	196	80	1	22	60	14	3	96	74	3.8	6.6	76
NY115	158	146	60	6	44	49	0	0	94	49	3.6	4.6	69
NY145 (D40-35)	267	228	94	12	71	17	0	0	88	17	8.2	3.4	80
NY146 (D40-50)	162	146	60	5	39	45	11	0	95	56	3.2	5.2	70
NY147 (D40-263)	150	133	55	7	53	39	1	0	93	40	3.5	4.5	63
REBA	252	219	90	3	31	52	11	4	93	63	4.2	6.2	72
SASSY	384	312	128	14	63	22	0	0	86	22	12.2	3.3	79
SNOWDEN	333	304	125	5	42	50	2	1	95	52	7.1	4.9	82
YUKON GEM	358	295	121	2	27	59	7	4	93	66	5.9	6.3	69
YUKON GOLD	195	163	67	4	28	54	9	5	91	63	3.4	6.2	77
Average:	256	220	90	6	40	47	6	1	93	53	5.4	5.2	76
Maximum:	384	312	128	14	71	64	14	5	97	74	12.2	6.6	90
Minimum:	150	103	42	1	22	17	0	0	86	17	3.2	3.3	63
Waller-Duncan LSD (k=100)	xx	xx									xx	xx	xx
C.V. (%)	(xx)	(xx)									(xx)	(xx)	(xx)

[1]Tuber size classes: 1 = 1" to 1-7/8", 2 = 1-7/8" to 2-1/2", 3 = 2-1/2" to 3-1/4", 4 = 3-1/4" to 4", and 5 = over 4" dia.

Plant Date: May 3 Maturity Ratings: Aug 11 Vinekill Date: Aug 18 Harvest Date: Sep 14

* Note: all entries have four replications except for the two line numbers followed by an "*".

Upstate New York Table 5. Plant maturity, tuber shape and appearance, percentage of external and internal tuber defects, and scab rating for the medium maturity trial grown at Freeville, New York - 2010.

Genotype	Plant[1]	Tuber Attributes[1]			External Tuber Defects (%)					Int. Tuber Defects (%)[2]				Scab
Variety or Clone	Mat. At Vinekill	Tuber Shape	Skin Text.	Tuber Appear.	Total Defects	Sun-Green	Mis-shapen	Growth Cracks	Rot	Holl. Heart	Brn. Center	Vasc. Disc.	Int. Nec.	Rating
ATLANTIC-CU	6.3	2	5	6.1	5.1	0.1	2.0	2.0	1.1	7.5	0.0	5.0	2.5	1.4
ATLANTIC-NE1031	7.0	2	5	5.5	11.3	1.7	3.9	5.1	0.5	40.0	0.0	5.0	5.0	0.6
A00188-3C *	7.0	3	8	5.7	5.8	1.2	3.8	0.7	0.0	3.3	0.0	3.3	0.0	1.7
AF0338-17 *	7.3	3	6	6.7	7.8	0.7	1.7	5.1	0.4	10.0	0.0	16.7	26.7	1.5
AF2873-2	4.8	3	8	4.3	23.7	1.5	6.7	14.1	1.5	0.0	0.0	2.5	12.5	1.0
CO99045-1W/Y	7.0	8	6	5.5	11.4	3.4	5.4	2.0	0.6	15.0	0.0	42.5	0.0	1.3
EVA	4.8	2	8	7.0	3.2	0.8	2.0	0.0	0.4	2.5	0.0	2.5	2.5	2.0
LEHIGH	6.5	3	6	5.4	5.9	0.6	2.4	2.3	0.7	27.5	0.0	2.5	0.0	1.0
MSL228-1SPL	6.0	5	8	6.3	13.3	0.5	5.5	7.3	0.0	2.5	0.0	0.0	0.0	0.0
NY115	3.0	3	9	7.3	1.6	0.1	1.0	0.0	0.4	2.5	0.0	0.0	0.0	1.8
NY145 (D40-35)	4.5	1	8	7.3	2.6	0.6	1.6	0.1	0.2	0.0	0.0	2.5	0.0	2.0
NY146 (D40-50)	6.0	3	9	8.0	4.8	0.0	4.4	0.0	0.3	2.5	0.0	5.0	0.0	3.0
NY147 (D40-263)	2.8	3	8	6.5	4.6	0.2	3.5	0.6	0.4	0.0	0.0	7.5	0.0	1.8
REBA	6.3	3	8	6.6	6.5	1.7	2.7	1.0	1.1	10.0	0.0	2.5	0.0	0.8
SASSY	7.5	1	5	4.0	4.4	0.7	1.7	1.9	0.1	5.0	0.0	0.0	5.0	1.0
SNOWDEN	6.8	0	6	4.6	3.4	0.8	1.4	1.1	0.1	27.5	0.0	15.0	0.0	1.6
YUKON GEM	6.3	5	7	5.3	11.7	2.6	6.2	2.7	0.1	27.5	2.5	0.0	0.0	1.8
YUKON GOLD	2.8	4	8	6.0	8.3	0.6	3.5	3.4	0.8	5.0	0.0	17.5	2.5	1.9
Average:	6	3	7	6	7.5	1.0	3.3	2.7	0.5	10.5	0.1	7.2	3.1	1.4
Maximum:	8	8	9	8	23.7	3.4	6.7	14.1	1.5	40.0	2.5	42.5	26.7	3.0
Minimum:	3	0	5	4	1.6	0.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

[1]See the standard NE1031 rating system for a key to these rating scales in the appendix in the rear of this report.
[2]Based on a 10-tuber sample from each replication. The tubers were taken from the size 3 and 4 categories.

Upstate New York Table 6. Total yield, marketable yield, percentage of yield by grade size distribution, mean tuber number per foot and weight, and specific gravity for the medium late maturity trial grown at Freeville, New York - 2010.

Genotype	Total	Mkt. Yield		Size Distribution[1]					Size Distrib. (%)				
Variety	Yield		% of	(% of total yield)					1-7/8"	2-1/2"	Mean Tuber		Spec.
or Clone	Cwt/A	Cwt/A	Std.	1	2	3	4	5	to 4"	to 4 "	#/ft.	wt.(oz.)	Grav.
ATLANTIC - CU	296	267	95	2	32	62	4	0	98	66	5.3	5.8	91
ATLANTIC - NE1031	317	281	100	2	26	61	9	2	95	70	5.3	6.2	88
A01144-3C	341	232	82	5	32	55	7	0	95	62	6.8	5.2	78
AF2291-10	242	170	61	3	29	56	9	2	94	65	4.0	6.7	82
AF2865-4	254	204	73	3	23	57	13	5	93	69	4.2	6.3	71
AF4058-1	350	288	103	4	33	50	10	3	93	60	6.4	5.7	77
B1992-106	272	244	87	5	44	45	4	1	93	50	5.7	5.0	79
KENNEBEC	270	186	66	2	27	51	15	5	93	66	4.1	6.9	70
KEUKA GOLD	264	211	75	3	42	48	6	1	95	54	5.3	5.2	73
MSL268-D	255	213	76	7	61	27	3	1	92	31	6.5	4.1	80
NY139 - CU	302	277	99	3	29	60	7	1	96	67	5.5	5.8	82
NY139 - NE1031	287	254	90	3	35	55	6	1	95	61	5.4	5.5	80
NY143 - CU	187	173	61	6	51	43	0	0	94	43	4.3	4.5	69
NY143 - NE1031	250	233	83	4	43	52	1	0	96	53	5.1	5.1	67
SNOWDEN	275	242	86	5	43	52	0	0	95	52	6.1	4.7	82
W2438-3Y	203	173	62	4	35	53	6	2	94	59	3.9	5.4	73
W2717-5	234	201	72	3	46	48	3	0	97	51	4.9	5.0	89
W5015-12	320	287	102	6	55	38	1	0	93	38	8.1	4.2	85
Average:	273	230	82	4	38	51	6	1	95	56	5.4	5.4	78
Maximum:	350	288	103	7	61	62	15	5	98	70	8.1	6.9	91
Minimum:	187	170	61	2	23	27	0	0	92	31	3.9	4.1	67
Waller-Duncan LSD (k=100)	xx	xx									xx	xx	xx
C.V. (%)	(xx)	(xx)									(xx)	(xx)	(xx)

[1]Tuber size classes: 1 = 1" to 1-7/8", 2 = 1-7/8" to 2-1/2", 3 = 2-1/2" to 3-1/4", 4 = 3-1/4" to 4", and 5 = over 4" dia.

Plant Date: May 3 Maturity Ratings: Aug 11 Vinekill Date: Aug 25 Harvest Date: Sep 15

Upstate New York Table 7. Plant maturity, tuber shape and appearance, percentage of external and internal tuber defects, and scab rating for the medium late maturity trial grown at Freeville, New York - 2010.

