



Potato Show & Tell, 2 December 2015



Contents of this Report

- I. Paragraph descriptions of advanced selections from the Cornell Breeding Program
- II. Summary tables comparing yield and specific gravity across trial sites
- III. Results from Cornell Breeding Trials (Walter De Jong and Bob Plaisted)
 - i. Advanced Yield Trial, Ellis Hollow
 - ii. Intermediate Stage Yield Trial, Ellis Hollow
 - iii. First Stage Yield Trial, Ellis Hollow
 - iv. Red Yield Trial, Ellis Hollow
 - v. Chip Color Data for 2014 Crop in University Trials
 - vi. Chip Color Summary for 2012-2014 University Trials
 - vii. Common Scab Resistance Test Data
 - viii. Tuber Dormancy Data
- IV. Data from Freeville and Upstate County Trials (Don Halseth)
 - i. Advanced Yield Trial, Freeville
 - ii. Intermediate Stage Yield Trial, Freeville
 - iii. First Stage Yield Trial, Freeville
 - iv. Red Yield Trial, Freeville
 - v. Early Harvest Yield Trial, Freeville
 - vi. Wayne County Muck Soil Red and Purple Clone Yield Trial, Marion
 - vii. Wayne County Muck Soil White Clone Yield Trial, Marion
 - viii. Steuben County Chipstock Yield Trial, Arkport
 - ix. Wyoming County Chipstock Yield Trial, Castile
- V. Data from Long Island Trials (Sandra Menasha)
 - i. Advanced White-Skinned Clone Yield Trial
 - ii. Maine, USDA and Michigan Intermediate White-Skinned Clone Yield Trial
 - iii. Northeast Regional Evaluation Project (NE1231) Yield Trial
 - iv. Red- and Purple-Skinned Yield Trial

Description of Advanced Selections From Cornell Breeding Program
Based on Cornell trials in 2015 and prior years
Last updated: 18 November 2015

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

- Marketable yields in Tompkins County over the past 13 years have averaged 98% of Atlantic (34 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, 109% in 2013, 143% in 2014, and 101% of Reba in 2014.
- 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), 97% in 2012 (3 trials), and 88% of Atlantic in 2014 (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: 98% of Superior in 2015, 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 (35 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.

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

- In nine Tompkins County trials over four years, marketable yields averaged 85% of Atlantic.
- Wayne County (muck soil) yield was 67% of Atlantic in 2011 and 114% of Eva in 2015.
- Yield on Long Island was 83% of Yukon Gold in 2011.
- Yield in PA was 118% of Atlantic in 2011 (1 trial).

Tuber flesh color comparable to Yukon Gold, but tuber size is smaller. A low level of pickouts, mostly misshapes, have been observed. Generally free of internal defects. Low levels of hollow heart have been observed. Specific gravity has averaged 0.013 less than Atlantic (9 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.

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

- In 15 Tompkins County trials over the past seven years, yields of tubers between 1 and 1.875 inches averaged 167 cwt/acre, while yields of tubers between 1.875 and 2.5 inches in diameter averaged 160 cwt/acre. In the same trials yield of tubers greater than 2.5 inches averaged only 18 cwt/acre. For comparison, marketable yield of Atlantic (>1.875 inches) in the same trials averaged 408 cwt/acre.
- Yield in Wayne County in 2014 was 128, 181 and 20 cwt/acre for the less than 2 inch, 2 to 3 inch, and greater than 3 inch size categories, respectively. Yield for the same size categories in a short 2015 season were 110, 35 and 0 cwt/acre.
- Yield on Long Island in 2014 was 63, 207 and 21 cwt/acre for the less than 2 inch, 2 to 2.5 inch, and greater than 2.5 inch size categories, respectively. Yield in 2015 was 75, 155 and 20 cwt/acre for the same size categories.
- Yield in PA in 2013 averaged 143, 185 and 43 cwt/acre for the less than 1.875 inch, 1.875 to 2.5 inch, and greater than 2.5 inch size categories, respectively (2 trials). Yield in 2014 was 114, 159 and 93 cwt/acre for the same size categories.

Few pickouts (mostly misshapes) or internal defects have been observed. Specific gravity has averaged 0.010 less than Atlantic (13 trials). Tubers do not darken or slough appreciably after boiling, and retain attractive appearance after long term storage. Very little skinning when harvested early (end of July). 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, 2013 and 2014. Resistant to race Ro1 of the golden nematode.

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

- In 11 Tompkins County trials over the past six years, marketable yields averaged 104% of Atlantic.
- Yield in Wayne County was 114% of Atlantic in 2014 and 116% of Eva in 2015.
- Yield on Long Island was 116% of Reba in 2011, 118% in 2012, 114% in 2014, and 110% of Reba in 2015.
- Yield in PA was 117% of Atlantic in 2011 (1 trial), 114% in 2012 (3 trials), and 81% of Atlantic in 2014 (2 trials).

In general, low levels of pickouts (mostly growth cracks) or internal defects (brown center) have been observed, although 23% brown center was observed in one trial in 2014. Specific gravity is low and has averaged 0.024 less than Atlantic (11 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, excellent chip color.

