



Potato Show & Tell, 6 November 2013

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Description of Advanced Selections From Cornell Breeding Program
Based on Cornell trials in 2013 and prior years
Last updated: 1 November 2013

Waneta (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 eleven years have averaged 90% of Atlantic (29 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, 103% in 2010, 94% in 2011, 103% in 2012, and 77% of Atlantic in 2013. Ten year average: 100%.
- Wayne County (muck soil) yield was 120% of Atlantic in 2006, 81% in 2007, 118% in 2009, 69% in 2011, and 112% of Atlantic in 2012.
- 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), 87% in 2009 (3 trials), 96% in 2010 (3 trials), and 100% of Atlantic in 2011 (2 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, while in 10 SFA trials in 2010 yields averaged 97% 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 (49 trials). Moderate resistance to common scab. Chip color out of 44F has been very good to date: visual chip scores over the past nine years averaged 3.0 compared to 3.6 for Snowden (lower is better). In fifteen SFA trials Agtron scores for NY138 averaged 65, compared to 63 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; seven 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.

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

- Marketable yields in Tompkins County over the past eleven years have averaged 93% of Atlantic (28 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, 80% in 2010, 91% in 2011, 97% in 2012, and 77% of Atlantic in 2013. Nine year average: 93%.
- 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), 87% in 2009 (3 trials), 125% in 2010 (3 trials), and 85% of Atlantic in 2011 (2 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. Yields in 10 SFA trials in 2010 averaged 93% of Snowden.

A low frequency of pickouts due to misshapes and growth cracks. Few standard internal defects have been observed. In Ithaca, but not yet elsewhere, we have observed small spots of translucent tissue inside tubers. Several growers have observed low levels of black heart, a disorder that results from insufficient oxygen in the center of the tuber. Specific gravity has been very good, averaging 0.004 less than Atlantic (47 trials). Chip color out of 44F has been excellent, averaging 2.9 over the past nine years, compared to 3.6 for Snowden (lower is better). In fifteen SFA trials from 2008 to 2010, Agron scores averaged 64 for NY139 compared to 63 for Snowden. Moderate resistance to common scab. Less susceptible to blackspot bruise than Snowden. Tubers darken slightly after boiling. Tuber dormancy is about 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 races Ro1 and Ro2 of the golden nematode.

- Marketable yields in Tompkins County over the past eleven years have averaged 115% of Atlantic (27 trials).
- Yields in Steuben and Wyoming County trials averaged 111% of Atlantic in 2006, 119% in 2007, 117% in 2008, 119% in 2009, 102% in 2010, 106% in 2011, 105% in 2012, and 101% of Atlantic in 2013. Eight year average: 111%.
- Yield in Wayne County was 129% of Atlantic in 2008, 123% in 2009, and 112% of Atlantic in 2012.
- 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, 139% in 2010, 126% in 2011, and 120% of Reba in 2012.
- In PA yields averaged 106% of Atlantic in 2005 (3 trials), 124% in 2007 (4 trials), 119% in 2008 (2 trials), 104% in 2009 (3 trials), 112% in 2010 (3 trials), 107% in 2011 (2 trials), and 129% of Atlantic in 2012 (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 6.2 ounces per tuber (19 trials). Even at 6 inch spacing, tuber size remains large (2009 and 2010 trials). Specific gravity has averaged 0.012 less than Atlantic (37 trials). This will limit the locations where it could be grown for chips. Chip quality has generally been very good: over the past nine years it has averaged 3.5, comparable to Snowden, which also averaged 3.6 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 races Ro1 and **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 eleven years have averaged 99% of Atlantic (30 trials).
- Yield in Wayne County was 107% of Atlantic in 2008, 106% in 2009, 78% in 2011, and 108% of Atlantic in 2012.
- 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, 118% in 2010, 110% in 2011, 102% in 2012, and 109% of Reba in 2013.
- Yield in PA in 2005 was 107% of Atlantic in 2005 (1 trial), 92% in 2007 (4 trials), 79% in 2008 (2 trials), 94% in 2009 (3 trials), 115% in 2010 (3 trials), 91% in 2011 (2 trials), and 97% of Atlantic in 2012 (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 7.0 tubers per foot, with an average weight of 6.1 ounces (14 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 (31 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.

NY148 (E106-4) = NY128 x Marcy (2003). Late season, high gravity chipstock.

- In 14 Tompkins County trials over the past six years, marketable yields averaged 112% of Atlantic.
- In trials in Wyoming and Steuben Counties, yield averaged 112% of Atlantic in 2009, 81% in 2010, 108% in 2011, 90% in 2012, and 90% of Atlantic in 2013. Five year average: 96%
- Yield on Long Island was 98% of Reba in 2010, 106% in 2011, 113% in 2012, and 108% of Reba in 2013.
- Yield in PA was 113% of Atlantic in 2011 (1 trial) and 132% in 2012 (4 trials).

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). Heat necrosis has also been observed on Long Island in 2013 and in small-scale NCPT trials in southern states. Tuber size is similar to Snowden. Scurfy tuber skin. Specific gravity is high and has averaged equal to Atlantic (26 trials). Chip color from 44F storage is reasonable, but not as good as Snowden. 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. In 2010 chip color averaged 3.3 compared to Snowden at 2.5. In 2011 chip color averaged 3.8 versus 3.7 for Snowden. In 2012 chip color averaged 4.3 compared to Snowden at 3.7. Tubers darken slightly after boiling, and slough moderately. Tuber dormancy is comparable to Atlantic. Many white flowers. Has exhibited good resistance to common scab to date. Resistant to potato virus Y. Tests in PA in 2012 uncovered some resistance to both early and late blight as well. Resistant to race Ro1 of the golden nematode.

NY149 (F11-1) = Yukon Gold x Keuka Gold (2004). Mid-late season yellow-fleshed tablestock, with slightly-textured skin and pink eyes.

{This clone will resume testing in several years, as soon as we have virus-free seed again}.

NY150 (F52-1) = NY121 x Jacqueline Lee (2004). Niche-market, early season tablestock. Produces many small tubers with bright white skin.

- In eleven Tompkins County trials over the past five years, yields of tubers between 1 and 1.875 inches averaged 174 cwt/acre, while yields of tubers between 1.875 and 2.5 inches in diameter averaged 146 cwt. acre. In the same trials yield of tubers greater than 2.5 inches averaged only 13 cwt/acre. For comparison, marketable yield of Atlantic (>1.875 inches) in the same trials averaged 390 cwt/acre.

Few pickouts (mostly misshapes) or internal defects have been observed. Specific gravity has averaged 0.010 less than Atlantic (9 trials). Tubers do not darken or slough appreciably after boiling, and retain attractive appearance after long term storage. Tuber dormancy is about 2 weeks longer than Atlantic. Intermediate reaction to common scab. Resistant to potato virus Y. Exhibited some resistance to late blight in PA in 2012. Resistant to race Ro1 of the golden nematode.

NY151 (G73-1) = NY121 x Salem (2005). Late season, white tablestock with relatively smooth skin.

- In seven Tompkins County trials over the past four years, marketable yields averaged 105% of Atlantic.
- Yield on Long Island was 116% of Reba in 2011 and 118% of Reba in 2012.
- Yield in PA was 117% of Atlantic in 2011 (1 trial) and 114% of Atlantic in 2012 (3 trials).

Low levels of pickouts (mostly growth cracks) or internal defects (brown center) have been observed. Specific gravity is low and has averaged 0.023 less than Atlantic (7 trials). Moderate resistance to common scab. Tubers do not darken or slough appreciably after boiling. Tuber dormancy is comparable to Atlantic. Resistant to race Ro1 of the golden nematode.

NY152 (H15-5) = B38-14 x Marcy (2006). Late season chipstock.

- In five Tompkins County trials over the past three years, marketable yields averaged 101% of Atlantic.
- Yield in PA was 106% of Atlantic in 2011 (1 trial).
- In trials in Wyoming and Steuben Counties, yield averaged 97% of Atlantic in 2012.

Low levels of pickouts (growth cracks) or internal defects (hollow heart) have been observed. Specific gravity has averaged 0.008 less than Atlantic (6 trials). Chip color from 44F storage in

December, January and February (2011 crop season) averaged 3.0 compared to 4.0 for Snowden (lower is better). Chip color in 2012 averaged 3.3 versus 3.7 for Snowden. Moderate to good resistance to common scab. Tuber dormancy is about 5 weeks longer than Atlantic. Susceptible to race Ro1 of the golden nematode.

NY153 (H25-4) = Waneta x Pike (2006). Late season chipstock, high specific gravity, promising chip color.

- In five Tompkins County trials over the past three years, marketable yields averaged 97% of Atlantic.
- Yield in PA was 71% of Atlantic in 2011 (1 trial).
- In trials in Wyoming and Steuben Counties, yield averaged 94% of Atlantic in 2012.

Low levels of pickouts (growth cracks and knobs) have been observed. The frequency of hollow heart to date is nevertheless of concern, e.g. 23% in one trial in 2013. Specific gravity has averaged 0.002 less than Atlantic (6 trials). Chip color from 44F storage in December, January and February (2011 crop season) averaged 2.0 compared to 4.0 for Snowden (lower is better). Chip color in 2012 averaged 2.7 versus 3.7 for Snowden. Moderate resistance to common scab. Tuber dormancy is about 6 weeks longer than Atlantic. Resistant to race Ro1 of the golden nematode.

H15-17 = B38-14 x Marcy (2006). Late season chipstock, promising chip color.

- In four Tompkins County trials over the past three years, marketable yields averaged 118% of Atlantic.
- Yield in PA was 91% of Atlantic in 2011 (1 trial).
- In trials in Wyoming and Steuben Counties, yield averaged 122% of Atlantic in 2012.

Low levels of pickouts (knobs) or internal defects (hollow heart) have been observed. Specific gravity has averaged 0.008 less than Atlantic (5 trials). Chip color from 44F storage in December, January and February (2011 crop season) averaged 3.3 compared to 4.0 for Snowden (lower is better). In 2012, chip color averaged 3.0 versus 3.7 for Snowden. Moderately resistant to common scab. Tuber dormancy is about 1 week longer than Atlantic. Susceptible to race Ro1 of the golden nematode.