Genotype	Plant[1]	Tuber Attributes[1]			External Tuber Defects (%)					Int. Tuber Defects (%)[2]				Scab
Variety or Clone	Mat. At Vinekill	Tuber Shape	Skin Text.	Tuber Appear.	Total Defects	Sun-Green	Mis-shapen	Growth Cracks	Rot	Holl. Heart	Brn. Center	Vasc. Disc.	Int. Nec.	Rating
ATLANTIC - CU	6.0	1	6	6.5	7.9	0.1	3.6	3.4	0.9	0.0	2.5	7.5	5.0	0.6
ATLANTIC - NE1031	6.8	1	6	6.5	6.8	1.3	1.7	3.0	0.8	25.0	0.0	22.5	0.0	1.1
A01144-3C	8.0	3	8	3.3	26.9	4.6	14.5	7.5	0.2	0.0	0.0	3.3	3.3	3.2
AF2291-10	8.3	3	6	3.8	24.4	2.4	14.2	6.1	1.7	40.0	2.5	5.0	0.0	2.5
AF2865-4	5.8	2	6	4.8	11.8	1.8	6.5	1.6	1.9	0.0	0.0	15.0	0.0	1.8
AF4058-1	5.7	6	8	4.2	10.8	0.2	9.9	0.6	0.2	0.0	0.0	0.0	23.3	1.7
B1992-106	6.8	3	6	6.0	3.4	0.4	2.1	0.9	0.0	5.0	0.0	2.5	2.5	3.0
KENNEBEC	6.3	6	8	5.3	24.9	3.4	11.8	6.9	2.8	5.0	0.0	15.0	0.0	1.8
KEUKA GOLD	7.5	1	6	6.1	16.0	4.0	2.7	9.3	0.0	0.0	0.0	5.0	0.0	3.5
MSL268-D	5.5	3	6	6.5	8.5	0.2	8.0	0.0	0.2	0.0	0.0	25.0	0.0	2.5
NY139 - CU	5.3	2	7	6.3	4.8	0.9	2.8	0.9	0.2	0.0	0.0	10.0	0.0	1.5
NY139 - NE1031	6.8	3	8	5.4	7.3	0.5	3.6	3.0	0.2	0.0	0.0	17.5	0.0	1.8
NY143 - CU	4.5	3	8	7.5	1.8	0.0	1.2	0.6	0.0	0.0	0.0	2.5	0.0	1.3
NY143 - NE1031	5.0	1	8	7.0	3.1	0.1	2.1	0.8	0.1	0.0	0.0	2.5	0.0	1.5
SNOWDEN	6.5	1	6	5.0	7.3	2.1	3.7	1.0	0.4	22.5	0.0	27.5	0.0	1.1
W2438-3Y	5.5	4	8	5.0	9.2	2.4	4.7	1.6	0.6	5.0	0.0	17.5	2.5	0.9
W2717-5	4.8	3	8	5.6	10.4	0.6	6.4	1.6	1.7	15.0	0.0	20.0	0.0	3.0
W5015-12	7.0	1	6	5.5	3.7	0.9	1.4	1.2	0.2	7.5	0.0	2.5	0.0	2.0
Average:	6	3	7	6	10.5	1.4	5.6	2.8	0.7	6.9	0.3	11.2	2.0	1.9
Maximum:	8	6	8	8	26.9	4.6	14.5	9.3	2.8	40.0	2.5	27.5	23.3	3.5
Minimum:	5	1	6	3	1.8	0.0	1.2	0.0	0.0	0.0	0.0	0.0	0.0	0.6

[1]See the standard NE1031 rating system for a key to these rating scales in the appendix in the rear of this report.
[2]Based on a 10-tuber sample from each replication. The tubers were taken from the size 3 and 4 categories.

Upstate New York Table 8. Total yield, marketable yield, percentage of yield by grade size distribution, mean tuber number per foot and weight, and specific gravity for the late maturity trial grown at Freeville, New York - 2010.

Genotype	Total	Mkt. Yield		Size Distribution[1]					Size Distrib. (%)				
Variety	Yield		% of	(% of total yield)					1-7/8"	2-1/2"	Mean Tuber		Spec.
or Clone	Cwt/A	Cwt/A	Std.	1	2	3	4	5	to 4"	to 4 "	#/ft.	wt.(oz.)	Grav.
ATLANTIC (CU)	341	320	97	1	32	60	7	0	99	67	6.1	5.8	91
ATLANTIC (NE1031)	355	330	100	1	25	62	11	2	97	72	6.0	6.2	91
AF2574-1	415	324	98	2	26	54	14	3	94	68	6.7	6.5	77
AF4129-2 *	304	279	84	3	41	49	7	0	97	56	6.7	4.7	80
AF4149-1 *	298	246	75	4	24	60	12	0	96	72	5.6	5.6	78
CASTILE	274	246	75	3	48	45	2	1	96	48	5.7	5.0	78
GENESEE	185	158	48	3	31	60	5	1	96	66	3.6	5.3	68
HARLEY BLACKWELL	190	170	52	10	62	27	1	0	90	28	5.6	3.5	73
KATAHDIN	264	250	76	3	40	52	6	0	97	58	5.4	5.1	71
MARCY	367	347	105	3	28	61	8	0	97	69	6.5	5.9	82
NY 138 (CU)	224	214	65	3	46	49	2	0	97	51	5.1	4.6	77
NY138 (NE1031)	206	197	60	2	27	67	4	0	98	71	3.5	6.0	78
NY140	341	317	96	3	42	52	3	1	97	54	6.7	5.3	72
SALEM	349	307	93	2	31	55	9	2	96	65	6.0	6.0	66
SNOWDEN	341	319	97	4	44	50	1	0	96	52	7.4	4.8	83
Average:	297	268	81	3	36	54	6	1	96	60	5.8	5.4	78
Maximum:	415	347	105	10	62	67	14	3	99	72	7.4	6.5	91
Minimum:	185	158	48	1	24	27	1	0	90	28	3.5	3.5	66
Waller-Duncan													
LSD (k=100)	xx	xx									xx	xx	xx
C.V. (%)	(xx)	(xx)									(xx)	(xx)	(xx)

[1]Tuber size classes: 1 = 1" to 1-7/8", 2 = 1-7/8" to 2-1/2", 3 = 2-1/2" to 3-1/4", 4 = 3-1/4" to 4", and 5 = over 4" dia.

Plant Date: May 3 Maturity Ratings: Aug 20 Vinekill Date: Sep 1 Harvest Date: Sep 22

* Note: trial has four replications except for AF4129-2 and AF4149-1 have three replications.

Upstate New York Table 9. Plant maturity, tuber shape and appearance, percentage of external and internal tuber defects, and scab rating for the late maturity trial grown at Freeville, New York - 2010.

Genotype	Plant[1]	Tuber Attributes[1]			External Tuber Defects (%)					Int. Tuber Defects (%)[2]				Scab
Variety or Clone	Mat. At Vinekill	Tuber Shape	Skin Text.	Tuber Appear.	Total Defects	Sun-Green	Mis-shapen	Growth Cracks	Rot	Holl. Heart	Brn. Center	Vasc. Disc.	Int. Nec.	Rating
ATLANTIC (CU)	4.5	1	6	5.0	4.9	0.2	0.9	2.3	1.6	7.5	0.0	5.0	0.0	1.0
ATLANTIC (NE1031)	5.0	1	6	5.0	4.1	0.5	1.5	1.8	0.2	32.5	0.0	7.5	0.0	0.6
AF2574-1	7.0	2	7	5.3	16.5	1.2	11.0	4.3	0.0	0.0	0.0	10.0	0.0	3.0
AF4129-2 *	6.7	2	6	5.7	5.4	0.7	2.1	2.2	0.4	0.0	0.0	26.7	0.0	3.0
AF4149-1 *	6.3	1	6	6.0	14.0	0.1	2.3	11.0	0.5	0.0	3.3	6.7	0.0	1.8
CASTILE	5.0	6	8	4.6	5.4	0.5	4.2	0.2	0.5	0.0	0.0	7.5	0.0	2.5
GENESEE	7.5	1	7	6.0	11.0	5.2	3.6	1.8	0.4	0.0	0.0	42.5	0.0	3.0
HARLEY BLACKWELL	1.0	1	6	6.5	0.9	0.0	0.5	0.0	0.4	0.0	0.0	5.0	0.0	1.4
KATAHDIN	5.8	3	8	5.3	2.8	1.5	1.0	0.3	0.0	15.0	0.0	25.0	0.0	3.5
MARCY	7.8	3	6	5.9	2.7	0.9	1.5	0.3	0.0	12.5	0.0	5.0	0.0	1.8
NY 138 (CU)	3.3	1	7	6.3	1.7	0.5	0.4	0.6	0.2	0.0	0.0	2.5	0.0	1.0
NY138 (NE1031)	6.0	1	7	6.3	2.8	0.7	1.1	1.0	0.0	10.0	0.0	2.5	0.0	1.5
NY140	4.5	3	8	5.9	3.7	1.5	0.7	1.0	0.4	0.0	0.0	30.0	0.0	1.5
SALEM	5.0	3	8	5.1	7.7	1.9	2.2	3.5	0.2	0.0	0.0	37.5	0.0	2.4
SNOWDEN	6.3	1	6	4.3	1.8	0.6	1.0	0.0	0.2	17.5	0.0	15.0	2.5	1.8
Average:	5	2	7	6	5.7	1.1	2.3	2.0	0.3	6.3	0.2	15.2	0.2	2.0
Maximum:	8	6	8	7	16.5	5.2	11.0	11.0	1.6	32.5	3.3	42.5	2.5	3.5
Minimum:	1	1	6	4	0.9	0.0	0.4	0.0	0.0	0.0	0.0	2.5	0.0	0.6