- In nine Tompkins County trials over the past five years, marketable yields averaged 103% 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, 133% in 2014, and 98% in 2014.
- Yield on Long Island was 164% of Reba in 2014.

Low levels of pickouts (growth cracks) or internal defects (hollow heart) have been observed. Specific gravity has averaged 0.008 less than Atlantic (14 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 averaged 3.3 versus 3.7 for Snowden in 2012, 3.0 versus 4.7 for Snowden in 2013, and 3.7 versus 4.0 for Snowden in 2014. Moderate to good resistance to common scab. Tuber dormancy is about 4 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 eight Tompkins County trials over the past five years, marketable yields averaged 92% 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 and 85% of Atlantic in 2015.

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 and 77% in one trial in 2015. Specific gravity has averaged 0.002 less than Atlantic (11 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 averaged 2.7 versus 3.7 for Snowden in 2012, 3.3 versus 4.7 in 2013, and 3.0 versus 4.0 for Snowden in 2014. Moderate resistance to common scab. Tuber dormancy is about 5 weeks longer than Atlantic. Resistant to race Ro1 of the golden nematode.

Because of the high levels of hollow heart in some trials, we will stop evaluating this clone in our trials. Nevertheless, the USBP fast-track program grew 1 acre of NY153 seed in 2015. If NY153 does well in national trials in 2016, we will resume testing.

NY154 (H15-17) = B38-14 x Marcy (2006). Late season chipstock, promising chip color.

- In eight Tompkins County trials over the past five years, marketable yields averaged 115% of Atlantic.
- Yield in PA was 91% of Atlantic in 2011 (1 trial) and considerably better than Atlantic (176%; too good to be true) in 2015 (two trials).
- In trials in Wyoming and Steuben Counties, yield averaged 122% of Atlantic in 2012, 150% in 2014, and 103% of Atlantic in 2015.
- Yield on Long Island was 125% of Atlantic in 2014.

Low levels of pickouts (knobs) or internal defects (hollow heart) have been observed. Specific gravity has averaged 0.007 less than Atlantic (13 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). Chip color averaged 3.0 versus 3.7 for Snowden in 2012, 3.0 versus 4.7 in 2013, and 3.7 versus 4.0 for Snowden in 2014. Good resistance to common scab. Tuber dormancy is comparable to Atlantic. Susceptible to race Ro1 of the golden nematode.

NY155 (H122-4) = NY136 x Nordonna (2006). Early maturing, pink-skinned tablestock.

- In seven Tompkins County trials over the past five years, marketable yields averaged 101% of Chieftain.
- Yield in Wayne County was 84% of Atlantic in 2014 and 104% of Chieftain in 2015.
- Yield on Long Island was 76% of Chieftain in 2012 and 151% of Reba in 2014.
- 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 (hollow heart, 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. Susceptible to the golden nematode.

NY156 (J104-3) = White Pearl x Marcy (2007). Late maturity chipstock. Outstanding chip color.

NY156 had considerable virus in 2014. We will resume testing in several years, once clean seed becomes available.

- In three Tompkins County trials over the past three years, marketable yields averaged 87% of Atlantic.

Low levels of pickouts (secondary growth) or internal defects (internal necrosis) have been observed. Specific gravity has averaged 0.008 less than Atlantic (3 trials). Chip color from 44F storage in December, January and February (2012 crop season) averaged 2.0 compared to 4.0 for Snowden (lower is better). Chip color from the 2013 crop averaged 2.0 compared to 5.7 for Snowden in the same trial. Chip color from the 2014 crop averaged 2.3 compared to 4.0 for Snowden. Moderately resistant to common scab. Tuber dormancy is similar to Atlantic. Susceptible to race Ro1 of the golden nematode.

NY157 (J105-10) = White Pearl x NY115 (2007). Mid-season chipstock.

- In seven Tompkins County trials over the past four years, marketable yields averaged 91% of Atlantic.
- In trials in Wyoming and Steuben Counties, yield averaged 100% of Atlantic in 2014, and 87% of Atlantic in 2015.
- On Long Island, yield was 114% of Reba in 2014 and 88% of Reba in 2015.

Low levels of pickouts (knobs, growth cracks) or internal defects (internal necrosis) have been observed. Specific gravity has averaged 0.007 less than Atlantic (11 trials). Chip color from 44F storage in December, January and February (2012 crop season) averaged 4.0 compared to 4.0 for Snowden (lower is better). Chip color averaged 3.7 vs 5.7 for Snowden in 2013 and 3.0 versus 4.0 for Snowden in 2014. Moderately resistant to common scab. Tuber dormancy is similar to Atlantic. Resistant to race Ro1 of the golden nematode.

NY158 (K28-7) = Snowden x E48-2 (2008). Late maturity chipstock.

- In five Tompkins County trials over the past three years, marketable yields averaged 103% of Atlantic.
- In trials in Wyoming and Steuben Counties, yield averaged 114% of Atlantic in 2014 and 97% of Atlantic in 2015.