H122-4 = NY136 x Nordonna (2006). Early maturing, pink-skinned tablestock.

- In four Tompkins County trials over the past three years, marketable yields averaged 103% of Chieftain.
- Yield on Long Island was 76% of Chieftain in 2012.
- Yield in PA was 115% of Chieftain in 2011 (2 trials).

Tubers are uniform, large (5.8 ounce average, 3 trials) and have an oblong, flattened shape with shallow eyes and – even though both its parents have deep red skin – **very light pink skin**. Low levels of pickouts (secondary growth) or internal defects (internal necrosis and brown center) have been observed. Moderate resistance to common scab. Tubers do not darken or slough appreciably after boiling. Tuber dormancy is two weeks longer than Atlantic. Unclear reaction to race Ro1 of the golden nematode.

J15-7 = MSK061-4 x Marcy (2007). High yielding, late maturity chipstock.

- In three Tompkins County trials over the past two years, marketable yields averaged 116% of Atlantic.
- In trials in Wyoming and Steuben Counties, yield averaged 98% of Atlantic in 2013.

Low levels of pickouts (growth cracks) or internal defects (internal necrosis) have been observed. Specific gravity has averaged 0.009 less than Atlantic (5 trials). Chip color from 44F storage in December, January and February (2012 crop season) averaged 4.0 compared to 3.7 for Snowden (lower is better). Moderately resistant to common scab. Tuber dormancy is similar to Atlantic. Susceptible to race Ro1 of the golden nematode.

2013 Summary of Yield Trials
 Marketable yield larger than 1 7/8" (including green tubers).
 Performance given as % of check variety.

	Ellis Hollow			Freeville					Steuben Arkport	Wyoming Bliss
	Advanced Trial	Intermed. Trial	Red Trial	CU Trial	Early Trial	Med Trial	Late Trial	Red Trial		
Atlantic	100	100		53	100	100	100		100	100
Snowden	123	117		100		119	105		78	88
Andover	81	81			92					
Lamoka	106	102					98		78	76
Waneta	93	89					88		98	55
Reba	113	112				102	108			
NY140	115						115		101	101
NY141	109				112	102				
NY148	117						114		80	101
NY150 *	79				86					
NY151	109									
NY152 (H15-5)	112						108			
NY153 (H25-4)	101									
H15-17	114									
J2-21		83							85	53
J2-29		86								
J3-14		80							84	69
J5-2		110							72	60
J13-2		91							88	76
J15-7		132							95	102
J17-1		87							55	69
J18-2		102		85						
J21-5		81		93						
J104-3		89								
J105-10		103								
J107-5		79								
J112-2		85								
Chieftain			100						100	
Nordonna			80						102	
Red Maria			96						136	
Adirondack Blue			62						63	
C100-2			54							
H52-1			41							
H73-1			70							
H90-4 *			58							
H122-4			97	78						
K100-3			80						113	

*includes tubers less than 1.875 inches; this clone produces many small tubers

2013 Summary of Specific Gravities

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

	Ellis Hollow		Freeville					County	
	Advanced Trial	Intermed. Trial	CU Trial	Early Trial	Med Trial	Med-late Trial	Late Trial	Steuben Arkport	Wyoming Bliss
Atlantic	1.087	1.086	1.088	1.090	1.085	1.083	1.086	1.098	1.096
Snowden	-2	-2	4		5	1	-1	2	-1
Andover	-14	-10	-10	-12					
Lamoka	-9	-8					1	1	-4
Waneta	-15	-13					-13	-6	-10
Reba	-21	-14	-10		-14		-10		
NY140	-16						-10	-10	-9
NY141	-17			-13	-9				
NY148	1						4	4	2
NY150	-9			-11					
NY151	-27								
NY152 (H15-5)	-10						-8		
NY153 (H25-4)	-6								
H15-17	-8								
J2-21		-3						-6	-2
J2-29		-6							
J3-14		-9						-12	-14
J5-2		-7						-8	-10
J13-2		-12						-14	-11
J15-7		-11						-13	-3
J17-1		-9						7	-3
J18-2		-12	-15						
J21-5		-16	-14						
J104-3		-11							
J105-10		-5							
J107-5		-3							
J112-2		-3							

Results from Cornell Breeding Program Trials

Walter De Jong and Robert Plaisted

2013 Advanced Yield Trial, Ellis Hollow

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

4 Replicates (unless indicated otherwise in parentheses)

Planted April 29, harvested September 19. First vine kill applied August 27

	cwt/acre		%	pickout		% internal defects			appear. score	specific gravity
	>1 7/8"	>2 1/2"	>2 1/2"	cwt/A	type	HHT	IN	BC		
Andover	359	249	69	3	gc	3	0	0	3.8	1.073
Atlantic	443	335	76	29	gc	15	0	3	3.3	1.087
Lamoka	471	339	72	6	gc	0	0	0	3.3	1.078
Reba	501	380	76	6	gc	5	3	0	3.1	1.066
Snowden	544	369	68	5	k	18	0	0	3.1	1.085
Waneta	414	324	78	5	gc	5	3	0	3.6	1.072
NY140	509	420	83	6	k	8	5	0	3.4	1.071
NY141	482	353	73	7	gc	0	0	3	3.5	1.070
NY148	518	339	65	3	k	0	5	0	3.2	1.088
NY150**	166	15	9	1	k	0	0	0	3.6	1.078
NY151	484	332	69	8	gc	0	5	8	3.7	1.060
NY152 (H15-5)	495	267	54	1	2 ^o g	5	0	5	3.5	1.077
NY153 (H25-4)	447	309	69	9	gc	23	0	0	3.3	1.081
H15-17	505	366	72	2	k	8	0	0	3.5	1.079

**NY150 also produced an additional 186 cwt/acre of tubers less than 1.875 inches in diameter

2013 Intermediate Stage Yield Trial, Ellis Hollow

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

Three replicates

Planted April 29, harvested September 19. First vine kill applied August 27

	cwt/acre		%	pickout		% internal defects			appear. score	specific gravity
	>1 7/8"	>2 1/2"		>2 1/2"	cwt/A	type	HHT	IN		
Andover	369	227	61	4	gc	3	0	0	3.6	1.076
Atlantic	455	333	73	31	gc	10	0	3	3.3	1.086
Eva	416	262	63	4	gc	7	3	3	3.6	1.071
Lamoka	463	350	76	7	gc	0	0	0	3.3	1.078
Reba	510	389	76	3	gc	10	0	0	3.1	1.072
Snowden	531	385	73	4	2°g	23	0	0	3.0	1.084
Superior	406	263	65	9	k	3	3	0	3.1	1.068
Waneta	405	309	76	6	gc	10	0	0	3.7	1.073
J2-21	378	279	74	8	gc	0	0	0	3.0	1.083
J2-29	390	319	82	10	gc	17	7	23	3.1	1.080
J3-14	363	224	62	0	-	40	0	0	3.6	1.077
J5-2	501	298	59	2	mis	0	0	0	3.2	1.079
J13-2	416	316	76	2	2°g	7	0	0	3.2	1.074
J15-7	599	457	76	3	2°g	3	0	7	3.3	1.075
J17-1	396	278	70	2	2°g	7	0	0	3.4	1.077
J18-2	466	350	75	1	2°g	7	0	0	3.4	1.074
J21-5	367	259	71	24	gc	0	0	3	3.8	1.070
J104-3	407	308	76	8	2°g	0	0	0	3.5	1.075
J105-10	470	304	65	3	k	7	0	0	3.5	1.081
J107-5	358	230	64	2	gc	5	0	0	3.5	1.083
J112-2	388	232	60	6	gc	10	0	0	3.7	1.083

2013 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 29, harvested September 20. First vine kill applied August 27

	cwt/acre		%	pickout		% internal defects			appear. score	specific gravity
	>1 7/8"	>2 1/2"	>2 1/2"	cwt/A	type	HHT	IN	BC		
Atlantic	497	370	75	12	gc	7	0	3	3.5	1.085
Eva	445	305	69	7	gc	3	0	0	3.6	1.069
Reba	518	405	78	2	gc	3	3	0	3.1	1.069
Snowden	512	367	72	3	2°g	23	0	0	3.0	1.086
K6-1	389	239	62	1	gc	3	3	3	3.3	1.078
K11-2	320	175	55	9	gc	0	0	0	3.5	1.065
K13-2	415	161	39	6	k	0	0	0	3.0	1.078
K13-3	455	224	49	6	gc	0	0	0	3.5	1.068
K18-3	406	269	66	10	gc	3	0	0	3.3	1.075
K18-8	471	362	77	30	gc	7	0	0	3.0	1.076
K19-9	357	247	69	5	gc	20	3	0	3.4	1.078
K19-28	384	259	68	30	gc	20	0	0	3.2	1.079
K19-31	475	338	71	13	k	13	0	0	3.0	1.079
K21-2	380	199	52	6	gc	0	0	0	3.5	1.080
K21-6	332	157	47	22	gc	3	0	0	3.3	1.074
K21-8	442	324	73	28	gc	7	0	0	3.3	1.076
K22-3	349	151	43	8	gc	7	0	0	3.1	1.076
K22-7	379	156	41	4	k	0	0	0	3.5	1.082
K22-10	302	154	51	3	mis	0	0	0	3.2	1.081
K23-6	345	107	31	7	gc	3	0	0	3.3	1.075
K23-13	429	249	58	6	k	10	7	0	3.2	1.084
K27-1	475	290	61	5	k	7	0	0	3.5	1.080
K27-3	421	219	52	26	k	3	0	0	3.4	1.088
K27-4	366	166	45	4	gc	7	0	0	3.8	1.075
K28-6	452	331	73	23	gc	10	0	0	3.5	1.077
K28-7	609	395	65	4	gc	10	0	0	3.3	1.083
K28-14	523	394	75	14	2°g	0	3	3	3.5	1.083
K28-18	403	180	45	13	2°g	0	0	0	3.5	1.088
K28-21	390	330	85	79	gc	27	3	0	3.0	1.077
K28-26	383	195	51	2	k	0	0	0	3.7	1.090
K30-9	418	261	62	10	gc	3	0	0	3.4	1.082
K31-4	466	322	69	2	k	3	0	0	3.5	1.080
K34-1	484	235	49	0	k	0	3	0	3.5	1.086
K107-4	381	228	60	8	gc	0	0	0	3.6	1.068
K107-8	434	185	43	2	k	7	0	0	3.6	1.085