[1]See the standard NE1031 rating system for a key to these rating scales in the appendix in the rear of this report.
[2]Based on a 10-tuber sample from each replication. The tubers were taken from the size 3 and 4 categories.

Upstate New York Table 10. Total yield, marketable yield, percentage of yield by grade size distribution, mean tuber number per foot and weight, and specific gravity for the red-skinned variety trial grown at Freeville, New York - 2010.

(* Note: trial consisted of two replications per entry except those lines denoted by an "*" which had one replication.)

Genotype Variety or Clone	Total Yield Cwt/A	Mkt. Yield Cwt/A	Mkt. Yield % of Std.	Size Distribution[1] (% of total yield) 1	2	3	4	5	Size Distrib. (%) 1-7/8" to 4"	2-1/2" to 4 "	Mean Tuber #/ft.	Mean Tuber wt.(oz.)	Spec. Grav.
A00286-3Y	450	358	152	7	58	32	3	0	93	35	10.3	4.5	71
A99331-2RY	419	257	109	27	61	12	0	0	73	12	15.6	2.8	69
AC99329-7PW/Y	347	297	126	7	34	58	1	0	93	59	7.8	4.6	72
AC99330-1P/Y	256	159	67	28	65	7	0	0	72	7	9.5	2.8	70
AF4127-3 *	184	157	67	2	24	61	13	0	98	74	3.3	5.9	71
BERTITA	218	93	40	44	51	4	0	0	56	4	9.8	2.3	78
B13-1	197	144	61	20	66	14	0	0	80	14	6.5	3.1	53
B2152-17	131	100	42	19	70	10	0	0	81	10	4.6	3.0	65
B2676-2	149	115	49	20	69	11	0	0	80	11	4.8	3.2	76
BCO01306-2	259	221	94	13	61	26	0	0	87	26	8.2	3.3	71
BNC193-1	103	79	33	21	79	0	0	0	79	0	3.8	2.7	68
CHIEFTAIN	273	236	100	5	52	40	3	0	95	43	6.4	4.5	68
CO00277-2R *	39	21	9	33	67	0	0	0	67	0	1.8	2.3	na
CO00291-5R *	193	162	68	8	38	45	9	0	92	54	4.4	4.5	71
CO00405-1RF *	54	4	2	89	11	0	0	0	11	0	4.4	1.3	na
CO00415-1R *	47	9	4	75	25	0	0	0	25	0	3.2	1.5	na
CO97227-2P/PW	190	123	52	16	77	7	0	0	84	7	6.8	2.9	81
CO97232-2R/Y	234	203	86	8	67	24	0	0	92	24	6.3	3.9	60
CO98012-5R	188	133	56	19	57	24	0	0	81	24	5.9	3.3	72
CO99076-6R	273	231	98	6	31	53	7	3	92	61	5.2	5.4	70
CO99256-2R	187	145	62	12	46	42	0	0	88	42	5.1	3.8	64

Upstate New York Table 10-(cont'd)- Total yield, marketable yield, percentage of yield by grade size distribution, mean tuber number per foot and weight, and specific gravity for the red-skinned variety trial grown at Freeville, New York - 2010.

(* Note: trial consisted of two replications per entry except those lines denoted by an "*" which had one replication.)

Genotype	Total	Mkt. Yield		Size Distribution[1]					Size Distrib. (%)				
Variety	Yield		% of	(% of total yield)					1-7/8"	2-1/2"	Mean Tuber		Spec.
or Clone	Cwt/A	Cwt/A	Std.	1	2	3	4	5	to 4"	to 4 "	#/ft.	wt.(oz.)	Grav.
DARK RED NORLAND	218	186	79	4	52	42	2	0	96	44	4.9	4.6	58
F36-3	119	75	32	26	69	5	0	0	74	5	4.6	2.7	60
G1-17 **	70	0	0	87	13	0	0	0	13	0	5.3	1.4	66
G2-1 **	171	47	20	63	37	0	0	0	37	0	11.4	1.6	66
G4-1	130	97	41	3	45	50	2	0	97	52	2.7	5.0	54
G4-2	396	264	112	18	65	17	0	0	82	17	11.6	3.5	70
MAGIC MOLLY **	91	64	27	6	65	29	0	0	94	29	2.3	4.0	72
MODOC	195	138	59	26	68	7	0	0	74	7	6.9	2.9	57
NORDONNA	165	138	58	12	59	29	0	0	88	29	4.7	3.6	62
NY136	260	228	97	5	33	46	14	1	93	60	5.0	5.5	61
NY142	82	50	21	34	66	0	0	0	66	0	3.7	2.3	67
NY144	248	141	60	21	64	13	1	1	78	14	7.9	3.2	55
PETER WILCOX	206	162	69	17	74	9	0	0	83	9	6.4	3.3	71
RED LA SODA *	271	226	96	3	25	65	7	0	97	73	4.6	6.2	63
SNOG	176	128	54	11	67	23	0	0	89	23	4.6	4.0	71
TROLL	264	128	54	36	57	7	0	0	64	7	10.5	2.6	83
W2609-1R	135	113	48	11	66	23	0	0	89	23	4.0	3.5	53
Average:	200	143	61	22	52	21	2	0	77	24	6.2	3.5	67
Maximum:	450	358	152	89	79	65	14	5	98	74	15.6	6.2	83
Minimum:	39	0	0	1	2	0	0	0	11	0	1.8	1.3	53

[1]Tuber size classes: 1 = 1" to 1-7/8", 2 = 1-7/8" to 2-1/2", 3 = 2-1/2" to 3-1/4", 4 = 3-1/4" to 4", and 5 = over 4" dia.

Plant Date: May 4 Maturity Ratings: July 28 Vinekill Date: Sep 8 Harvest Date: Sep 27

** Note: the three clones denoted by "**" had long tuber shapes and were graded by weight, see Table 12 for the 5 weight categories.

Upstate New York Table 11. Plant maturity, tuber shape and appearance, percentage of external and internal tuber defects, and scab rating for the red-skinned variety trial grown at Freeville, New York - 2010.

(* Note: trial consisted of two replications per entry except those lines denoted by an "*" which had one replication.)