Low levels of pickouts (growth cracks) have been observed. Hollow heart (5 to 10%) is often observed. Specific gravity has averaged 0.002 less than Atlantic (10 trials). Chip color from 44F storage in December, January and February (2013 crop season) averaged 3.0 compared to 4.3 for Snowden (lower is better). Chip color averaged 3.3 vs 4.0 for Snowden in 2014. Intermediate reaction to common scab. Tuber dormancy is about two weeks longer than Atlantic. Resistant to race Ro1 of the golden nematode.

NY159 (K100-3) = B13-1 x Chieftain (2008). Mid-late season, red tablestock with smooth skin. Known informally as 'Electric Red'.

- In six Tompkins County trials over the past three years, marketable yields averaged 96% of Chieftain.
- Yield in Wayne County was 112% of Chieftain in 2014 and 51% of Chieftain in 2015.

Tubers are round to oblong in shape with attractive red color and smooth skin. Low levels of pickouts (growth cracks) or internal defects (internal necrosis) have been observed. Moderate resistance to common scab. Tubers do not darken but do slough slightly after boiling. Tuber dormancy is one to two weeks longer than Atlantic. Susceptible to the golden nematode.

NY160 (L27-2) = D32-4 x C100-2 (2009). Early-mid season, pink-skinned tablestock.

- In four Tompkins County trials over the past two years, marketable yields averaged 83% of Chieftain.
- Yield in Wayne County was 84% of Chieftain in 2014 and 50% of Chieftain in 2015.

Tubers are relatively small, with smooth, pink skin. Very few pickouts or internal defects have been observed. Moderate resistance to common scab. Tuber dormancy is two weeks shorter than Atlantic. Susceptible to the golden nematode.

This clone has a lot of virus in 2015 and will resume testing in a few years, once we have clean seed available again.

NY161 (L29-3) = Daisy Gold x C24-1 (2009). Mid-late season yellow-fleshed tablestock with purple splashes on the skin. Known informally as 'Violetta'.

- In three Tompkins County trials over the past two years, marketable yields averaged 122% of Atlantic. In another Tompkins County trial, yield was 90% of Chieftain.
- Yield in Wayne County was 154% of Atlantic in 2014 and 76% of Chieftain in 2015.

Tubers have smooth skin with purple splashes around the eyes and pleasing yellow flesh. Low levels of growth cracks and hollow heart are typically observed. Moderate resistance to common scab. Tuber dormancy is one week longer than Atlantic. Susceptible to the golden nematode.

(blank)

2015 Summary of Yield Trials

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

	Ellis Hollow			Freeville				County		
	Advanced Trial	Intermed. Trial	Red Trial	Advanced Trial	Intermed. Trial	Red Trial	Early Harv. Trial	Wayne Marion	Steuben Arkport	Wyoming Castile
Atlantic	100	100		100	100		134		100	100
Snowden	94	128		96	112				89	103
Superior							100			
Eva	82	117		102	76			100		
Lamoka	78	106		78						87
Yukon Gold	72	82		69	55					
NY141	91			74			98			
NY149	81			97				114		
NY150	86 *			90 *			128 *	63 *		
NY151	85			100				116		
NY152	96			110					94	101
NY153	74			87					82	88
NY154	101			98					93	113
NY157	91			93					88	85
NY158 (K28-7)	93			106					93	101
NY161 (L29-3)		132			124			76		
K11-2	76			83				94		
K27-1	82			102			122			
K27-3	87			91					70	97
K28-14	90			89						
K28-18	98			93						
K31-4	91			104					104	97
L1-7		127			89					
L2-12		107			90		127		80	
L7-2		126			100					
L8-12		88			95				99	
L17-3		113			103					
L30-5		121			94					
Chieftain			100			100		100		
Nordonna			68			98		66		
NY155			90			109		104		
NY159 (K100-3)			104			100		51		
NY160 (L27-2)			72			81		50		
L26-6			67			82		45		

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

2015 Summary of Specific Gravities

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

	Ellis Hollow		Freeville		County	
	Advanced Trial	Intermed. Trial	Advanced Trial	Intermed. Trial	Steuben Arkport	Wyoming Bliss
Atlantic	1.097	1.100	1.105	1.105	1.105	1.105
Snowden	+2	0	-3	+1	0	0
Lamoka	-4	-4	-7			0
Waneta	-12				-12	
NY141	-13		-16			
NY149	-18		-21			
NY150	-9		-14			
NY151	-27		-31			
NY152	-6		-9		-8	-11
NY153	-5		-2		+1	-4
NY154	-1		-1		-10	-10
NY157	-4		-7		-9	-11
NY158 (K28-7)	+1		-7		-3	+4
NY161 (L29-3)		-18		-14		
K11-2	-29		-27			
K27-1	-13		-14			
K27-3	-1		-7		-7	0
K28-14	-3		-11			
K28-18	+2		0			
K31-4	-6		-6		-7	-4
L1-7		-10		-9		
L2-12		-7		-6	-4	
L7-2		-5		-1		
L8-12		-7		-5	+3	
L17-3		-10		-4		
L30-5		-15		-5		

Results from Cornell Breeding Program Trials

Walter De Jong and Robert Plaisted

2015 Advanced Stage Yield Trial, Ellis Hollow

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

4 Replicates

Planted May 5, harvested September 22. Vine kill applied September 3.