2013 Red Trial, Ellis Hollow

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

3 replicates (unless indicated otherwise in parentheses)

Planted April 29, harvested September 19. First vine kill applied August 27

	cwt/acre		%	pickout		% internal defects			appear. score	specific gravity
	>1 7/8"	>2 1/2"	>2 1/2"	cwt/A	type	HHT	IN	BC		
Chieftain	553	415	75	10	gc	0	0	0	3.5	1.060
Nordonna	442	245	55	20	2 ^o g	0	0	0	3.4	1.063
Adirondack Blue	344	203	59	15	mis	3	0	0	3.1	1.067
Red Maria	533	422	79	1	gc	0	0	0	3.6	1.062
C100-2	298	137	46	2	mis	0	0	0	3.6	1.061
H90-4 **	178	27	15	1	k	0	0	0	3.5	1.072
H52-1	227	109	48	11	2 ^o g	3	0	0	3.4	1.067
H73-1	386	197	51	31	2 ^o g	0	7	0	3.5	< 1.060
H122-4	534	327	61	12	2 ^o g	0	7	3	3.6	< 1.060
K101-1***	288	59	21	6	2 ^o g	0	0	0	3.3	1.067
K45-2	368	211	57	14	2 ^o g	0	0	0	3.4	< 1.060
K100-3	442	224	51	10	gc	0	7	0	3.6	< 1.060
B13-1	418	255	61	28	gc	0	0	0	3.3	< 1.060

** H90-4 also produced an additional 142 cwt/acre of tubers less than 1.875 inches in diameter

*** K101-1 also produced an additional 102 cwt/acre of tubers less than 1.875 inches in diameter

2012 Crop Season Chip Color Scores - University Trials

44F Storage

Potatoes grown in Ellis Hollow

	VISUAL SCORES			
	DEC	JAN	FEB	Average 3 MONTHS
SNOWDEN	4.0	3.0	4.0	3.7
WANETA	3.0	3.0	4.0	3.3
LAMOKA	3.0	3.0	4.0	3.3
NY140	2.0	3.0	3.0	2.7
NY148	4.0	5.0	4.0	4.3
NY152 (H15-5)	4.0	3.0	3.0	3.3
NY153 (H25-4)	3.0	2.0	3.0	2.7
H15-17	3.0	no data	3.0	3.0

VISUAL CHIP SCALE: 1 - 10

1 = best

4 = marginal

5 and over = not acceptable

Samples were reconditioned for 7 days before chipping in December, but were not reconditioned before chipping in January or February.

Average Chip Color over Four Years - University Trials

Out of 44F storage: 2008 - 2011 crop seasons.

Reconditioned 0-2 weeks at room temperature

	VISUAL SCORES			
	(4 YEARS, 2 LOCATIONS*)			
	DEC	JAN	FEB	AVG
Snowden	3.7	3.3	3.0	3.3
Waneta	3.0	2.8	2.6	2.8
Lamoka	3.1	3.0	2.7	2.9
NY140	3.4	3.4	3.0	3.3
NY148	3.6	3.7	3.4	3.6

VISUAL CHIP SCALE: 1 - 10

1 = best

4 = marginal

5 and over = not acceptable

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

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.

	2012	2011	2010	2009	2008	2007	2006	2005	2004	2003	2002
Round whites:											
Andover	3	3	3	3		4	4	3		1	4
Atlantic	0		0	0	0	0	0	0	0	0	0
Eva	7	8								9	8
Katahdin					1						
King Harry						0	0		-1	-2	0
Lamoka	3	0	1	1	1	2	3	-1	1		
Lehigh					3	3	3	3	1	2	3
Marcy		4				4	4	3	2	2	2
Pike					4	5			2	4	3
Reba	4		5	5	4	6	7	5	3	4	3
Snowden	2	2	2	2	1	4	2	0	0	0	1
Superior					2					-1	1
Waneta	10	7	8	8	6	8	7	5	6		
Yukon Gold		0	1								
NY140	7	6	6	7	5	6	6	5	5		
NY141	3	2	2	2	2	3	3	1	2		
NY148	0	1	0	0	0						
NY149		0	2	1							
NY150	2	2	2	2							
NY151	1	1	0								
NY152 (H15-5)	3	5									
NY153 (H25-4)	5	6									
H15-17	-1	3									
Reds and purples:											
Chieftain	2	1	2	1	1	0	2	2	1	1	1
Norland DR	-1				-3	-3		-2	-2	-2	-1
Nordonna	2	0	1	2	0	0	1	1	0		
Red Maria	3	4	5	3	3	4	4	1	4	3	2
NY136	5	4	5			4	4	5	4	3	2
H52-1	-1	0									
H122-4	3	2									
Ad. Blue	-2					2	2	1	-1		2
Ad. Red						2	1	5			3

(blank)

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 - 2013.

Genotype Variety or Clone	Total Yield Cwt/A	Mkt. Yield		Size Distribution ¹ (% of total yield)					Size Distrib. (%)		Mean Tuber		Spec. Grav.
		Cwt/A	% of Std.	1	2	3	4	5	1-7/8" to 4"	2-1/2" to 4 "	#/ft.	wt.(oz.)	
ANDOVER	474	437	82	4	46	44	5	1	95	49	10.1	5.0	78
ATLANTIC	522	479	90	6	46	45	2	0	93	47	11.6	4.7	90
AF4138-8	506	431	80	14	57	29	0	0	86	29	14.2	3.7	64
AF4157-6	461	412	77	9	58	32	1	0	91	33	12.4	3.9	84
NY141	578	531	99	3	42	48	6	0	97	55	11.3	5.3	77
NY150	420	151	28	62	37	0	0	0	38	0	22.3	2.0	79
ROCHDALE GOLD-DOREE	391	332	62	10	50	38	3	0	90	40	9.9	4.1	74
SUPERIOR	580	535	100	3	34	52	9	2	96	62	10.5	5.7	74
Average:	492	414	77	14	46	36	3	0	86	39	12.8	4.3	77
Maximum:	580	535	100	62	58	52	9	2	97	62	22.3	5.7	90
Minimum:	391	151	28	3	34	0	0	0	38	0	9.9	2.0	64
Waller-Duncan LSD (k=100) C.V. (%)	xx (xx)	xx (xx)									xx (xx)	xx (xx)	xx (xx)

¹Tuber 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 6

Maturity Ratings: Aug 19

Vinekill (mow) Date: Aug 19

Harvest Date: Aug 20

Note: all entries are in 4 replications.

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 - 2013.

Genotype Variety or Clone	Plant ¹ Mat. At Vinekill	Tuber Attributes ¹			External Tuber Defects (%)					Int. Tuber Defects (%) ²				Scab Rating
		Tuber Shape	Skin Text.	Tuber Appear.	Total Defects	Sun- Green	Mis- shapen	Growth Cracks	Rot	Holl. Heart	Brn. Center	Vasc. Disc.	Int. Nec.	
ANDOVER	6.3	4	6	6.5	2.9	1.2	0.4	0.3	0.9	10.0	0.0	0.0	0.0	0.3
ATLANTIC	6.5	2	5	5.5	1.5	0.6	0.1	0.3	0.5	22.5	0.0	0.0	0.0	0.3
AF4138-8	7.8	2	7	6.3	1.1	0.5	0.1	0.4	0.2	0.0	0.0	0.0	0.0	0.4
AF4157-6	6.8	2	6	5.8	1.8	0.6	0.2	0.9	0.1	10.0	2.5	0.0	0.0	1.3
NY141	6.3	5	7	7.3	5.1	1.2	3.4	0.0	0.5	0.0	0.0	0.0	0.0	0.5
NY150	7.0	1	9	8.0	2.1	0.9	0.8	0.3	0.1	0.0	0.0	0.0	0.0	0.4
ROCHDALE GOLD-DOREE	7.5	2	6	6.6	5.2	1.3	0.0	1.4	2.5	0.0	0.0	0.0	0.0	1.5
SUPERIOR	6.5	5	6	4.0	3.5	1.4	1.3	0.3	0.5	2.5	2.5	0.0	0.0	0.8
Average:	6.8	3	6	6.2	2.9	1.0	0.8	0.5	0.7	5.6	0.6	0.0	0.0	0.7
Maximum:	7.8	5	9	8.0	5.2	1.4	3.4	1.4	2.5	22.5	2.5	0.0	0.0	1.5
Minimum:	6.3	1	5	4.0	1.1	0.5	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.3

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

²Based 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 - 2013.