Genotype	Plant[1]	Tuber Attributes[1]			External Tuber Defects (%)					Int. Tuber Defects (%)[2]				Scab
Variety or Clone	Mat. At Vinekill	Tuber Shape	Skin Text.	Tuber Appear.	Total Defects	Sun-Green	Mis-shapen	Growth Cracks	Rot	Holl. Heart	Brn. Center	Vasc. Disc.	Int. Nec.	Rating
A00286-3Y	9.0	3	9	7.3	13.4	5.5	7.0	0.7	0.3	0.0	0.0	5.0	0.0	1.5
A99331-2RY	8.5	1	8	6.8	11.7	0.5	11.2	0.1	0.0	0.0	0.0	10.0	0.0	0.5
AC99329-7PW/Y	8.5	1	8	6.5	7.7	1.2	2.0	4.2	0.3	0.0	0.0	25.0	0.0	2.5
AC99330-1P/Y	8.5	3	8	5.0	10.0	0.2	9.5	0.0	0.2	0.0	0.0	60.0	0.0	1.0
AF4127-3 *	7.0	3	8	4.0	12.7	1.5	4.0	7.1	0.0	0.0	0.0	20.0	0.0	3.5
BERTITA	9.0	1	6	3.5	13.4	1.2	8.2	4.0	0.0	0.0	0.0	0.0	0.0	0.5
B13-1	6.5	2	7	5.0	7.5	0.0	4.3	1.8	1.4	0.0	0.0	0.0	0.0	1.5
B2152-17	5.0	1	8	8.0	4.1	0.9	1.6	1.5	0.0	0.0	0.0	20.0	0.0	0.5
B2676-2	5.0	3	6	4.3	2.7	0.0	0.8	1.2	0.6	0.0	0.0	5.0	0.0	3.0
BCO01306-2	7.5	2	8	6.5	2.1	0.0	2.0	0.1	0.0	0.0	0.0	0.0	0.0	2.5
BNC193-1	4.0	2	8	7.5	3.6	0.0	3.0	0.7	0.0	0.0	0.0	0.0	0.0	0.0
CHIEFTAIN	8.0	3	8	5.5	8.4	0.0	4.1	3.8	0.5	0.0	0.0	15.0	0.0	0.8
CO00277-2R *	2.0	1	8	7.0	14.4	0.0	9.9	4.5	0.0	0.0	0.0	10.0	0.0	1.5
CO00291-5R *	9.0	5	8	6.5	8.3	2.8	3.3	1.1	1.1	0.0	0.0	30.0	0.0	2.0
CO00405-1RF *	4.0	8	8	6.0	3.9	0.0	3.9	0.0	0.0	0.0	0.0	20.0	10.0	0.0
CO00415-1R *	7.0	8	8	5.0	5.3	0.0	3.0	0.0	2.3	0.0	0.0	0.0	0.0	2.0
CO97227-2P/PW	7.5	3	8	6.0	18.7	0.0	18.0	0.0	0.8	15.0	0.0	0.0	0.0	3.3
CO97232-2R/Y	5.5	1	6	4.5	5.1	0.0	2.4	2.3	0.3	0.0	0.0	15.0	0.0	3.0
CO98012-5R	8.0	1	8	7.5	10.4	2.2	4.8	2.8	0.6	0.0	0.0	0.0	0.0	2.8
CO99076-6R	7.5	3	9	8.0	7.1	1.3	1.9	3.9	0.0	0.0	0.0	25.0	0.0	1.5
CO99256-2R	8.0	3	9	8.0	10.7	1.0	6.9	1.3	1.5	0.0	0.0	10.0	0.0	3.0

Upstate New York Table 11. (cont'd)- Plant maturity, tuber shape and appearance, percentage of external and internal tuber defects, and scab rating for the red-skinned variety trial grown at Freeville, New York - 2010.

(* Note: trial consisted of two replications per entry except those lines denoted by an "*" which had one replication.)

Genotype	Plant[1]	Tuber Attributes[1]			External Tuber Defects (%)					Int. Tuber Defects (%)[2]				Scab
Variety or Clone	Mat. At Vinekill	Tuber Shape	Skin Text.	Tuber Appear.	Total Defects	Sun-Green	Mis-shapen	Growth Cracks	Rot	Holl. Heart	Brn. Center	Vasc. Disc.	Int. Nec.	Rating
DARK RED NORLAND	5.0	3	6	5.0	10.3	1.6	1.7	5.9	1.1	5.0	0.0	15.0	0.0	1.0
F36-3	2.5	1	6	4.5	11.6	2.3	0.3	7.8	1.1	0.0	0.0	5.0	0.0	1.0
G1-17 **	3.0	3	8	5.5	19.6	0.0	19.6	0.0	0.0	0.0	0.0	0.0	0.0	1.5
G2-1 **	8.0	8	8	6.0	10.2	0.6	9.0	0.0	0.5	0.0	0.0	0.0	0.0	2.5
G4-1	8.0	5	6	5.5	22.6	3.3	14.3	1.9	3.1	0.0	0.0	15.0	0.0	2.0
G4-2	8.0	7	6	5.0	16.4	1.6	12.7	1.8	0.3	0.0	0.0	20.0	0.0	3.3
MAGIC MOLLY **	7.5	8	8	6.0	23.0	0.0	23.0	0.0	0.0	0.0	0.0	0.0	0.0	3.0
MODOC	5.0	1	8	7.0	4.8	0.9	2.5	1.4	0.0	0.0	0.0	5.0	20.0	2.3
NORDONNA	4.5	2	8	6.3	5.6	0.6	4.3	0.0	0.7	0.0	0.0	15.0	10.0	1.0
NY136	7.5	3	8	7.5	5.7	0.4	4.2	0.4	0.7	0.0	0.0	0.0	0.0	1.3
NY142	4.0	1	8	6.5	7.9	0.0	0.8	7.0	0.0	0.0	0.0	0.0	0.0	0.0
NY144	8.0	2	8	7.5	21.2	1.4	17.7	2.1	0.0	0.0	0.0	0.0	0.0	0.5
PETER WILCOX	6.0	3	8	5.5	3.8	0.8	2.2	0.5	0.3	5.0	0.0	0.0	0.0	3.0
RED LA SODA *	8.0	3	8	4.0	14.0	0.0	7.1	6.9	0.0	0.0	0.0	40.0	0.0	3.0
SNOG	7.0	3	6	4.0	16.6	0.0	15.3	1.3	0.0	0.0	0.0	5.0	0.0	2.0
TROLL	8.5	2	6	4.0	15.3	2.0	11.6	1.7	0.0	5.0	0.0	0.0	0.0	3.0
W2609-1R	5.0	3	8	5.0	5.3	0.3	0.8	2.6	1.6	0.0	0.0	15.0	0.0	1.5
Average:	7	3	8	6	10.4	0.9	6.8	2.2	0.5	0.8	0.0	10.7	1.1	1.8
Maximum:	9	8	9	8	23.0	5.5	23.0	7.8	3.1	15.0	0.0	60.0	20.0	3.5
Minimum:	2	1	6	4	2.1	0.0	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0

[1]See the standard NE1031 rating system for a key to these rating scales in the appendix in the rear of this report.

[2]Based on a 10-tuber sample from each replication. The tubers were taken from the size 3 and 4 categories.

Upstate New York Table 14. Total yield, marketable yield, percentage of yield by grade size distribution, mean tuber number per foot and weight, and specific gravity for the advanced Cornell "E" and "F" clone trial grown at Freeville, New York - 2010.

Genotype	Total	Mkt. Yield		Size Distribution[1]					Size Distrib. (%)				
Variety	Yield		% of	(% of total yield)					1-7/8"	2-1/2"	Mean Tuber		Spec.
or Clone	Cwt/A	Cwt/A	Std.	1	2	3	4	5	to 4"	to 4 "	#/ft.	wt.(oz.)	Grav.
ATLANTIC	362	332	100	3	46	49	2	0	97	51	7.5	5.0	93
E39-3	256	223	67	9	67	24	0	0	91	24	6.9	3.8	60
E43-10	454	362	109	16	66	18	0	0	84	18	14.6	3.3	66
E50-8	308	253	76	7	36	47	8	1	91	55	6.3	5.1	90
E50-9	146	122	37	12	72	15	1	0	88	16	4.3	3.5	79
E105-16	385	344	104	6	51	42	1	0	94	43	9.4	4.3	77
E106-4	423	390	118	4	44	48	3	0	96	52	8.7	5.1	91
E107-1	294	241	73	16	76	8	0	0	84	8	9.7	3.1	71
F11-1	332	285	86	12	68	20	0	0	88	20	9.3	3.7	78
F29-1	310	249	75	16	73	11	0	0	84	11	9.1	3.5	75
F47-3	290	237	71	11	68	21	0	0	89	21	7.7	3.9	82
F47-5	256	233	70	4	66	30	0	0	96	30	6.4	4.2	83
F48-4	212	187	56	9	71	20	0	0	91	20	6.1	3.7	80
F52-1	224	69	21	66	34	0	0	0	34	0	12.6	1.9	78
F57-3	348	306	92	8	57	34	1	0	92	35	8.7	4.2	80
KATAHDIN	289	217	65	8	43	43	6	0	92	49	6.2	4.8	77
SNOWDEN	391	343	103	6	53	39	2	0	94	41	9.1	4.5	88
SUPERIOR	218	177	53	6	51	41	1	0	94	42	5.0	4.5	75
Average:	305	254	76	12	58	29	1	0	88	30	8.2	4.0	79
Maximum:	454	390	118	66	76	49	8	1	97	55	14.6	5.1	93
Minimum:	146	69	21	3	34	0	0	0	34	0	4.3	1.9	60
Waller-Duncan LSD (k=100)	xx	xx									xx	xx	xx
C.V. (%)	(xx)	(xx)									(xx)	(xx)	(xx)

[1]Tuber size classes: 1 = 1" to 1-7/8", 2 = 1-7/8" to 2-1/2", 3 = 2-1/2" to 3-1/4", 4 = 3-1/4" to 4", and 5 = over 4" dia.