	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	454	371	82	20	gc, k	33	0	0	3.0	1.097
Eva	373	302	81	0	-	3	0	0	3.3	1.078
Lamoka	354	296	84	8	gc	3	0	0	3.0	1.093
Snowden	427	309	72	0	-	15	0	0	2.9	1.099
Waneta	352	291	83	3	gc	5	0	0	3.2	1.085
Yukon Gold	325	294	90	32	gc, k	35	0	0	2.5	1.079
NY141	412	348	85	11	k, gc	8	0	0	3.1	1.084
NY149	366	232	63	0	-	7	0	0	3.8	1.079
NY150**	230	28	12	0	-	0	1	0	3.8	1.086
NY151	388	289	75	2	gc, k	0	5	0	3.6	1.070
NY152	438	300	68	0	-	5	0	0	3.2	1.091
NY153	335	243	72	1	gc	20	0	0	3.0	1.092
NY154	459	316	69	0	-	0	0	0	3.2	1.096
NY157	415	296	71	0	-	0	0	0	3.0	1.093
K11-2	345	232	67	4	gc	0	0	0	2.9	1.068
K27-1	373	269	72	2	gc, k	10	0	0	3.2	1.084
K27-3	393	258	66	4	gc	3	0	0	3.0	1.096
K28-7	422	302	72	0	-	5	0	0	3.0	1.098
K28-14	407	331	81	34	gc, k	30	0	0	2.9	1.094
K28-18	445	311	70	32	gc, k	3	0	0	2.6	1.099
K31-4	412	299	72	0	-	5	0	0	3.3	1.091

**NY150 also produced an additional 160 cwt/acre of tubers less than 1.875 inches in diameter

2015 Intermediate Stage Yield Trial, Ellis Hollow

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

Three replicates

Planted May 4, harvested September 21. Vine kill applied September 3.

	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	329	254	77	10	gc, k	30	10	0	3.1	1.100
Eva	386	316	82	0	-	0	0	0	3.6	1.083
Lamoka	348	287	82	4	gc	0	0	0	3.4	1.096
Snowden	421	309	73	0	-	10	0	0	2.9	1.100
Yukon Gold	270	249	92	19	gc, k	65	0	0	2.7	1.088
L1-7	417	334	80	6	gc	10	0	0	3.2	1.090
L2-12	351	225	64	0	-	0	0	0	3.1	1.093
L7-2	416	293	71	4	gc	0	0	0	3.1	1.095
L8-12	291	231	79	4	gc	0	0	0	3.1	1.093
L9-6	292	147	50	0	-	0	0	0	3.2	1.093
L17-1	247	140	57	0	-	3	0	0	3.2	1.099
L17-3	371	237	64	7	gc	0	0	0	3.5	1.090
L29-3	436	321	74	7	gc	3	0	0	3.3	1.082
L30-5	397	220	55	0	-	3	0	0	3.4	1.085

2015 First Stage Yield Trial, Ellis Hollow

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

3 Replicates

Planted May 5, harvested September 22. Vine kill applied September 3.

	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	482	397	82	6	gc, k	23	0	0	2.9	1.096
Lamoka	379	315	83	0	-	0	0	0	3.1	1.090
Snowden	438	319	73	0	-	3	0	0	2.8	1.099
Waneta	358	297	83	7	gc	3	0	0	3.2	1.084
M3-4	485	394	81	19	gc	0	0	0	3.1	1.077
M3-10	354	266	75	18	gc	3	0	0	3.0	1.075
M5-4	310	225	73	5	gc	0	10	0	3.2	1.093
M5-5	368	246	67	0	-	0	0	0	3.0	1.083
M7-1	373	240	64	0	-	10	3	0	3.0	1.093
M7-2	374	183	49	0	-	0	0	0	3.4	1.077
M7-4	433	309	71	0	-	0	0	0	3.2	1.082
M7-6	374	263	70	4	gc	0	0	0	3.3	1.084
M8-4	329	202	61	0	-	0	0	0	3.3	1.095
M8-5	461	356	77	0	-	0	0	0	2.8	1.083
M13-1	398	282	71	9	gc	7	0	0	2.8	1.082
M13-7	313	239	76	0	-	17	0	0	3.2	1.086
M14-5	335	256	76	7	gc	0	3	0	2.8	1.096
M14-6	325	179	55	16	gc, k	0	0	0	3.4	1.077
M14-11	407	277	68	13	gc	0	0	0	3.1	1.081
M15-3	348	258	74	9	gc	0	0	0	2.9	1.085
M15-4	466	365	78	2	gc, k	0	0	0	2.6	1.084
M15-5	425	284	67	0	-	0	0	0	3.0	1.086
M15-7	299	197	66	3	gc	10	0	0	3.0	1.089
M18-2	337	185	55	0	-	0	0	0	3.0	1.092
M18-3	494	380	77	5	gc, k	10	0	3	2.7	1.082
M18-4	311	186	60	14	gc	3	0	0	3.0	1.080
M18-7	418	312	75	0	-	3	0	0	2.9	1.076
M102-3	431	305	71	0	=	0	0	0	3.0	1.093