Genotype Variety or Clone	Total Yield Cwt/A	Mkt. Yield		Size Distribution ¹ (% of total yield)					Size Distrib. (%)		Mean Tuber		Spec. Grav.
		Cwt/A	% of Std.	1	2	3	4	5	1-7/8" to 4"	2-1/2" to 4"	#/ft. wt.(oz.)		
											#/ft.	wt.(oz.)	
ANDOVER	440	411	100	5	49	44	2	0	95	46	9.7	4.7	77
ATLANTIC	447	412	100	5	49	42	3	0	95	45	10.3	4.5	85
A00286-3Y	442	318	77	19	63	17	0	0	81	18	14.8	3.1	70
AF0338-17	491	450	109	2	36	53	7	2	96	60	9.3	5.5	76
AF4013-3	423	361	88	11	56	32	0	0	89	32	11.8	3.7	77
LEHIGH	561	495	120	4	28	55	11	1	94	66	9.4	6.2	79
NY141	470	422	102	3	46	48	2	1	97	50	9.6	5.1	76
REBA-CU	474	410	100	6	53	40	1	1	94	41	11.0	4.4	71
REBA-GR **	487	458	111	2	51	45	2	0	98	46	10.1	5.0	72
SNOWDEN	536	487	118	7	63	30	0	0	93	30	14.4	3.9	90
YUKON GOLD	483	436	106	3	24	54	16	3	94	70	8.3	6.0	77
Average:	478	424	103	6	47	42	4	1	93	46	10.8	4.8	77
Maximum:	561	495	120	19	63	55	16	3	98	70	14.8	6.2	90
Minimum:	423	318	77	2	24	17	0	0	81	18	8.3	3.1	70
Waller-Duncan LSD (k=100)	xx	xx									xx	xx	xx
C.V. (%)	(xx)	(xx)									(xx)	(xx)	(xx)

¹Tuber 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 6

Maturity Ratings: Aug 12

Vinekill Date: Aug 15

Harvest Date: Aug 26

Notr: all entries are in 3 replications except for those denoted by ** which are in 2 replications.

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 - 2013.

Genotype Variety or Clone	Plant ¹ Mat. At Vinekill	Tuber Attributes ¹			External Tuber Defects (%)					Int. Tuber Defects (%) ²				Scab Rating
		Tuber Shape	Skin Text.	Tuber Appear.	Total Defects	Sun- Green	Mis- shapen	Growth Cracks	Rot	Holl. Heart	Brn. Center	Vasc. Disc.	Int. Nec.	
ANDOVER	7.0	2	6	7.0	1.8	0.8	0.0	0.0	1.0	16.7	0.0	0.0	0.0	0.7
ATLANTIC	7.3	2	5	5.0	2.3	1.2	0.0	0.4	0.8	30.0	0.0	0.0	0.0	0.7
A00286-3Y	9.0	4	8	4.3	8.7	1.2	3.2	3.7	0.6	0.0	0.0	0.0	0.0	0.0
AF0338-17	7.0	3	6	6.2	4.3	2.1	0.0	1.1	1.1	13.3	0.0	0.0	0.0	0.7
AF4013-3	7.5	3	8	7.0	3.7	1.4	0.7	0.6	1.0	0.0	0.0	0.0	0.0	1.0
LEHIGH	7.0	3	7	5.0	5.8	1.8	1.6	0.2	2.3	13.3	0.0	0.0	0.0	1.8
NY141	6.0	3	8	7.0	7.0	0.7	3.0	0.3	2.9	0.0	0.0	0.0	0.0	1.3
REBA-CU	7.7	2	8	5.7	7.2	3.5	0.6	0.4	2.7	56.7	0.0	0.0	0.0	1.0
REBA-GR **	7.5	2	8	6.5	3.9	3.4	0.0	0.0	0.5	60.0	0.0	0.0	0.0	0.0
SNOWDEN	7.7	2	5	3.3	2.1	1.9	0.0	0.0	0.2	6.7	0.0	0.0	0.0	3.2
YUKON GOLD	7.7	2	8	6.3	4.1	0.8	0.8	0.6	1.9	40.0	0.0	0.0	0.0	0.0
Average:	7.4	3	7	5.8	4.6	1.7	0.9	0.7	1.4	21.5	0.0	0.0	0.0	0.9
Maximum:	9.0	4	8	7.0	8.7	3.5	3.2	3.7	2.9	60.0	0.0	0.0	0.0	3.2
Minimum:	6.0	2	5	3.3	1.8	0.7	0.0	0.0	0.2	0.0	0.0	0.0	0.0	0.0

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

²Based 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 - 2013.

Genotype Variety or Clone	Total Yield Cwt/A	Mkt. Yield		Size Distribution ¹ (% of total yield)					Size Distrib. (%)		Mean Tuber		Spec. Grav.
		Cwt/A	% of Std.	1	2	3	4	5	1-7/8" to 4"	2-1/2" to 4"	#/ft.	wt.(oz.)	
ATLANTIC	373	328	100	9	51	37	4	0	91	41	9.4	4.1	83
BNC182-5	408	332	101	16	46	37	1	0	84	38	11.7	3.6	77
KENNEBEC	266	164	50	6	52	32	7	2	92	39	6.2	4.5	66
KEUKA GOLD	491	441	134	8	41	50	2	0	92	51	11.3	4.5	68
NY143	400	337	103	10	48	41	1	0	90	42	9.4	4.4	61
SNOWDEN	395	352	107	9	56	35	0	0	91	35	10.8	3.8	84
W5015-12	462	371	113	18	58	23	0	0	82	24	15.0	3.2	80
W5955-1	276	225	69	8	33	55	4	0	92	59	6.3	4.6	78
Average:	384	319	97	10	48	39	2	0	89	41	10.0	4.1	75
Maximum:	491	441	134	18	58	55	7	2	92	59	15.0	4.6	84
Minimum:	266	164	50	6	33	23	0	0	82	24	6.2	3.2	61
Waller-Duncan LSD (k=100) C.V. (%)	xx (xx)	xx (xx)									xx (xx)	xx (xx)	xx (xx)

¹Tuber 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 12

Vinekill Date: Aug 15

Harvest Date: Aug 29

Note: all entries are in 3 replications.

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 - 2013.

Genotype Variety or Clone	Plant ¹ Mat. At Vinekill	Tuber Attributes ¹			External Tuber Defects (%)					Int. Tuber Defects (%) ²				Scab Rating
		Tuber Shape	Skin Text.	Tuber Appear.	Total Defects	Sun- Green	Mis- shapen	Growth Cracks	Rot	Holl. Heart	Brn. Center	Vasc. Disc.	Int. Nec.	
ATLANTIC	7.3	1	6	7.0	3.5	2.2	0.1	0.4	0.8	23.3	0.0	0.0	0.0	1.3
BNC182-5	8.3	1	6	6.7	2.7	1.4	0.3	0.0	1.0	16.7	0.0	0.0	0.0	0.2
KENNEBEC	7.7	7	8	4.0	30.4	5.5	4.9	15.0	4.9	10.0	3.3	3.3	0.0	1.2
KEUKA GOLD	7.7	3	6	7.2	2.8	1.6	0.1	0.0	1.1	16.7	0.0	0.0	0.0	2.0
NY143	7.0	4	9	8.0	6.0	2.8	0.9	1.0	1.3	3.3	0.0	0.0	0.0	0.0
SNOWDEN	7.0	2	5	4.0	2.8	2.4	0.0	0.2	0.2	16.7	0.0	0.0	0.0	2.7
W5015-12	8.3	2	5	4.0	2.2	1.6	0.0	0.2	0.4	16.7	0.0	0.0	0.0	2.0
W5955-1	9.0	2	6	6.0	9.8	6.4	3.3	0.2	0.0	56.7	0.0	0.0	0.0	1.0
Average:	7.8	3	6	5.9	7.5	3.0	1.2	2.1	1.2	20.0	0.4	0.4	0.0	1.3
Maximum:	9.0	7	9	8.0	30.4	6.4	4.9	15.0	4.9	56.7	3.3	3.3	0.0	2.7
Minimum:	7.0	1	5	4.0	2.2	1.4	0.0	0.0	0.0	3.3	0.0	0.0	0.0	0.0

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

²Based 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 - 2013.

Genotype Variety or Clone	Total Yield Cwt/A	Mkt. Yield		Size Distribution ¹ (% of total yield)					Size Distrib. (%)		Mean Tuber		Spec. Grav.
		Cwt/A	% of Std.	1	2	3	4	5	1-7/8" to 4"	2-1/2" to 4 "	#/ft.	wt.(oz.)	
ATLANTIC	489	430	100	7	50	41	2	0	93	43	12.2	4.2	86
GENESEE	382	335	78	5	45	43	7	0	95	50	8.6	4.7	61
JACQUELINE LEE	524	312	73	27	67	6	0	0	73	6	19.6	2.8	74
KATAHDIN	376	319	74	11	60	30	0	0	89	30	10.4	3.8	67
LAMOKA	465	422	98	8	57	34	1	0	92	35	12.1	4.0	87
MARCY	577	513	119	5	44	47	3	0	95	50	12.6	4.8	78
MISSAUKEE	528	422	98	17	54	28	0	0	83	29	16.7	3.3	72
NY140	543	480	112	5	43	50	3	0	95	53	11.6	4.9	76
NY148 **	559	490	114	10	57	34	0	0	90	34	14.9	3.9	90
NY152 **	545	457	106	13	52	34	1	0	87	35	15.2	3.8	78
REBA **	503	462	107	3	37	51	9	1	96	60	9.7	5.4	76
SNOWDEN	505	447	104	8	52	37	3	0	92	40	12.9	4.1	85
SPARTAN SPLASH **	454	384	89	15	60	25	0	0	85	25	14.2	3.3	71
WANETA	417	377	88	6	40	49	5	0	94	54	9.0	4.8	73
Average:	490	418	97	10	51	36	2	0	90	39	12.8	4.1	77
Maximum:	577	513	119	27	67	51	9	1	96	60	19.6	5.4	90
Minimum:	376	312	73	3	37	6	0	0	73	6	8.6	2.8	61
Waller-Duncan LSD (k=100)	xx	xx									xx	xx	xx
C.V. (%)	(xx)	(xx)									(xx)	(xx)	(xx)

¹Tuber 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 xx

Vinekill Date: Aug 20

Harvest Date: Sep 5

Note: all entries are in 3 replications except for those denoted by ** which are in two 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 - 2013.