Plant Date: May 7 Maturity Ratings: Aug 20 Vinekill Date: Sep 15 Harvest Date: Oct 13

Upstate New York Table 15. Plant maturity, tuber shape and appearance, percentage of external and internal tuber defects, and scab rating for the advanced Cornell "E" and "F" clone trial grown at Freeville, New York - 2010.

Genotype	Plant[1]	Tuber Attributes[1]			External Tuber Defects (%)					Int. Tuber Defects (%)[2]				Scab
Variety or Clone	Mat. At Vinekill	Tuber Shape	Skin Text.	Tuber Appear.	Total Defects	Sun-Green	Mis-shapen	Growth Cracks	Rot	Holl. Heart	Brn. Center	Vasc. Disc.	Int. Nec.	Rating
ATLANTIC	5.3	1	6	5.4	5.2	1.1	0.9	3.2	0.0	5.0	0.0	15.0	0.0	1.4
E39-3	2.3	1	8	6.5	3.5	0.7	2.6	0.1	0.1	0.0	0.0	0.0	0.0	0.3
E43-10	5.3	1	8	6.0	3.5	1.6	1.3	0.3	0.3	2.5	0.0	17.5	0.0	0.5
E50-8	7.5	2	8	5.4	8.8	3.7	1.2	3.8	0.2	5.0	0.0	7.5	0.0	2.1
E50-9	1.5	1	8	6.5	4.3	1.3	2.5	0.3	0.2	0.0	0.0	7.5	0.0	1.0
E105-16	7.5	1	6	6.0	4.1	3.3	0.4	0.4	0.0	0.0	0.0	10.0	0.0	0.9
E106-4	7.8	1	6	5.0	3.6	1.7	1.1	0.6	0.2	0.0	0.0	0.0	0.0	1.0
E107-1	5.3	1	8	7.6	2.5	0.3	2.0	0.1	0.1	0.0	0.0	7.5	0.0	0.3
F11-1	4.8	1	6	7.3	2.7	0.2	2.0	0.3	0.2	0.0	0.0	10.0	0.0	1.8
F29-1	2.0	1	6	6.0	4.1	0.3	2.7	1.1	0.0	7.5	0.0	2.5	0.0	0.6
F47-3	4.3	1	6	4.4	7.5	3.4	3.6	0.3	0.1	22.5	0.0	2.5	0.0	1.0
F47-5	5.0	2	6	4.5	4.3	0.4	3.0	0.3	0.5	0.0	0.0	0.0	0.0	1.0
F48-4	2.8	2	8	6.6	2.8	0.8	1.7	0.3	0.0	0.0	0.0	10.0	0.0	0.0
F52-1	2.3	1	8	6.8	3.1	0.1	2.7	0.3	0.1	0.0	0.0	7.5	0.0	0.4
F57-3	4.5	2	6	4.6	4.4	1.1	2.8	0.1	0.4	0.0	0.0	25.0	0.0	1.4
KATAHDIN	7.3	3	8	5.1	18.2	11.1	5.6	1.6	0.0	5.0	0.0	17.5	0.0	2.5
SNOWDEN	7.0	1	6	4.5	6.5	3.0	1.7	1.8	0.0	5.0	0.0	12.5	0.0	1.9
SUPERIOR	1.5	1	6	4.3	12.9	0.6	7.5	4.2	0.7	2.5	0.0	7.5	5.0	0.8
Average:	5	1	7	6	5.7	1.9	2.5	1.1	0.2	3.1	0.0	8.9	0.3	1.0
Maximum:	8	3	8	8	18.2	11.1	7.5	4.2	0.7	22.5	0.0	25.0	5.0	2.5
Minimum:	2	1	6	4	2.5	0.1	0.4	0.1	0.0	0.0	0.0	0.0	0.0	0.0

[1]See the standard NE1031 rating system for a key to these rating scales in the appendix in the rear of this report.
[2]Based on a 10-tuber sample from each replication. The tubers were taken from the size 3 and 4 categories.

Upstate New York Table 16. Total yield, marketable yield, percentage of yield by grade size distribution, mean tuber number per foot and weight, and specific gravity for the advanced Cornell "G" clone trial grown at Freeville, New York - 2010.

Genotype	Total	Mkt. Yield		Size Distribution[1]					Size Distrib. (%)				
Variety	Yield		% of	(% of total yield)					1-7/8"	2-1/2"	Mean Tuber		Spec.
or Clone	Cwt/A	Cwt/A	Std.	1	2	3	4	5	to 4"	to 4 "	#/ft.	wt.(oz.)	Grav.
ANDOVER	205	167	57	3	33	58	6	0	97	64	3.7	5.8	82
ATLANTIC	345	296	100	3	40	55	2	0	97	58	6.5	5.5	92
G20-4	108	79	27	14	72	14	0	0	86	14	3.3	3.4	72
G20-5	138	97	33	22	76	2	0	0	78	2	5.0	2.9	70
G20-12	179	154	52	9	71	20	0	0	91	20	5.1	3.6	63
G20-13	171	115	39	28	71	2	0	0	72	2	6.9	2.6	73
G20-30	112	83	28	17	72	11	0	0	83	11	3.7	3.1	74
G20-31	299	260	88	6	55	38	1	0	94	39	6.4	4.9	80
G20-33	214	156	53	18	72	10	0	0	82	10	6.9	3.2	70
G20-41	291	239	81	11	66	23	0	0	89	23	8.2	3.7	84
G20-44	144	101	34	24	72	5	0	0	76	5	5.4	2.8	86
G20-55	260	225	76	2	37	52	8	1	97	60	4.5	6.1	83
G20-56 *	230	184	62	11	33	48	8	0	89	56	5.0	4.7	81
G20-58	222	195	66	6	50	41	3	0	94	44	5.1	4.6	80
G20-63	296	259	87	7	51	42	1	0	93	42	7.1	4.4	79
G27-1	418	345	117	10	59	32	0	0	90	32	11.0	3.9	91
G70-3	267	220	74	9	67	23	1	0	91	24	6.6	4.2	65
G73-1	366	270	91	8	41	46	5	0	92	52	8.1	4.7	59
G77-4	183	112	38	35	65	0	0	0	65	0	7.8	2.5	68
G86-1	288	235	79	11	69	20	0	0	89	20	7.8	3.9	76
G87-3	273	239	81	9	62	28	1	0	91	29	7.1	4.0	86
G89-2	301	230	78	16	69	14	0	0	84	15	8.6	3.6	89
G101-2	309	206	69	16	75	9	0	0	84	9	10.1	3.2	69
KATAHDIN	291	183	62	6	47	40	6	1	94	46	6.2	4.9	77
KEUKA GOLD	349	272	92	3	41	48	7	1	96	55	6.5	5.6	77
MARCY	364	315	106	3	42	51	5	0	97	56	6.8	5.6	85
SNOWDEN	429	360	122	8	57	34	1	0	92	35	10.8	4.1	86
SUPERIOR	177	131	44	11	54	35	1	0	89	35	4.4	4.2	70
Average:	258	205	69	12	58	29	2	0	88	31	6.6	4.1	77
Maximum:	429	360	122	35	76	58	8	1	97	64	11.0	6.1	92
Minimum:	108	79	27	2	33	0	0	0	65	0	3.3	2.5	59

[1]Tuber size classes: 1 = 1" to 1-7/8", 2 = 1-7/8" to 2-1/2", 3 = 2-1/2" to 3-1/4", 4 = 3-1/4" to 4", and 5 = over 4" dia.

Plant Date: May 10 Maturity Ratings: Aug 20 Vinekill Date: Sep 15 Harvest Date: Oct 12

* Note: all entries were in 4 replications except G20-56 which was in two replications.

Upstate New York Table 17. Plant maturity, tuber shape and appearance, percentage of external and internal tuber defects, and scab rating for the advanced Cornell "G" clone trial grown at Freeville, New York - 2010.