2015 Red Trial, Ellis Hollow

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

3 replicates (unless indicated otherwise in parentheses)

Planted May 4, harvested September 21. Vine kill applied September 3.

	cwt/acre		%	pickout		% internal defects			appear. score	specific gravity
	>1 7/8"	>2 1/2"		>2 1/2"	cwt/A	type	HHT	IN		
Adirondack Blue	241	116	48	0	-	7	0	0	2.6	1.072
Chieftain	435	339	78	6	gc	0	0	0	3.1	1.074
Nordanna	296	207	70	0	-	0	0	0	3.1	1.080
Red Maria	388	284	73	0	-	0	0	0	3.3	1.075
Strawberry Paw	352	237	67	2	gc	0	0	0	3.5	1.081
NY155	391	256	65	2	k	7	7	0	3.6	1.073
K100-3	452	323	72	0	-	0	0	0	3.5	1.067
L26-6	292	177	61	1	gc	0	0	0	3.6	1.081
L26-7	254	104	41	7	k	0	0	0	3.0	1.074
L27-2	313	131	42	0	-	0	0	0	3.8	1.074
M1-1	359	290	81	0	-	3	0	0	3.0	1.078
M12-3	362	199	55	0	-	0	0	0	3.0	1.084
M22-3	386	243	63	2	gc	0	0	0	3.0	1.085
M22-6	328	218	67	0	-	3	0	0	2.8	1.098

2014 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	4.0	4.0	4.0
WANETA	3.0	2.0	-	2.5
LAMOKA	3.0	3.0	4.0	3.3
NY140	4.0	3.0	3.0	3.3
NY148	4.0	3.0	3.0	3.3
NY152	4.0	3.0	4.0	3.7
NY153	3.0	3.0	3.0	3.0
NY154	4.0	3.0	4.0	3.7
NY156 (J104-3)	3.0	2.0	2.0	2.3
NY157 (J105-10)	3.0	3.0	3.0	3.0
NY158 (K28-7)	4.0	3.0	3.0	3.3

VISUAL CHIP SCALE: 1 - 10

1 = best

4 = marginal

5 and over = not acceptable

Samples were not reconditioned before chipping

Average Chip Color over Three Years - University Trials

Out of 44F storage: 2012 - 2014 crop seasons.

Reconditioned 0-1 weeks at room temperature

	VISUAL SCORES			
	(3 YEARS, 1 LOCATION)			
	DEC	JAN	FEB	AVG
Snowden	4.3	4.0	4.0	4.1
Waneta	3.7	2.7	4.0	3.5
Lamoka	3.0	3.0	3.7	3.2
NY140	2.7	3.0	3.0	2.9
NY148	4.0	5.0	4.0	4.3
NY152	3.7	3.0	3.3	3.3
NY153	3.0	3.0	3.0	3.0
NY154	3.7	3.0	3.0	3.3
NY156	2.3	2.0	2.7	2.3
NY157	3.7	3.7	3.7	3.7

VISUAL CHIP SCALE: 1 - 10

1 = best

4 = marginal

5 and over = not acceptable

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.

	2014	2013	2012	2011	2010	2009	2008	2007	2006	2005	2004
Round whites:											
Andover	1		3	3	3	3		4	4	3	
Atlantic	0	0	0		0	0	0	0	0	0	0
Eva	6		7	8							
Lamoka	0		3	0	1	1	1	2	3	-1	1
Lehigh							3	3	3	3	1
Marcy	3			4				4	4	3	2
Pike							4	5			2
Reba	2		4		5	5	4	6	7	5	3
Snowden	0		2	2	2	2	1	4	2	0	0
Superior							2				
Waneta	6		10	7	8	8	6	8	7	5	6
Yukon Gold				0	1						
NY140	4	5	7	6	6	7	5	6	6	5	5
NY141	0	4	3	2	2	2	2	3	3	1	2
NY148	0	0	0	1	0	0	0				
NY149				0	2	1					
NY150	3	3	2	2	2	2					
NY151	0	0	1	1	0						
NY152	2	4	3	5							
NY153	4	6	5	6							
NY154	-1	0	-1	3							
NY156	0	1	2								
NY157	-1	0	2								
NY158 (K28-7)	2	2									
NY161 (L29-3)	1										
Reds and purples:											
Chieftain	0	0	2	1	2	1	1	0	2	2	1
Norland DR	-4		-1				-3	-3		-2	-2
Nordonna	-2	0	2	0	1	2	0	0	1	1	0
Red Maria	1	3	3	4	5	3	3	4	4	1	4
NY155	1	2	3	2							
NY159 (K100-3)	1	2									
NY160 (L27-2)	-2										
Ad. Blue	0	0	-2					2	2	1	-1
Ad. Red	2							2	1	5	

**Data from Freeville and Upstate County Farm Trials
Walter De Jong and Don Halseth**

Advanced Clone Yield Trial, Freeville NY, 2015. Page 1 of 2.