Genotype Variety or Clone	Plant ¹ Mat. At Vinekill	Tuber Attributes ¹			External Tuber Defects (%)					Int. Tuber Defects (%) ²				Scab Rating
		Tuber Shape	Skin Text.	Tuber Appear.	Total Defects	Sun- Green	Mis- shapen	Growth Cracks	Rot	Holl. Heart	Brn. Center	Vasc. Disc.	Int. Nec.	
ATLANTIC	6.3	2	6	5.7	4.9	1.5	1.2	1.3	0.9	23.3	0.0	0.0	0.0	2.8
GENESEE	8.3	3	7	6.0	7.0	5.1	0.3	0.3	1.3	3.3	0.0	0.0	0.0	0.7
JACQUELINE LEE	7.7	6	8	5.7	13.7	3.8	7.1	0.9	1.8	3.3	0.0	0.0	0.0	3.2
KATAHDIN	6.3	2	7	5.8	4.6	3.0	0.5	0.0	1.1	20.0	0.0	0.0	0.0	1.7
LAMOKA	6.3	2	7	5.5	1.1	1.1	0.1	0.0	0.0	3.3	0.0	0.0	0.0	2.0
MARCY	7.7	3	5	5.0	5.6	2.1	0.0	0.0	3.5	20.0	0.0	3.3	0.0	1.7
MISSAUKEE	7.7	2	6	5.7	3.2	2.7	0.0	0.1	0.4	3.3	0.0	0.0	0.0	4.0
NY140	7.0	3	8	5.8	6.5	4.2	1.0	0.0	1.3	20.0	0.0	0.0	0.0	1.2
NY148 **	7.5	1	6	6.0	2.7	1.1	0.1	0.0	1.5	0.0	0.0	0.0	0.0	1.0
NY152 **	7.5	2	6	5.5	3.3	3.0	0.0	0.0	0.2	10.0	0.0	0.0	0.0	1.8
REBA **	6.5	3	7	5.5	4.3	2.7	0.8	0.0	0.8	70.0	0.0	0.0	0.0	0.5
SNOWDEN	6.3	1	6	3.3	3.2	2.3	0.4	0.4	0.1	13.3	0.0	0.0	0.0	4.0
SPARTAN SPLASH **	6.5	2	8	7.8	0.3	0.0	0.0	0.0	0.3	15.0	0.0	0.0	0.0	0.0
WANETA	7.7	1	8	6.7	4.0	2.5	0.2	0.0	1.4	0.0	0.0	0.0	0.0	1.0
Average:	7.1	2	7	5.7	4.6	2.5	0.8	0.2	1.1	14.6	0.0	0.2	0.0	1.8
Maximum:	8.3	6	8	7.8	13.7	5.1	7.1	1.3	3.5	70.0	0.0	3.3	0.0	4.0
Minimum:	6.3	1	5	3.3	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

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

²Based 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 and purple-skinned variety trial grown at Freeville, New York - 2013.

Genotype Variety or Clone	Total Yield Cwt/A	Mkt. Yield		Size Distribution ¹					Size Distrib. (%)		Mean Tuber		Spec. Grav.
		Cwt/A	% of Std.	(% of total yield)					1-7/8"	2-1/2"	#/ft.	wt.(oz.)	
				1	2	3	4	5	to 4"	to 4 "			
ADIRONDACK BLUE	343	302	62	8	61	29	1	0	92	30	8.4	4.3	77
ADIRONDACK RED	519	434	89	14	71	15	0	0	86	15	15.4	3.5	70
A05180-3PY	684	578	119	9	61	28	1	0	91	29	18.4	3.9	72
A05182-7RY	656	552	114	13	69	18	0	0	87	18	19.9	3.4	69
AF4565-1	463	385	79	9	66	25	0	0	91	25	12.3	4.0	64
AF5041-1 *	422	377	77	7	63	25	5	0	93	30	11.0	4.0	63
AF5131-2 *	486	399	82	5	59	34	2	0	95	36	11.1	4.6	66
AF5154-2 *	447	356	73	15	56	25	4	0	85	29	11.8	3.9	56
AF5160-7 *	447	357	73	4	59	32	4	0	96	37	9.6	4.9	64
AF5245-1 *	537	479	99	7	52	40	1	0	93	41	12.8	4.4	79
AF5274-6 *	632	484	99	18	58	22	2	0	82	24	19.5	3.4	69
AF5356-3 *	320	225	46	14	65	16	2	3	83	18	10.2	3.3	70
AOTX91861-41	620	565	116	4	37	51	7	1	95	58	10.9	6.0	64
ATTX01178-1R	540	484	100	3	37	49	10	1	96	59	9.9	5.7	70
B2676-2	483	391	80	14	69	17	1	0	86	18	14.2	3.5	79
B2942-6 *	331	264	54	20	65	15	0	0	80	15	11.1	3.1	71
B3034-7 *	475	356	73	15	69	16	0	0	85	16	15.9	3.1	70
B3034-9 *	454	361	74	18	75	6	0	0	82	6	15.9	3.0	71
BNC201-1	544	508	105	3	51	43	4	0	97	46	11.1	5.1	78
BNC304-1 *	383	310	64	14	71	14	1	0	86	15	11.4	3.5	57
BNC306-2 *	356	298	61	11	60	27	0	2	87	27	10.4	3.6	70
BNC306-3 *	458	345	71	24	67	10	0	0	76	10	16.7	2.9	66
BNC314-5 *	422	359	74	11	67	22	0	0	89	22	12.4	3.5	62
BNC314-8 *	395	327	67	14	66	15	6	0	86	21	12.3	3.3	76
BNC315-5 *	520	468	96	7	65	28	0	0	93	28	13.4	4.1	76

Upstate New York Table 10 continued. Total yield, marketable yield, percentage of yield by grade size distribution, mean tuber number per foot and weight, and specific gravity for the red and purple-skinned variety trial grown at Freeville, New York - 2013.

BNC316-1 *	546	524	108	2	52	44	2	0	98	46	11.2	5.1	73
BNC320-2 *	460	352	72	19	70	10	0	0	81	10	16.0	3.0	69
BNC322-2 *	440	354	73	4	60	31	5	0	96	36	9.4	4.8	62
CHIEFTAIN-NE1231	532	486	100	7	53	37	3	0	93	40	12.4	4.5	65
CHIEFTAIN-FILL-BP	414	355	73	7	45	34	12	2	91	46	8.8	4.9	68
CO04159-1R	289	252	52	11	58	31	1	0	89	31	7.5	4.0	61
DARK RED NORLAND	333	307	63	4	55	38	1	1	95	39	7.3	4.7	56
K45-2	479	420	86	8	63	28	1	0	92	29	13.0	3.8	54
K100-3	651	554	114	12	61	25	2	0	88	27	17.9	3.8	60
MASQUERADE	400	307	63	10	54	32	3	0	90	35	10.6	3.9	78
#1RMPR	561	400	82	24	70	5	0	0	76	5	21.8	2.7	77
NORDONNA	558	487	100	7	61	31	1	0	93	32	13.9	4.2	67
NDTX5438-11R	475	427	88	5	47	41	6	2	93	47	9.8	5.0	62
PETER WILCOX (B1816-:	500	446	92	9	70	20	1	0	91	21	13.4	3.9	74
RED MARIA (NY129)	705	659	136	4	39	48	8	0	95	56	13.6	5.4	73
W6002-1R	486	413	85	12	58	29	2	0	88	31	13.0	3.9	62
W8370-2R	446	339	70	23	76	1	0	0	77	1	16.8	2.8	76
W8405-1R	515	402	83	19	70	11	0	0	81	11	17.1	3.1	66
W8893-1R	444	345	71	20	74	6	0	0	80	6	15.8	2.9	58
W9426-3R/Y	629	526	108	8	69	23	0	0	92	23	16.7	3.9	77
W9746-4R	499	395	81	13	65	20	1	1	86	21	15.1	3.5	67
W9765-3R	380	248	51	12	61	24	3	0	88	27	10.5	3.8	63
Average:	483	403	83	11	61	25	2	0	89	28	13.1	3.9	68
Maximum:	705	659	136	24	76	51	12	3	98	59	21.8	6.0	79
Minimum:	289	225	46	2	37	1	0	0	76	1	7.3	2.7	54

¹Tuber 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 9

Maturity Ratings: Sep 5

Vinekill Date: Sep 5

Harvest Date: Sep 27

Note: all entries are in 2 replications except for those denoted by * which are in 1 replication.

Upstate New York Table 11 continued. Plant maturity, tuber shape and appearance, percentage of external and internal tuber defects, and scab rating for the red and purple-skinned variety trial grown at Freeville, New York - 2013.