Genotype	Plant[1]	Tuber Attributes[1]			External Tuber Defects (%)					Int. Tuber Defects (%)[2]				Scab
Variety or Clone	Mat. At Vinekill	Tuber Shape	Skin Text.	Tuber Appear.	Total Defects	Sun-Green	Mis-shapen	Growth Cracks	Rot	Holl. Heart	Brn. Center	Vasc. Disc.	Int. Nec.	Rating
ANDOVER	3.8	3	6	5.5	14.8	0.8	4.5	9.1	0.4	10.0	0.0	2.5	2.5	3.0
ATLANTIC	5.5	2	6	4.5	11.3	1.4	5.8	4.0	0.1	7.5	0.0	10.0	5.0	1.8
G20-4	2.0	3	8	4.8	12.3	0.3	8.4	2.5	1.0	2.5	0.0	0.0	0.0	2.9
G20-5	3.8	2	6	4.0	7.6	0.2	5.4	2.0	0.0	0.0	0.0	7.5	0.0	2.6
G20-12	2.0	3	6	5.8	5.0	0.4	3.9	0.4	0.2	2.5	0.0	5.0	0.0	2.0
G20-13	3.0	1	6	5.3	5.4	0.5	4.9	0.0	0.0	0.0	0.0	2.5	0.0	0.8
G20-30	1.8	2	8	6.3	8.9	1.6	6.7	0.6	0.0	12.5	0.0	2.5	0.0	1.9
G20-31	7.5	3	6	5.5	7.4	1.0	3.8	2.1	0.5	0.0	0.0	10.0	0.0	2.0
G20-33	3.5	3	8	4.4	8.7	1.2	7.0	0.1	0.5	0.0	0.0	0.0	0.0	0.4
G20-41	7.3	3	6	4.5	7.0	1.5	3.6	1.7	0.2	0.0	0.0	7.5	0.0	2.0
G20-44	2.3	1	6	4.3	6.3	0.4	4.3	1.1	0.5	0.0	0.0	2.5	0.0	1.6
G20-55	5.8	3	8	4.6	10.4	0.6	5.0	4.0	0.8	10.0	0.0	5.0	0.0	2.0
G20-56 *	6.5	1	8	3.5	9.7	3.7	4.6	1.5	0.0	0.0	10.0	0.0	5.0	2.5
G20-58	6.5	3	7	4.6	6.8	2.8	1.7	1.7	0.6	2.5	0.0	5.0	2.5	2.0
G20-63	5.8	1	8	7.0	5.4	1.5	3.3	0.5	0.1	5.0	0.0	17.5	0.0	2.1
G27-1	7.5	1	6	6.0	7.7	4.0	2.0	1.5	0.2	2.5	0.0	2.5	5.0	2.5
G70-3	3.3	3	8	6.5	9.7	0.3	9.4	0.0	0.0	0.0	0.0	37.5	0.0	1.9
G73-1	4.3	1	8	6.5	18.3	8.0	1.9	7.5	0.9	2.5	0.0	15.0	0.0	2.0
G77-4	2.0	1	9	6.5	3.9	0.0	3.4	0.5	0.0	0.0	0.0	7.5	0.0	0.8
G86-1	6.8	3	8	6.3	7.6	2.6	2.9	1.9	0.1	47.5	0.0	0.0	2.5	2.0
G87-3	4.8	1	6	6.3	3.6	1.4	1.2	0.7	0.3	5.0	0.0	10.0	0.0	2.0
G89-2	6.5	3	8	6.0	8.2	5.1	2.8	0.3	0.1	7.5	0.0	12.5	0.0	2.0
G101-2	4.5	3	8	4.3	17.8	3.0	9.4	4.6	0.8	0.0	0.0	45.0	2.5	2.9
KATAHDIN	8.0	3	8	4.0	30.8	17.0	8.2	5.3	0.3	32.5	0.0	17.5	0.0	3.3
KEUKA GOLD	7.3	3	6	4.0	17.7	2.2	3.6	11.9	0.0	2.5	0.0	15.0	0.0	3.5
MARCY	7.8	3	6	4.8	10.8	4.8	4.4	1.4	0.2	20.0	0.0	2.5	0.0	2.5
SNOWDEN	6.8	1	6	4.0	8.3	2.5	2.9	2.7	0.2	7.5	0.0	25.0	0.0	3.0
SUPERIOR	1.8	1	6	3.5	15.1	0.5	8.9	4.4	1.3	0.0	2.5	10.0	2.5	1.0
Average:	5	2	7	5	10.2	2.5	4.8	2.6	0.3	6.4	0.4	9.9	1.0	2.1
Maximum:	8	3	9	7	30.8	17.0	9.4	11.9	1.3	47.5	10.0	45.0	5.0	3.5
Minimum:	2	1	6	4	3.6	0.0	1.2	0.0	0.0	0.0	0.0	0.0	0.0	0.4

[1]See the standard NE1031 rating system for a key to these rating scales in the appendix in the rear of this report.

[2]Based on a 10-tuber sample from each replication. The tubers were taken from the size 3 and 4 categories.

Upstate New York Table 27. Yield, marketable yield, percentage of yield by grade size distribution, mean tuber number per foot and weight, percentage of defects, and specific gravity for Steuben County chipping variety trial grown near Arkport, New York - 2010.

Variety or Clone	Total Yield	Mkt. Yield		Size Distribution[1] (% of total yield)				Mean Tuber		Percent External Tuber Defects				Percent Internal Tuber Defects				Spec.
	Cwt/A	Cwt/A	% of Std.	1	2	3	4	#/ft	wt(oz)	SUN	KNB	GC	ROT	HH	BC	VD	NEC	Grav.
ATLANTIC	375	318	100	9	74	16	1	8.6	4.8	2	0	3	0	10	5	0	0	82
E50-8	299	252	79	8	69	22	1	7.1	4.6	5	1	1	0	0	0	30	0	82
E106-4	327	278	87	13	81	5	0	9.8	3.7	1	1	0	0	0	0	5	5	80
F47-3 *	309	240	76	19	76	5	0	9.5	3.6	2	2	0	0	0	0	40	0	84
F47-5 *	295	268	84	7	84	10	0	6.9	4.7	1	1	0	0	0	0	20	0	76
F48-4	310	255	80	15	82	3	0	9.2	3.7	1	1	0	0	0	0	5	0	76
F57-3	230	181	57	12	69	19	0	5.7	4.5	3	3	3	0	0	0	50	0	74
MARCY	363	318	100	6	60	35	0	6.9	5.8	6	0	0	0	5	0	30	0	77
NY138	390	334	105	7	68	24	1	8.6	5.0	5	1	0	0	0	0	5	0	76
NY139	336	287	90	11	82	6	0	9.7	3.8	1	1	1	0	0	0	20	0	79
NY140	382	331	104	9	75	15	1	9.1	4.7	2	1	0	0	0	0	20	0	71
NY145	288	178	56	34	66	0	0	12.5	2.6	2	1	0	0	0	0	0	0	78
SNOWDEN	350	306	96	9	73	18	1	8.8	4.4	3	0	0	0	20	0	20	0	80
Average:	327	273	86	12	74	14	0	8.6	4.3	3	1	1	0	3	0	19	0	78
Maximum:	390	334	105	34	84	35	1	12.5	5.8	6	3	3	0	20	5	50	5	84
Minimum:	230	178	56	6	60	0	0	5.7	2.6	1	0	0	0	0	0	0	0	71

[1]Tuber size classes: 1 = under 2" dia., 2 = 2" to 3" dia., 3 = 3" to 4" dia., and 4 = over 4" dia.

Plant Date: June 4 Vinekill Date: September 15 and 20 Harvest Date: October 20

Fertilizer: 128 N-256 P-128 K- 8 B - 4 Zn lbs/a Vinekill: 1.0 pt Diquat/acre Irrigation: ???

Other: 2.5 pt Vydate CLV and 7.0 oz Quadris/acre in furrow Spacing: 36 inch bed width by 8.0 inch within row seed spacing

* Note: This trial had two replications, except there was only one plot each of F47-3 and F47-5.

Upstate New York Table 28. Yield, marketable yield, percentage of yield by grade size distribution, mean tuber number per foot and weight, percentage of defects, and specific gravity for Wyoming County chipping variety trial grown near North Java, New York - 2010.

Variety or Clone	Total Yield	Mkt. Yield		Size Distribution[1] (% of total yield)				Mean Tuber		Percent External Tuber Defects				Percent Internal Tuber Defects				Spec.
	Cwt/A	Cwt/A	% of Std.	1	2	3	4	#/ft	wt(oz)	SUN	KNB	GC	ROT	HH	BC	VD	NEC	Grav.
ATLANTIC	497	453	100	8	80	12	0	11.4	4.5	0	0	0	0	5	0	5	0	97
E50-8	298	261	58	6	80	14	0	6.5	4.8	2	0	0	5	5	0	15	0	95
E106-4	372	333	74	7	71	19	2	8.4	4.8	2	0	0	0	0	0	0	0	95
F47-3 *	350	297	66	12	85	3	0	10.1	3.6	2	1	0	0	40	0	10	0	89
F47-5 *	359	312	69	12	83	5	0	9.3	4.0	1	1	0	0	0	0	20	0	86
F48-4	330	280	62	9	75	16	1	7.9	4.4	4	1	0	0	5	0	5	0	86
F57-3	344	306	68	10	82	8	0	8.5	4.3	0	0	0	0	0	0	20	0	86
MARCY	497	460	102	5	71	23	2	9.7	5.3	1	0	0	0	15	0	5	0	81
NY138	474	446	98	5	79	16	0	9.6	5.2	0	0	0	0	0	0	30	0	81
NY139	349	321	71	8	83	9	0	7.8	4.6	0	0	0	0	0	25	10	0	90
NY140	498	453	100	7	71	21	1	9.9	5.2	1	0	0	0	10	0	10	0	83
NY145	256	195	43	24	76	0	0	9.1	2.9	1	0	0	0	0	0	5	0	88
SNOWDEN	415	380	84	7	77	15	0	10.2	4.3	1	0	0	0	5	0	50	0	91
Average:	388	346	76	9	78	12	0	9.1	4.5	1	0	0	0	7	2	14	0	88
Maximum:	498	460	102	24	85	23	2	11.4	5.3	4	1	0	5	40	25	50	0	97
Minimum:	256	195	43	5	71	0	0	6.5	2.9	0	0	0	0	0	0	0	0	81

[1]Tuber size classes: 1 = under 2" dia., 2 = 2" to 3" dia., 3 = 3" to 4" dia., and 4 = over 4" dia.