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

3 Replicates

Planted May 5, harvested September 16. First vine kill applied August 19

Genotype Variety or Clone	Total Yield Cwt/A	Mkt. Yield		Size Distribution (% of total yield)					Size Distrib. (%)		Spec. Grav.
		Cwt/A	% of Std.	1	2	3	4	5	1-7/8" to 4"	2-1/2" to 4 "	
Atlantic	431	408	100	3	25	58	12	1	96	70	1.105
Eva	463	415	102	2	17	52	23	7	92	75	1.095
Lamoka	339	319	78	4	32	55	8	1	95	63	1.098
Snowden	419	390	96	7	39	51	3	0	93	54	1.102
Yukon Gold	345	280	69	1	15	46	30	8	91	76	1.090
NY141	364	303	74	2	16	45	28	10	89	73	1.089
NY149	429	396	97	7	42	41	9	0	92	51	1.084
NY150	368	244	60	33	59	8	0	0	67	8	1.091
NY151	454	406	100	4	22	52	16	6	90	68	1.074
NY152	478	449	110	5	34	52	9	1	94	60	1.096
NY153	382	355	87	4	32	47	15	3	93	61	1.103
NY154	429	398	98	4	27	53	13	3	93	66	1.104
NY157	412	380	93	6	33	48	12	1	93	60	1.098
K11-2	370	341	83	4	27	55	12	2	94	67	1.078
K27-1	447	418	102	3	31	54	9	2	94	63	1.091
K27-3	406	370	91	6	29	53	11	1	93	64	1.098
K28-14	402	363	89	2	20	59	15	4	93	74	1.094
K28-18	427	378	93	4	34	58	4	0	96	62	1.105
K28-7	449	432	106	3	29	58	9	0	97	68	1.098
K31-4	462	423	104	2	19	47	26	6	92	73	1.099

Tuber size classes:

1 = under 1.875 inches diameter, 2 = 1.875 to 2.5, 3 = 2.5 to 3.25, 4 = 3.25 to 4, 5 = over 4 inches diameter

Advanced Clone Yield Trial, Freeville NY, 2015. Page 2 of 2.

Genotype Variety or Clone	Tuber Attributes			External Tuber Defects (%)			Int. Tuber Defects (%)			
	Tuber Shape	Skin Text.	Tuber Appear.	Total Defects	Mis- shapen	Growth Cracks	Holl. Heart	Brn. Center	Vasc. Disc.	Int. Nec.
Atlantic	3.0	5.0	3.3	1.2	0.8	0.4	23	0	3	0
Eva	3.3	5.0	3.3	1.9	0.0	1.9	10	0	0	0
Lamoka	3.0	6.0	3.5	0.6	0.4	0.2	0	0	7	0
Snowden	2.0	5.0	3.0	0.0	0.0	0.0	0	0	13	0
Yukon Gold	3.7	7.0	3.5	9.7	6.3	3.4	20	0	0	0
NY141	3.0	6.0	3.5	5.3	4.0	1.3	0	13	0	0
NY149	3.7	6.0	3.6	0.2	0.1	0.1	17	0	0	0
NY150	3.0	7.0	3.4	0.8	0.8	0.0	0	0	0	0
NY151	3.0	7.0	3.6	0.6	0.3	0.3	0	0	0	0
NY152	3.0	5.0	3.4	0.0	0.0	0.0	60	0	0	0
NY153	2.7	5.0	3.3	0.2	0.0	0.2	77	0	0	0
NY154	4.0	5.0	3.4	0.5	0.3	0.2	17	0	27	0
NY157	3.0	5.0	3.5	0.4	0.0	0.4	0	0	0	0
K11-2	3.3	6.0	3.4	2.1	1.2	0.9	13	0	0	0
K27-1	3.0	6.7	3.4	1.0	0.2	0.8	23	3	0	0
K27-3	3.7	6.3	3.5	2.2	0.3	1.9	0	0	17	0
K28-14	3.0	5.0	3.3	3.8	0.6	3.2	47	3	3	0
K28-18	4.0	5.7	3.5	7.3	0.5	6.7	0	0	0	0
K28-7	3.0	6.3	3.3	0.6	0.0	0.6	17	0	20	0
K31-4	3.0	6.3	3.4	0.4	0.4	0.0	7	0	10	0

Tuber shape 1 = round, 2 = mostly round, 3 = round to oblong, 4 = mostly oblong, 5 = oblong, 6 = oblong to long, 7 = long

Skin texture 5 = netted, 6 = slight net, 7 = medium smooth, 8 = smooth, 9 = very smooth

Tuber appearance 2 = ugly, 3 = OK, 4 = nice

Intermediate Clone Yield Trial, Freeville NY, 2015. Page 1 of 2.