BNC316-1 *	5.0	2	7	6.0	1.9	0.0	0.3	0.5	1.0	0.0	0.0	0.0	0.0	2.0
BNC320-2 *	5.0	1	8	6.5	4.1	0.5	1.4	0.2	2.0	0.0	0.0	0.0	0.0	1.5
BNC322-2 *	6.0	1	8	5.5	15.6	0.8	1.5	10.2	3.1	0.0	0.0	0.0	0.0	#DIV/0!
CHIEFTAIN-NE1231	4.5	3	8	5.0	1.6	0.8	0.5	0.3	0.0	0.0	0.0	0.0	0.0	1.3
CHIEFTAIN-FILL-BP	5.0	3	8	5.5	5.2	1.7	1.9	0.6	1.0	0.0	0.0	0.0	0.0	2.0
CO04159-1R	3.0	1	8	7.3	3.0	0.6	0.5	1.5	0.4	5.0	10.0	0.0	0.0	1.0
DARK RED NORLAND	2.5	3	8	6.0	2.3	0.0	1.2	1.1	0.0	0.0	0.0	0.0	0.0	1.5
K45-2	7.5	3	8	6.0	3.9	0.4	0.4	0.9	2.1	0.0	0.0	0.0	0.0	2.3
K100-3	3.5	4	8	4.0	3.3	0.0	1.3	0.8	1.2	0.0	0.0	0.0	0.0	3.0
MASQUERADE	6.5	2	8	6.5	12.7	6.1	4.9	0.4	1.4	20.0	0.0	0.0	0.0	0.0
#1RMPR	3.0	1	6	3.5	4.7	1.2	2.4	0.2	1.0	0.0	0.0	0.0	0.0	4.0
NORDONNA	5.5	1	8	6.3	5.4	1.9	2.2	0.9	0.4	0.0	0.0	0.0	0.0	1.5
NDTX5438-11R	4.0	3	8	6.5	3.5	1.6	1.1	0.8	0.0	35.0	0.0	0.0	0.0	1.0
PETER WILCOX (B1816- RED MARIA (NY129)	5.0 7.5	3 1	6 5	5.0 5.0	1.6 1.8	0.4 0.8	1.0 0.4	0.2 0.3	0.0 0.3	10.0 0.0	0.0 0.0	0.0 0.0	0.0 0.0	0.0 2.3
W6002-1R	4.0	3	7	6.0	3.3	0.6	1.5	0.6	0.6	0.0	0.0	0.0	0.0	2.0
W8370-2R	5.0	1	6	4.0	0.8	0.0	0.8	0.0	0.0	0.0	0.0	0.0	0.0	2.5
W8405-1R	6.5	2	8	5.5	3.2	1.9	0.6	0.3	0.4	0.0	0.0	0.0	15.0	2.0
W8893-1R	2.5	5	9	7.8	2.8	1.0	0.8	1.0	0.0	5.0	0.0	0.0	0.0	0.0
W9426-3R/Y	6.0	2	6	3.5	8.1	1.2	0.8	6.1	0.0	0.0	0.0	0.0	0.0	1.5
W9746-4R	4.0	2	8	6.0	6.6	1.6	2.4	1.3	1.4	0.0	0.0	0.0	0.0	3.0
W9765-3R	2.0	1	8	7.0	21.9	3.8	1.4	15.6	1.0	5.0	0.0	0.0	0.0	1.0
Average:	4.4	2	8	5.5	5.4	0.9	1.6	1.8	1.0	8.1	1.1	0.5	0.3	#DIV/0!
Maximum:	8.0	5	9	7.8	21.9	6.1	8.0	15.6	4.5	80.0	20.0	10.0	15.0	#DIV/0!
Minimum:	1.0	1	5	3.0	0.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	#DIV/0!

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

²Based on a 10-tuber sample from each replication. The tubers were taken from the size 3 and 4 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 and purple-skinned variety trial grown at Freeville, New York - 2013.

Genotype Variety or Clone	Plant ¹ Mat. At Vinekill	Tuber Attributes ¹			External Tuber Defects (%)					Int. Tuber Defects (%) ²				Scab Rating
		Tuber Shape	Skin Text.	Tuber Appear.	Total Defects	Sun- Green	Mis- shapen	Growth Cracks	Rot	Holl. Heart	Brn. Center	Vasc. Disc.	Int. Nec.	
ADIRONDACK BLUE	5.0	4	7	5.5	3.5	1.5	2.0	0.0	0.0	5.0	5.0	0.0	0.0	1.0
ADIRONDACK RED	2.0	3	8	6.0	2.2	0.3	1.2	0.2	0.5	0.0	5.0	0.0	0.0	2.0
A05180-3PY	5.5	1	9	7.0	6.2	0.3	0.8	5.0	0.0	25.0	0.0	0.0	0.0	1.0
A05182-7RY	8.0	3	8	5.5	2.9	1.4	0.5	0.0	1.0	5.0	0.0	0.0	0.0	2.0
AF4565-1	3.5	3	8	4.0	8.3	0.3	3.7	3.2	1.2	5.0	0.0	0.0	0.0	1.5
AF5041-1 *	4.0	1	8	5.0	3.5	0.0	0.0	1.7	1.8	0.0	0.0	0.0	0.0	2.0
AF5131-2 *	5.0	2	8	3.0	13.0	0.0	6.1	4.7	2.2	80.0	0.0	0.0	0.0	2.0
AF5154-2 *	3.0	3	8	5.0	5.8	0.0	2.8	1.1	1.9	0.0	0.0	0.0	0.0	2.0
AF5160-7 *	3.0	3	8	6.0	16.1	0.0	8.0	6.1	2.0	30.0	20.0	0.0	0.0	3.0
AF5245-1 *	6.0	3	8	6.5	4.0	0.4	1.4	2.2	0.0	40.0	0.0	0.0	0.0	2.0
AF5274-6 *	6.0	3	8	5.5	5.7	1.6	2.5	1.3	0.2	0.0	0.0	0.0	0.0	1.0
AF5356-3 *	3.0	3	8	5.5	12.5	2.4	3.3	5.0	1.8	20.0	0.0	0.0	0.0	0.0
AOTX91861-41	4.0	3	9	6.8	4.2	0.8	0.3	1.9	1.3	0.0	0.0	0.0	0.0	1.5
ATTX01178-1R	6.0	2	8	6.5	6.5	3.3	2.0	0.5	0.7	0.0	0.0	5.0	0.0	0.0
B2676-2	3.5	3	7	4.0	5.6	1.2	3.5	0.0	0.8	0.0	0.0	0.0	0.0	1.5
B2942-6 *	3.0	1	8	6.5	0.4	0.4	0.0	0.0	0.0	30.0	0.0	0.0	0.0	1.5
B3034-7 *	3.0	1	6	4.0	10.1	0.6	1.0	3.9	4.5	40.0	0.0	0.0	0.0	3.0
B3034-9 *	1.0	1	7	5.5	2.1	1.7	0.4	0.0	0.0	0.0	0.0	0.0	0.0	2.0
BNC201-1	6.5	3	8	6.0	3.8	0.6	0.2	0.9	2.1	10.0	0.0	0.0	0.0	1.3
BNC304-1 *	6.0	2	8	4.0	4.9	0.1	1.9	1.6	1.3	0.0	0.0	10.0	0.0	1.5
BNC306-2 *	3.0	2	8	5.5	3.5	0.0	2.7	0.0	0.8	0.0	0.0	0.0	0.0	2.0
BNC306-3 *	5.0	1	8	7.0	1.1	0.0	0.3	0.8	0.0	10.0	10.0	10.0	0.0	1.0
BNC314-5 *	4.0	2	8	3.0	4.1	0.3	1.2	2.7	0.0	0.0	0.0	0.0	0.0	3.5
BNC314-8 *	3.0	3	7	5.0	3.6	0.0	0.4	0.0	3.2	0.0	0.0	0.0	0.0	2.0
BNC315-5 *	2.0	3	6	5.0	2.9	0.2	1.4	0.0	1.2	0.0	0.0	0.0	0.0	2.0

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 Cornell University advanced white lines trial grown at Freeville, New York - 2013.

Genotype Variety or Clone	Total Yield Cwt/A	Mkt. Yield		Size Distribution ¹					Size Distrib. (%)		Mean Tuber		Spec. Grav.
		Cwt/A	% of Std.	(% of total yield)					1-7/8"	2-1/2"	#/ft.	wt.(oz.)	
				1	2	3	4	5	to 4"	to 4 "			
ANDOVER **	353	329	109	4	48	46	3	0	96	48	7.5	4.9	78
ATLANTIC	339	302	100	6	49	40	4	1	93	44	11.4	4.7	88
H122-4	526	452	150	4	55	33	5	3	93	38	11.2	4.9	59
J18-2	552	489	162	8	46	39	5	0	91	45	14.1	4.1	73
J21-5	604	535	177	4	54	37	4	1	95	41	12.5	5.0	74
K6-1	378	301	100	16	56	25	3	0	84	28	11.2	3.5	86
K11-2	428	386	128	8	55	37	0	0	92	37	10.9	4.1	68
K13-2	514	407	135	16	69	15	0	0	84	15	16.6	3.2	84
K13-3	427	339	112	17	72	10	0	0	83	10	14.3	3.1	77
K18-3	389	340	113	9	58	30	4	0	91	33	9.9	4.1	79
K18-8	606	527	174	2	26	60	7	5	92	67	10.5	6.0	87
K19-9	433	386	128	5	43	46	7	0	95	52	9.3	4.8	83
K19-28	476	413	137	8	57	35	0	0	92	35	12.2	4.1	85
K19-31	461	378	125	7	57	35	1	0	93	36	11.4	4.2	88
K21-2	353	300	99	13	68	19	0	0	87	19	10.7	3.5	85
K21-6	424	330	109	15	67	18	0	0	85	18	13.2	3.3	78
K21-8	402	374	124	2	47	46	4	1	97	50	8.0	5.3	80
K22-3	396	332	110	13	71	16	0	0	87	16	12.0	3.5	84
K22-7	390	315	104	16	80	4	0	0	84	4	13.4	3.0	92
K22-10	281	238	79	13	73	14	0	0	87	14	8.9	3.3	83
K23-6 **	361	266	88	25	73	2	0	0	75	2	13.5	2.8	79
K23-13	547	482	159	9	69	23	0	0	91	23	15.1	3.8	91

Upstate New York Table 14 continued. Total yield, marketable yield, percentage of yield by grade size distribution, mean tuber number per foot and weight, and specific gravity for the Cornell University advanced white lines trial grown at Freeville, New York - 2013.