Plant Date: May 10 Vinekill Date: September 3 and September 10 Harvest Date: September 20

Fertilizer: 114-172-114-36 Mg-77 S-0.72 B at planting plus 99 N at sidedress Vinekill: 1.5 and 1.5 pt Diquat/acre Irrigation: 3.5" total

Spacing: 34 inch bed width by 8.0 inch within row seed spacing

* Note: This trial had two replications, except there was only one plot each of F47-3 and F47-5.

Data from Riverhead, Long Island Trials
Sandra Menasha and Joe Sieczka

Long Island Table 2. Yield, marketable yield, percentage of yield by grade, size distribution, and specific gravity of Adv
Cornell white-skinned clones grown at Riverhead, N.Y. - 2010.

	Total	Marketable Yield		Size Distribution (%)					Size Distribution		
	Yield		percentage		2 to	2.5 to	3.25 to		2 to	2.5 to	Specific[1]
Clone	cwt/A	cwt/A	of standard	<2"	2.5"	3.25"	4"	>4"	4 in.	4 in.	Gravity
Season-139 days											
Reba	286	265	100	4	28	60	7	0	96	67	64
Andover	319	294	111	6	42	50	2	0	94	52	74
Marcy	427	407	154	3	21	65	10	0	97	76	67
Norwis	349	323	122	2	14	55	28	1	96	82	61
Salem	400	374	141	4	21	59	16	0	96	75	<59
Waneta	324	308	116	4	20	64	12	0	96	76	69
Lamoka	371	342	129	5	30	61	4	0	95	65	70
NY 140	395	368	139	5	33	55	8	0	95	62	65
NY 141	343	312	118	4	32	56	8	0	96	64	67
NY 143	372	336	127	7	38	45	9	0	93	55	62
NY 146	370	350	132	3	22	60	15	0	97	75	68
NY 147	363	335	127	3	27	60	10	0	97	69	62
Fisher's Protected											
LSD (0.05)	*(70)*	*(69)*									*(3)*

Planted on 4/13/10, fertilizer rate was 100-200-200/A plus 60 lb N/A sidedressed, vine killed on 8/30/10, harvested on 9

[1] -1.0 is excluded from specific gravity readings.

Long Island Table 3. Maturity, tuber shape, and internal and external defects of Advanced Cornell white-skinned clone
at Riverhead, N.Y. - 2010.

	Maturity[1]	Tuber Data[1]		Tuber Defects (%)					Percentage				
	on		Appear-		Sun-	Mis-	Growth		Hollow	Brown	Internal Necrosis		
Clone	8/12/2010	Shape	ance	Total	burn	shapen	cracks	Other[2]	heart	center	Sl.	Mod.	Sev.
Season-139 days													
Reba	1	R-O	7	3	0	2	0	1	3	3	8	0	0
Andover	1	R-O	7	2	0	2	0	0	0	0	3	0	0
Marcy	2	O-R	6	2	1	1	0	0	0	0	3	3	0
Norwis	3	R-O	6	3	1	1	0	1	5	0	15	0	0
Salem	2	O-R	7	3	0	1	1	1	0	0	10	0	0
Waneta	2	R	7	1	0	1	0	0	0	0	15	0	0
Lamoka	2	R-O	6	2	0	2	0	0	0	0	8	0	0
NY 140	2	R-O	7	1	0	1	0	0	0	0	10	0	0
NY 141	2	O-R	7	5	0	4	0	1	0	0	5	0	0
NY 143	3	O-R	7	3	1	2	0	0	0	3	0	0	0
NY 146	2	R-O	7	2	0	1	0	1	3	0	3	0	0
NY 147	2	R-O	7	4	0	4	0	0	0	0	8	0	0

[1] -See rating system outlined in the text.

[2] -Other includes defects such as rhizoctonia, prominent lenticels, pink eye, decay and other defects scorable against a U
grade. Mechanical defects, however, were not scored.

Long Island Table 4. Yield, marketable yield, percentage of yield by grade, size distribution and specific gravity of Corne
Maine intermediate white-skinned clones grown at Riverhead, N.Y. - 2010.

	Total	Marketable Yield		Size Distribution (%)					Size Distribution		
	Yield		percentage		2 to	2.5 to	3.25 to		2 to	2.5 to	Specific[1]
Clone	cwt/A	cwt/A	of standard	<2"	2.5"	3.25"	4"	>4"	4 in.	4 in.	Gravity
Season-139 days											
Reba	459	438	100	4	25	62	10	0	96	71	69
AF2866-3	420	393	90	4	26	67	3	0	96	70	61
AF4014-9	362	310	71	13	59	28	0	0	87	28	68
AF4122-3	318	280	64	7	42	47	4	0	93	50	63
AF2873-1	315	289	66	5	34	59	2	0	95	61	61
AF3326-7	435	384	88	7	37	53	3	0	93	56	67
AF4058-1	447	401	92	5	29	57	8	0	95	66	72
AF2865-4	486	448	102	2	20	59	18	1	97	77	62
AF4134-2	429	394	90	6	37	56	1	0	94	56	68
E39-3	445	394	90	9	45	44	1	0	91	45	60
E43-10	510	455	104	9	46	44	1	0	91	45	59
E50-9	368	329	75	8	40	50	3	0	92	52	75
E106-4	478	431	98	9	42	48	0	0	91	48	76
Fisher's Protected											
LSD (0.05)	*(55)*	*(59)*									*(3)*

Planted on 4/13/10, fertilizer rate was 100-200-200/A plus 60 lb N/A sidedressed, vine killed on 8/30/10, harvested on 10

[1] -1.0 is excluded from specific gravity readings.

Long Island Table 5. Maturity, tuber shape, and internal and external defects of Cornell and Maine intermediate white-s
clones grown at Riverhead, N.Y. - 2010.

	Maturity[1]	Tuber Data[1]		Tuber Defects (%)					Percentage				
	on		Appear-		Sun-	Mis-	Growth		Hollow	Brown	Internal Necrosis		
Clone	8/12/2010	Shape	ance	Total	burn	shaper	cracks	Other[2]	heart	center	Sl.	Mod.	Sev.
Season-139 days													
Reba	2	R-O	7	1	0	0	0	0	0	0	0	5	0
AF2866-3	1	O-R	7	2	1	1	0	0	0	0	0	0	0
AF4014-9	1	R-O	7	1	0	1	0	0	0	0	0	0	0
AF4122-3	2	O-R	5	5	0	1	3	0	3	0	0	23	3
AF2873-1	1	R-O	5	3	1	2	0	1	0	0	3	0	0
AF3326-7	1	O-L	6	5	0	4	0	1	0	0	23	0	0
AF4058-1	4	O-R	7	5	1	3	0	1	0	0	20	20	0
AF2865-4	3	R	5	5	2	1	1	1	0	0	0	0	0
AF4134-2	1	R-O	6	2	0	1	0	1	0	0	0	0	0
E39-3	1	R	7	2	0	1	0	1	0	0	0	0	0
E43-10	1	R-O	6	2	1	0	0	1	0	0	0	0	0
E50-9	1	O-R	7	3	1	1	0	1	0	0	5	0	0
E106-4	2	R	6	1	0	0	0	0	0	0	8	3	0

[1] -See rating system outlined in the text.

[2] -Other includes defects such as rhizoctonia, prominent lenticels, pink eye, decay and other defects scorable against a U
grade, primary defects listed in (). Mechanical defects, however, were not scored.

Long Island Table 6. Yield, marketable yield, percentage of yield by grade, size distribution and specific gravity of NE 103 white-skinned clones grown at Riverhead, N.Y. - 2010.