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

3 Replicates

Planted May 5, harvested September 16. First vine kill applied August 19

Genotype Variety or Clone	Total Yield Cwt/A	Mkt. Yield		Size Distribution ¹ (% of total yield)					Size Distrib. (%)		Spec. Grav.
		Cwt/A	% of Std.	1	2	3	4	5	1-7/8" to 4"	2-1/2" to 4 "	
Atlantic	387	362	100	3	24	60	11	2	95	71	1.105
Eva	285	275	76	3	37	56	4	0	97	60	1.091
Snowden	429	407	112	5	38	54	3	0	95	57	1.106
Yukon Gold	267	200	55	0	14	45	31	10	90	76	1.092
L1-7	335	322	89	4	31	55	10	0	96	65	1.096
L2-12	348	325	90	5	46	43	6	0	95	49	1.099
L7-2	380	362	100	4	50	41	5	0	96	46	1.104
L8-12	357	344	95	3	30	57	9	0	97	67	1.100
L9-6	316	292	81	7	57	34	2	1	93	36	1.099
L17-1	293	275	76	5	54	37	4	0	95	41	1.104
L17-3	394	372	103	5	41	45	9	0	95	54	1.101
L29-3	490	450	124	4	25	60	10	1	96	70	1.091
L30-5	357	342	94	3	45	44	8	0	97	51	1.100

Tuber size classes:

1 = under 1.875 inches diameter, 2 = 1.875 to 2.5, 3 = 2.5 to 3.25, 4 = 3.25 to 4, 5 = over 4 inches diameter

Intermediate Clone Yield Trial, Freeville NY, 2015. Page 2 of 2.

Genotype Variety or Clone	Tuber Attributes			External Tuber Defects (%)			Int. Tuber Defects (%)			
	Tuber Shape	Skin Text.	Tuber Appear.	Total Defects	Mis- shapen	Growth Cracks	Holl. Heart	Brn. Center	Vasc. Disc.	Int. Nec.
Atlantic	3	5	3.3	1.5	0.3	1.2	10	7	7	7
Eva	3	6	3.6	0.3	0.3	0.0	3	0	10	7
Snowden	3	5	3.0	0.0	0.0	0.0	3	0	47	0
Yukon Gold	4	6	3.4	15.2	8.7	6.6	30	0	0	0
L1-7	2	6	3.3	0.4	0.0	0.4	13	0	7	0
L2-12	2	6	3.5	1.9	0.4	1.5	17	0	0	0
L7-2	3	8	3.2	0.4	0.0	0.4	0	0	30	0
L8-12	3	5	3.5	0.6	0.2	0.3	23	0	3	0
L9-6	3	5	3.5	0.0	0.0	0.0	0	0	63	0
L17-1	3	5	3.5	1.2	0.0	1.2	27	0	10	0
L17-3	3	5	3.6	0.7	0.2	0.5	10	0	0	0
L29-3	3	7	3.4	3.6	1.1	2.5	13	3	3	0
L30-5	6	6	3.7	0.8	0.5	0.3	0	0	23	0

Tuber shape 1 = round, 2 = mostly round, 3 = round to oblong, 4 = mostly oblong, 5 = oblong, 6 = oblong to long, 7 = long

Skin texture 5 = netted, 6 = slight net, 7 = medium smooth, 8 = smooth, 9 = very smooth

Tuber appearance 2 = ugly, 3 = OK, 4 = nice

First Year Clone Yield Trial, Freeville NY, 2015. Page 1 of 2.

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

3 Replicates

Planted May 6, harvested September 15. First vine kill applied August 19

Genotype Variety or Clone	Total Yield Cwt/A	Mkt. Yield		Size Distribution ¹ (% of total yield)					Size Distrib. (%)		Spec. Grav.
		Cwt/A	% of Std.	1	2	3	4	5	1-7/8" to 4"	2-1/2" to 4 "	
Atlantic	406	366	100	3	23	53	19	2	95	72	1.099
Lamoka	333	315	86	4	31	57	7	0	96	64	1.095
Snowden	428	399	109	7	33	52	9	0	93	61	1.096
M3-4	465	436	119	5	25	59	12	0	95	71	1.084
M3-10	388	349	95	5	24	54	15	2	93	69	1.089
M5-4	353	323	88	7	33	47	13	0	93	60	1.104
M7-1	395	327	89	11	47	39	4	0	89	43	1.105
M8-4	326	276	75	13	47	37	3	0	87	39	1.096
M8-5	358	336	92	6	41	47	6	0	94	53	1.085
M13-1	375	323	88	7	32	45	13	3	90	58	1.088
M13-7	360	335	92	5	27	53	15	1	94	68	1.095
M14-5	352	306	83	3	30	56	8	2	95	65	1.105
M14-6	365	303	83	11	50	36	3	0	89	39	1.088
M14-11	412	341	93	8	35	52	5	0	92	57	1.098
M15-3	348	319	87	6	33	47	12	1	93	60	1.097
M15-4	419	384	105	5	29	59	7	0	95	66	1.090
M15-5	409	372	102	6	44	48	2	0	94	49	1.096
M15-7	362	330	90	8	32	49	11	0	92	60	1.095
M18-2	386	346	95	9	36	47	7	0	91	54	1.099
M18-3	338	319	87	6	41	53	1	0	94	53	1.079
M18-4	326	279	76	9	45	44	3	0	91	47	1.086
M102-3	399	364	100	7	42	45	5	0	93	51	1.099

Tuber size classes:

1 = under 1.875 inches diameter, 2 = 1.875 to 2.5, 3 = 2.5 to 3.25, 4 = 3.25 to 4, 5 = over 4 inches diameter

First Year Clone Yield Trial, Freeville NY, 2015. Page 2 of 2.