K27-1	567	498	165	9	57	28	5	0	91	33	14.7	4.0	87
K27-3	480	411	136	9	59	31	1	0	91	32	12.0	4.1	89
K27-4	549	486	161	6	57	34	2	0	94	37	13.0	4.4	80
K28-6	598	519	172	4	51	45	1	0	96	45	12.8	4.9	83
K28-7	711	619	205	7	62	30	2	0	93	31	17.4	4.3	90
K28-14	604	540	179	3	39	51	5	1	96	56	12.6	5.0	90
K28-18	586	502	166	9	78	13	1	0	91	14	16.1	3.8	99
K28-21	507	452	150	2	23	59	14	2	96	73	7.8	6.8	87
K28-26	463	365	121	14	69	17	0	0	86	17	13.8	3.5	94
K30-9	495	414	137	9	64	25	1	0	91	26	13.9	3.7	89
K31-4	582	535	177	4	52	41	2	0	96	43	12.7	4.8	87
K34-1	459	391	130	14	73	14	0	0	86	14	14.0	3.5	86
K107-4	457	402	133	10	61	28	1	0	90	29	12.2	3.9	77
K107-8	486	417	138	11	65	23	0	0	89	23	14.4	3.6	89
KATAHDIN **	339	303	100	8	63	29	0	0	92	29	9.1	3.9	68
NY115	428	388	129	6	59	31	3	1	93	34	9.2	5.6	75
REBA	643	611	202	2	44	47	6	0	97	53	12.6	5.3	78
SNOWDEN	640	576	191	8	64	25	2	0	92	27	16.9	3.9	92
SUPERIOR	580	536	178	4	50	43	3	0	96	46	12.1	5.0	77
Average:	483	419	139	9	58	30	2	0	91	33	12.3	4.2	83
Maximum:	711	619	205	25	80	60	14	5	97	73	17.4	6.8	99
Minimum:	281	238	79	2	23	2	0	0	75	2	7.5	2.8	59
Waller-Duncan													
LSD (k=100)	xx	xx									xx	xx	xx
C.V. (%)	(xx)	(xx)									(xx)	(xx)	(xx)

¹Tuber 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 9

Maturity Ratings: Sep 5

Vinekill Date: Sep 11

Harvest Date: Oct 2

Note: all entries are in 3 replications except for those denoted by ** which are in 2 replications.

Upstate New York Table 15. Plant maturity, tuber shape and appearance, percentage of external and internal tuber defects, and scab rating for the Cornell University advanced white lines trial grown at Freeville, New York - 2013.

Genotype Variety or Clone	Plant ¹ Mat. At Vinekill	Tuber Attributes ¹			External Tuber Defects (%)					Int. Tuber Defects (%) ²				Scab Rating
		Tuber Shape	Skin Text.	Tuber Appear.	Total Defects	Sun- Green	Mis- shapen	Growth Cracks	Rot	Holl. Heart	Brn. Center	Vasc. Disc.	Int. Nec.	
ANDOVER **	3.0	3	6	6.5	2.5	0.4	0.2	0.6	1.2	10.0	0.0	0.0	0.0	0.8
ATLANTIC	5.7	1	5	5.3	3.7	1.6	1.0	0.1	1.0	5.0	0.0	5.0	0.0	2.5
H122-4	3.3	5	8	4.0	6.8	1.0	3.0	0.0	2.7	3.3	20.0	0.0	0.0	3.2
J18-2	4.3	1	8	5.3	2.5	1.0	0.0	0.2	1.3	6.7	3.3	0.0	0.0	1.2
J21-5	4.0	5	8	6.5	6.1	1.5	2.2	1.3	1.0	0.0	0.0	0.0	0.0	1.8
K6-1	4.3	1	8	6.5	4.4	1.6	0.2	0.2	2.5	16.7	3.3	0.0	0.0	0.7
K11-2	4.3	2	8	6.3	2.2	1.7	0.5	0.0	0.0	6.7	0.0	0.0	0.0	2.0
K13-2	3.0	1	6	3.7	4.3	1.4	2.6	0.0	0.3	0.0	0.0	0.0	0.0	2.5
K13-3	5.3	1	6	5.0	3.0	1.7	0.4	0.4	0.5	0.0	0.0	0.0	0.0	3.3
K18-3	4.0	2	8	4.0	4.1	2.3	1.2	0.6	0.0	16.7	0.0	0.0	0.0	2.0
K18-8	5.7	3	8	4.3	5.5	1.9	0.5	1.5	1.6	3.3	0.0	0.0	0.0	2.2
K19-9	6.7	3	6	5.3	6.0	4.7	0.5	0.2	0.6	6.7	0.0	0.0	0.0	1.5
K19-28	6.0	1	6	4.7	4.9	2.9	0.0	0.5	1.6	26.7	0.0	0.0	0.0	1.7
K19-31	3.0	2	6	3.0	10.8	3.2	4.0	3.1	0.5	20.0	0.0	0.0	0.0	3.8
K21-2	3.3	3	6	4.0	1.7	1.0	0.7	0.0	0.0	23.3	0.0	0.0	0.0	2.0
K21-6	5.0	1	6	4.5	7.2	1.3	3.3	2.2	0.5	3.3	0.0	0.0	0.0	1.8
K21-8	4.7	4	6	3.7	3.7	0.4	1.1	1.7	0.5	0.0	0.0	0.0	0.0	3.0
K22-3	4.3	1	8	5.0	2.9	1.2	0.9	0.4	0.4	0.0	0.0	0.0	0.0	2.3
K22-7	5.3	3	8	4.0	3.9	3.4	0.0	0.1	0.4	6.7	0.0	0.0	0.0	2.0
K22-10	3.3	1	8	4.2	2.0	1.7	0.1	0.0	0.2	6.7	0.0	0.0	0.0	1.8
K23-6 **	3.0	1	7	4.5	1.2	1.0	0.0	0.0	0.2	0.0	0.0	0.0	0.0	2.8
K23-13	4.0	2	6	4.0	3.0	1.3	1.0	0.0	0.7	23.3	6.7	0.0	0.0	1.2

Upstate New York Table 15 continued. Plant maturity, tuber shape and appearance, percentage of external and internal tuber defects, and scab rating for the Cornell University advanced white lines trial grown at Freeville, New York - 2013.

K27-1	5.7	2	6	6.3	2.6	2.0	0.2	0.2	0.2	13.3	0.0	0.0	0.0	0.7
K27-3	7.0	3	8	6.2	5.7	3.5	1.1	0.6	0.6	10.0	0.0	0.0	0.0	1.0
K27-4	5.0	5	8	6.2	5.6	1.7	1.7	1.8	0.4	10.0	0.0	0.0	0.0	0.5
K28-6	2.0	3	6	5.2	9.3	1.2	0.8	6.9	0.5	6.7	0.0	0.0	0.0	2.7
K28-7	5.0	5	7	3.3	6.1	3.4	2.0	0.7	0.1	10.0	0.0	0.0	0.0	3.7
K28-14	2.3	3	6	4.7	6.3	1.1	4.0	0.8	0.4	0.0	6.7	0.0	0.0	2.7
K28-18	1.7	3	6	3.7	5.8	0.7	2.9	1.4	0.7	0.0	0.0	0.0	0.0	1.0
K28-21	5.0	5	6	2.0	7.0	3.1	1.6	1.0	1.4	36.7	0.0	0.0	0.0	4.2
K28-26	5.7	3	7	5.5	7.5	4.0	2.7	0.5	0.1	3.3	0.0	0.0	0.0	2.0
K30-9	5.3	1	6	6.7	7.5	4.7	1.8	0.9	0.0	6.7	0.0	0.0	0.0	0.3
K31-4	4.3	2	7	5.8	3.6	1.1	1.8	0.1	0.5	6.7	0.0	0.0	0.0	2.3
K34-1	6.3	2	6	5.2	1.2	0.6	0.1	0.0	0.4	6.7	0.0	0.0	0.0	1.5
K107-4	4.7	1	8	5.5	2.2	1.2	0.7	0.0	0.3	0.0	0.0	0.0	0.0	2.0
K107-8	5.5	1	7	5.5	3.1	2.1	0.1	0.0	1.0	40.0	0.0	0.0	0.0	2.5
KATAHDIN **	5.0	3	8	5.0	2.5	2.5	0.0	0.0	0.0	20.0	0.0	0.0	0.0	1.8
NY115	4.3	2	8	6.3	2.7	0.6	0.4	0.0	1.7	0.0	0.0	0.0	0.0	1.0
REBA	5.3	5	8	5.0	2.6	1.9	0.2	0.1	0.3	33.3	0.0	0.0	0.0	1.0
SNOWDEN	4.7	1	6	3.2	1.7	1.3	0.2	0.0	0.1	13.3	0.0	0.0	0.0	2.7
SUPERIOR	2.7	5	6	4.0	4.2	1.2	2.0	0.0	1.0	10.0	3.3	3.3	0.0	0.5
Average:	4.5	2	7	4.9	4.4	1.9	1.2	0.7	0.7	10.0	1.1	0.2	0.0	2.0
Maximum:	7.0	5	8	6.7	10.8	4.7	4.0	6.9	2.7	40.0	20.0	5.0	0.0	4.2
Minimum:	1.7	1	5	2.0	1.2	0.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3

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

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

Upstate New York Table XX. 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 - 2013.

Variety or Clone	Total Yield		Mkt. Yield		Size Distribution ¹				Mean Tuber		Percent External Tuber Defects				Percent Internal Tuber Defects				Spec. Grav.
	Cwt/A		Cwt/A		(% of total yield)				#/ft	wt(oz)	SUN	KNB	GC	ROT	HH	BC	VD	NEC	
				% of Std.	1	2	3	4											
ACCUMULATOR	387	343	91	9	67	24	0	8.7	4.9	1	0	1	0	10	5	0	0	103	
ATLANTIC	435	375	100	7	61	32	1	9.3	5.1	6	0	0	0	10	0	0	0	98	
J2-21 *	382	319	85	11	70	20	0	9.1	4.6	6	0	0	0	0	0	0	0	92	
J3-14 *	376	324	86	11	74	15	0	10.0	4.2	3	0	0	0	0	0	0	0	86	
J5-2 *	365	267	71	20	75	5	0	12.9	3.1	6	0	0	0	0	0	0	0	90	
J13-2 *	407	337	90	14	65	21	0	10.6	4.2	4	0	0	0	0	0	0	0	84	
J15-7 *	430	372	99	10	63	25	1	10.1	4.7	2	0	0	0	0	0	0	0	85	
J17-1 *	253	214	57	14	83	4	0	6.4	4.4	2	0	0	0	0	0	0	0	105	
LAMOKA	342	297	79	9	73	18	0	9.9	3.8	4	0	0	0	0	0	0	0	99	
MSR061-1	362	309	82	12	70	17	0	9.5	4.2	2	0	0	0	10	0	0	0	97	
NICOLET	360	286	76	14	69	17	0	10.1	3.9	7	0	0	0	0	0	0	0	99	
NY140	436	382	102	7	60	32	1	9.1	5.3	5	0	0	0	0	0	0	0	88	
NY148	376	311	83	16	75	9	0	10.7	3.9	2	0	0	0	5	0	0	0	102	
SNOWDEN	376	295	79	17	70	13	0	11.5	3.6	5	0	0	0	30	0	0	0	100	
WANETA	430	365	97	7	54	38	2	8.0	5.9	6	0	0	0	0	0	0	0	92	
Average:	381	320	85	12	69	19	0	9.7	4.4	4	0	0	0	4	0	0	0	94	
Maximum:	436	382	102	20	83	38	2	12.9	5.9	7	0	1	0	30	5	0	0	105	
Minimum:	253	214	57	7	54	4	0	6.4	3.1	1	0	0	0	0	0	0	0	84	

¹Tuber size classes:

1 = under 2" dia., 2 = 2" to 3" dia., 3 = 3" to 4" dia., and 4 = over 4" dia.