	Total	Marketable Yield		Size Distribution (%)					Size Distribution		
	Yield		percentage		2 to	2.5 to	3.25 to		2 to	2.5 to	Specific[1]
Clone	cwt/A	cwt/A	of standard	<2"	2.5"	3.25"	4"	>4"	4 in.	4 in.	Gravity
Season-139 days											
Atlantic	492	465	100	3	24	64	8	0	97	73	80
Katahdin	406	375	81	6	37	53	4	0	94	57	62
Superior	351	325	70	7	47	46	1	0	93	47	70
Yukon Gold	410	380	82	3	18	66	13	0	97	78	71
AF2865-4	542	496	107	4	21	62	13	0	96	75	63
AF3001-6	474	375	81	6	57	38	0	0	94	38	69
AF0038-17	515	483	104	5	27	68	0	0	95	69	75
B1992-106	432	403	87	6	36	56	3	0	94	58	79
NYB38-40	512	463	100	6	33	56	5	0	94	60	63
NY145	392	318	68	18	66	16	0	0	82	16	76
Fisher's Protected											
LSD (0.05)	*(52)*	*(53)*									*(3)*

Planted on 4/13/10, fertilizer rate was 100-200-200/A plus 60 lb N/A sidedressed, vine killed on 8/30/10, harvested on 10

[1] -1.0 is excluded from specific gravity readings.

Long Island Table 7. Maturity, tuber shape, and internal and external defects of NE 1031 white-skinned clones grown at Riverhead, N.Y. - 2009.

	Maturity[1]	Tuber Data[1]		Tuber Defects (%)					Percentage				
	on		Appear-		Sun-	Mis-	Growth		Hollow	Brown	Internal Necrosis		
Clone	8/12/2010	Shape	ance	Total	burn	shapen	cracks	Other[2]	heart	center	Sl.	Mod.	Sev.
Season-139 days													
Atlantic	2	R-O	6	2	0	1	0	1	3	0	10	40	0
Katahdin	2	R-O	6	2	1	0	0	0	0	0	5	0	0
Superior	1	R-O	6	1	0	1	0	0	3	0	0	0	0
Yukon Gold	1	O-R	6	4	0	1	1	2	3	3	0	5	0
AF2865-4	3	R-O	6	5	1	1	1	1	0	0	0	0	0
AF3001-6	4	O-L	5	16	0	12	1	3	0	0	0	0	0
AF0038-17	2	R-O	7	2	0	1	0	0	0	0	3	0	0
B1992-106	2	O-R	7	1	0	0	0	0	3	0	0	0	0
NYB38-40	2	O-R	7	4	1	1	1	0	0	0	0	0	0
NY145	1	R	6	1	0	0	0	0	0	0	0	0	0

[1] -See rating system outlined in the text.

[2] -Other includes defects such as rhizoctonia, prominent lenticels, pink eye, decay and other defects scorable against a U grade. Mechanical defects, however, were not scored.

Long Island Table 10. Yield, marketable yield, percentage of yield by grade, size distribution and specific gravity of earl white-skinned varieties grown at Riverhead, N.Y. - 2010.

	Total	Marketable Yield		Size Distribution (%)					Size Distribution		
	Yield		percentage		2 to	2.5 to	3.25 to		2 to	2.5 to	Specific[1]
Clone	cwt/A	cwt/A	of standard	<2"	2.5"	3.25"	4"	>4"	4 in.	4 in.	Gravity
Season-110 days											
Andover	333	316	100	4	34	58	4	0	96	61	76
Eramosa	271	246	78	6	33	55	7	0	94	62	66
Superior	294	269	85	6	39	53	2	0	94	55	74
Fisher's Protected											
LSD (0.05)	*(50)*	*(46)*									*(2)*
[2]NY 79	317	301	95	1	13	68	18	0	99	86	67

Planted on 4/13/10, fertilizer rate was 100-200-200/A plus 60 lb N/A sidedressed, vine killed on 8/1/10, harvested on 8/

[1]-1.0 is excluded from specific gravity readings.

[2]NY 79 was replicated only two times in the experiment and was therefore not included in the statistical analysis

Long Island Table 11. Maturity, tuber shape, and internal and external defects of early-season white-skinned varieties grown at Riverhead, N.Y. - 2010.

	Maturity[1]	Tuber Data[1]		Tuber Defects (%)					Percentage				
	on		Appear-		Sun-	Mis-	Growth		Hollow	Brown	Internal Necrosis		
Clone	7/29/2010	Shape	ance	Total	burn	shapen	cracks	Other[2]	heart	center	Sl.	Mod.	Sev.
Season-110 days													
Andover	2	O-R	7	1	0	0	1	0	0	0	3	0	0
Eramosa	1	R-O	6	3	0	1	0	2	0	0	25	0	0
Superior	1	O-R	6	3	0	2	1	0	3	0	8	0	0
NY 79	2	R-O	8	4	0	0	0	4	0	0	0	0	0

[1]-See rating system outlined in the text.

[2] -Other includes defects such as rhizoctonia, prominent lenticels, pink eye, decay and other defects scorable against a U grade. Mechanical defects, however, were not scored.

Long Island Table 12. Yield, marketable yield, percentage of yield by grade, size distribution and specific gravity of yellow-fleshed varieties grown at Riverhead, N.Y. – 20

	Total	Marketable Yield		Size Distribution (%)					Size Distribution		
	Yield		percentage		2 to	2.5 to	3.25 to		2 to	2.5 to	Specific[1]
Clone	cwt/A	cwt/A	of standard	<2"	2.5"	3.25"	4"	>4"	4 in.	4 in.	Gravity
Season–139 days											
Yukon Gold	384	359	100	4	23	63	9	0	96	73	74
Albane	422	345	96	11	62	27	0	0	89	27	63
F11–1	369	297	83	17	62	21	0	0	83	21	70
Juliette	168	21	6	85	15	0	0	0	15	0	69
Satina	469	391	109	11	49	39	1	0	89	40	59
Vivaldi	374	320	89	11	55	33	1	0	89	34	60
Fisher's Protected LSD (0.05)	*(59)*	*(52)*									*(4)*
[2] Carola	451	377	105	9	53	37	1	0	91	38	69
[2] Appoline	511	273	76	11	59	30	0	0	89	30	<59

Planted on 4/13/10, fertilizer rate was 100–200–200/A plus 60 lb N/A sidedressed, vine killed on 8/30/10 , and harvested on

[1] –1.0 is excluded from specific gravity readings.

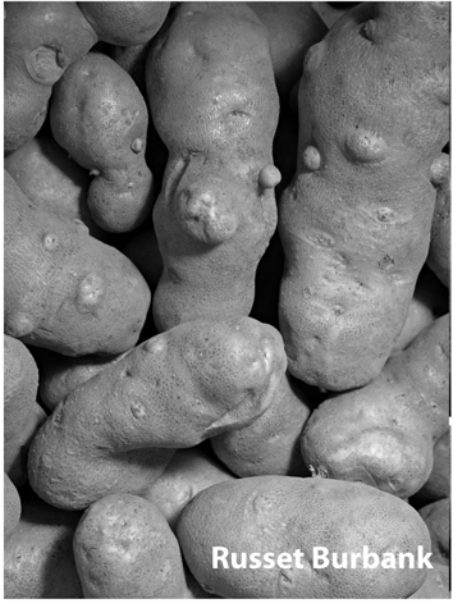
[2] Both varieties were replicated in the experiment but not inlcuded in the statistical analysis.

Long Island Table 13. Maturity, tuber shape, and internal and external defects of yellow–fleshed varieties grown at Riverhead, N.Y. – 2010.

	Maturity[1]	Tuber Data[1]		Tuber Defects (%)					Percentage				
	on		Appear--		Sun-	Mis-	Growth		Hollow	Brown	Internal Necrosi		
Clone	8/12/2010	Shape	ance	Total	burn	shaper	cracks	Other[2]	heart	center	Sl.	Mod.	Sev.
Season–139 days													
Yukon Gold	1	O–R	7	2	0	1	0	1	3	0	10	0	0
Albane	3	O–R	6	8	0	4	3	1	3	0	3	3	0
F11–1	1	R	7	2	0	1	0	1	0	0	3	3	0
Juliette	3	O–L	5	13	0	13	0	0	0	0	3	0	0
Satina	4	R–O	6	6	0	5	0	1	0	0	15	3	0
Vivaldi	1	O–R	7	4	0	4	0	0	0	3	3	0	0
Carola	1	O–R	7	9	1	7	0	1	0	0	0	0	0
Apolline	2	O–R	2	39	0	9	1	29	0	5	3	0	0

[1] –See rating system outlined in the text.

[2] –Other includes defects such as rhizoctonia, prominent lenticels, pink eye, decay and other defects scorable against a U. grade, primary defects listed in (). Mechanical defects, however, were not scored.



Some of the 200-plus potato clones being evaluated by the SolCAP project