Plant Date: June 5

Vinekill Date: September 17 & 23

Harvest Date: October 15

Fertilizer: 128N - 256P- 128K - 5S - 5Zn lbs. per acre

Vinekill: 1 pt./a Reglone + crop oil

Irrigation: ??

Other: 7 oz /a Quadris, 2.67 oz /a Platinum.

36" bed width by 8 inch within row spacing

* Note: This trial had two replications, except there was only one plot each for the six "J" clones as denoted by "**".

Upstate New York Table XX. 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 Bliss, New York - 2013.

Variety or Clone	Total Yield	Mkt. Yield		Size Distribution ¹				Mean Tuber		Percent External Tuber Defects				Percent Internal Tuber Defects				Spec. Grav.
	Cwt/A	Cwt/A	% of Std.	(% of total yield)				#/ft	wt(oz)	SUN	KNB	GC	ROT	HH	BC	VD	NEC	
				1	2	3	4											
ACCUMULATOR	412	357	108	9	56	33	2	8.7	5.0	1	0	1	0	5	0	0	5	96
ATLANTIC	376	331	100	9	66	24	1	8.5	4.6	2	0	0	0	0	0	0	0	96
J2-21 *	205	175	53	10	82	8	0	5.9	3.6	2	3	0	0	0	0	0	0	94
J3-14 *	322	231	70	27	69	4	0	11.8	2.8	1	0	0	0	0	0	0	0	82
J5-2 *	294	202	61	30	69	1	0	11.7	2.6	1	0	1	0	0	0	0	10	86
J13-2 *	329	254	77	22	75	3	0	11.4	3.0	1	0	0	0	0	0	0	0	85
J15-7 *	391	337	102	10	72	17	1	9.3	4.4	2	0	1	0	0	0	0	0	93
J17-1 *	312	227	69	25	73	2	0	9.9	3.3	2	0	0	0	0	0	0	0	93
LAMOKA	312	252	76	16	72	12	0	8.2	4.0	2	0	1	0	0	0	0	0	92
MSR061-1	358	287	87	19	75	6	0	11.5	3.2	0	0	0	0	0	0	0	0	86
NICOLET	329	242	73	20	69	10	1	10.2	3.4	4	0	0	0	0	0	0	0	95
NY140	400	336	101	14	75	12	0	9.8	4.2	2	0	0	0	0	0	0	0	87
NY148	413	334	101	14	73	11	2	11.0	3.9	2	1	0	0	0	0	0	0	98
SNOWDEN	390	293	89	24	70	6	0	13.0	3.1	1	0	0	0	0	0	0	0	95
WANETA	232	184	55	19	74	8	0	6.4	3.7	1	1	1	0	0	0	0	0	86
Average:	338	269	81	18	71	10	0	9.8	3.7	2	0	0	0	0	0	0	1	91
Maximum:	413	357	108	30	82	33	2	13.0	5.0	4	3	1	0	5	0	0	10	98
Minimum:	205	175	53	9	56	1	0	5.9	2.6	0	0	0	0	0	0	0	0	82

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

Plant Date: May 31

Vinekill Date: September ??? (2 dates?)

Harvest Date: October 11

Fertilizer: xxxxxx lbs. per acre

Vinekill: ??? Material? Diquat at 1.5 pt/acre???

Irrigation: none

* Note: This trial had two replications, except there was only one plot each for the six "J" clones denoted by "*".

34 " bed width by 8 inch within row spacing

Data from Riverhead, Long Island Trials
Sandra Menasha

Long Island Table 2. Yield, marketable yield, percentage of yield by grade, size distribution and specific gravity of Advanced Cornell white-skinned clones grown at Riverhead, N.Y. - 2013.

Clone	Total	Marketable Yield		Size Distribution (%)					Size Distribution		
	Yield		percentage	2 to	2.5 to	3.25 to	4"	>4"	2 to	2.5 to	Specific ¹
	cwt/A	cwt/A	of standard	<2"	2.5"	3.25"	4"	>4"	4 in.	4 in.	Gravity
Season-141 days											
Andover	320	308	97	3	27	63	7	0	97	70	70
Envol	372	353	111	2	18	68	11	1	97	79	67
Marcy	338	327	103	2	17	63	18	1	97	80	68
Norwis	312	288	90	5	32	57	5	1	94	62	65
Reba	336	319	100	4	36	51	9	0	96	60	69
Sassy	318	257	81	13	55	30	2	0	87	32	72
Superior	333	317	99	3	29	62	7	0	97	69	71
NY141	378	348	109	4	20	63	11	1	95	75	70
NY143	267	241	76	7	39	46	8	0	93	55	65
NY148	376	345	108	6	48	44	1	1	93	45	79
NY150	224	161	50	28	67	5	0	0	72	5	71
<i>Fisher's Protected</i>											
LSD (0.05)	(67)	(64)									(4)

Planted on 4/16/13, fertilizer rate was 176-176-240/A controlled release nitrogen blend, vine killed on 9/4/13, harvested on 10/3/13.

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 clones grown at Riverhead, N.Y. - 2013.

Clone	Maturity ¹	Tuber Data ¹		Tuber Defects (%)					Percentage					
	on	Shape	Appearance	Sun-	Mis-	Growth	Other ²	Hollow heart	Brown center	Internal	Necrosis	Sl.	Mod.	Sev.
	8/8/2013			Total	burn	shaped	cracks							
Season-141 days														
Andover	1	O-R	7	1	0	0	1	0	3	0	0	0	0	0
Envol	1	O-R	6	2	0	2	0	0	10	0	3	0	0	0
Marcy	6	R-O	6	0	0	0	0	0	0	0	10	0	0	0
Norwis	5	R-O	7	1	1	0	0	1	5	3	5	0	0	0
Reba	4	R-O	7	2	1	0	0	0	13	3	10	0	0	0
Sassy	2	R-O	3	7	2	0	5	1	3	5	33	10	3	3
Superior	1	R-O	6	2	0	2	0	0	0	0	5	0	0	0
NY141	4	R-O	7	3	1	2	0	1	0	0	0	0	0	0
NY143	2	O-R	8	3	1	1	1	0	5	8	0	0	0	0
NY148	4	R	6	1	1	0	0	0	3	0	8	0	0	0
NY150	2	R	8	1	0	1	0	0	0	3	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 No. 1 grade. Mechanical defects, however, were not scored.

Long Island Table 6. Yield, marketable yield, percentage of yield by grade, size distribution and specific gravity NE 1231 white-skinned clones grown at Riverhead, N.Y. – 2013

Clone	Total	Marketable Yield		Size Distribution (%)					Size Distribution		Specific ¹ Gravity
	Yield cwt/A	cwt/A	percentage of standard	<2"	2 to 2.5"	2.5 to 3.25"	3.25 to 4"	>4"	2 to 4 in.	2.5 to 4 in.	
Season-140 days											
Atlantic	467	445	100	1	12	56	29	2	96	85	82
Katahdin	303	283	64	5	54	39	2	0	95	41	65
Superior	356	341	77	2	24	65	7	1	97	72	69
Yukon Gold	323	306	69	3	19	67	11	1	97	77	74
AF4013-3	353	329	74	6	59	33	1	0	94	34	75
AF4138-8	404	383	86	4	32	54	9	0	95	64	65
BNC182-5	365	346	78	3	35	54	8	1	96	62	73
NY148	412	388	87	5	40	50	5	0	95	55	80
NY150	323	266	60	17	74	9	0	0	83	9	73
<i>Fisher's Protected</i>											
LSD (0.05)	(43)	(43)									(3)

Planted on 4/17/2013, fertilizer rate was 176-176-240/A controlled release nitrogen blend, vine killed on 9/4/13 on 9/30/13.

¹ -1.0 is excluded from specific gravity readings.

Long Island Table 7. Maturity, tuber shape, and internal and external defects of NE 1231 white-skinned clones grown at Riverhead, N.Y. – 2013

Clone	Maturity ¹ on	Tuber Data ¹		Tuber Defects (%)					Percentage				
	8/8/2013	Shape	Appearance	Total	Sunburn	Misshapen	Growth cracks	Other ²	Hollow heart	Brown center	Internal SI	Mod.	Necrosis Sev.
Season-140 days													
Atlantic	6	R-O	6	1	0	0	0	0	8	3	55	10	3
Katahdin	3	O-R	7	1	1	1	0	0	0	5	0	0	0
Superior	1	R-O	6	1	0	0	0	0	0	0	5	0	0
Yukon Gold	1	R-O	6	2	0	1	0	0	0	5	0	0	0
AF4013-3	3	O-R	7	0	0	0	0	0	0	0	0	0	0
AF4138-8	3	R-O	6	1	0	0	0	0	0	0	40	5	0
BNC182-5	5	R	6	1	0	1	0	0	5	5	5	0	0
NY148	3	R	6	1	0	1	0	0	0	0	45	5	0
NY150	2	R-O	7	1	0	0	0	0	0	0	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 U.S. No. 1 grade. Mechanical defects, however, were not scored.



Typical roadside potato stand in Shashemene district of Ethiopia