Genotype Variety or Clone	Tuber Attributes			External Tuber Defects (%)			Int. Tuber Defects (%)			
	Tuber Shape	Skin Text.	Tuber Appear.	Total Defects	Mis- shapen	Growth Cracks	Holl. Heart	Brn. Center	Vasc. Disc.	Int. Nec.
Atlantic	2	5	3.4	4.7	0.9	3.8	10	3	7	0
Lamoka	3	6	3.5	1.4	0.0	1.4	0	0	10	0
Snowden	2	5	3.0	0.3	0.0	0.3	7	0	13	0
M3-4	3	5	3.3	1.6	0.0	1.6	27	0	0	0
M3-10	3	5	3.5	3.0	0.1	2.9	17	0	7	0
M5-4	3	5	3.3	1.8	0.8	0.9	10	0	10	0
M7-1	2	5	3.0	6.6	0.2	6.4	10	0	10	0
M8-4	1	6	3.5	2.0	0.0	2.0	0	0	17	0
M8-5	3	5	3.3	0.0	0.0	0.0	0	0	17	0
M13-1	4	7	3.3	4.0	0.4	3.6	7	0	33	0
M13-7	3	5	3.4	1.0	0.0	1.0	7	0	3	0
M14-5	3	5	3.2	7.5	0.4	7.2	10	0	20	0
M14-6	4	7	3.7	6.0	2.1	3.9	0	0	13	0
M14-11	3	6	3.4	9.1	0.3	8.8	0	0	10	0
M15-3	3	5	3.3	1.4	1.0	0.4	0	0	7	0
M15-4	4	6	3.5	2.9	2.7	0.2	0	0	7	0
M15-5	2	6	3.3	2.7	0.5	2.3	3	0	13	0
M15-7	3	6	3.4	1.3	0.5	0.9	23	0	0	0
M18-2	3	6	3.3	0.9	0.1	0.8	10	3	10	0
M18-3	4	7	3.3	0.0	0.0	0.0	7	0	3	0
M18-4	2	7	3.4	5.8	0.4	5.4	7	0	43	0
M102-3	2	5	3.4	1.6	0.5	1.1	7	0	7	0

Tuber shape 1 = round, 2 = mostly round, 3 = round to oblong, 4 = mostly oblong, 5 = oblong, 6 = oblong to long, 7 = long

Skin texture 5 = netted, 6 = slight net, 7 = medium smooth, 8 = smooth, 9 = very smooth

Tuber appearance 2 = ugly, 3 = OK, 4 = nice

Red Clone Yield Trial, Freeville NY, 2015. Page 1 of 2.

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

3 Replicates

Planted May 6, harvested September 15. First vine kill applied August 19

Genotype Variety or Clone	Total Yield Cwt/A	Mkt. Yield		Size Distribution ¹ (% of total yield)					Size Distrib. (%)		Spec. Grav.
		Cwt/A	% of Std.	1	2	3	4	5	1-7/8" to 4"	2-1/2" to 4 "	
Chieftain	454	409	100	5	38	51	5	0	95	57	1.082
AD Blue	323	276	68	11	45	43	1	1	89	44	1.074
Nordonna	424	399	98	5	52	40	3	0	95	42	1.081
Norland DR	360	298	73	8	35	48	8	0	92	56	1.068
Red Maria	459	441	108	3	34	53	9	0	97	62	1.079
Strawberry Paw	374	341	83	5	32	53	9	1	94	62	1.082
NY155	491	445	109	5	33	51	10	2	93	60	1.073
K100-3	463	411	100	4	34	52	8	1	94	60	1.070
L26-6	388	334	82	11	43	42	4	0	89	46	1.077
L26-7	375	313	76	12	53	34	1	0	88	35	1.076
L27-2	397	329	81	17	58	23	2	0	83	25	1.080
M1-1	332	299	73	6	45	41	6	2	92	47	1.080
M12-3	313	257	63	13	48	36	3	0	87	38	1.085
M22-3	392	352	86	10	52	36	1	0	90	37	1.089
M22-6	327	285	70	10	40	48	2	0	90	50	1.088

Tuber size classes:

1 = under 1.875 inches diameter, 2 = 1.875 to 2.5, 3 = 2.5 to 3.25, 4 = 3.25 to 4, 5 = over 4 inches diameter

Red Clone Yield Trial, Freeville NY, 2015. Page 2 of 2.

Genotype Variety or Clone	Tuber Attributes			External Tuber Defects (%)			Int. Tuber Defects (%)			
	Tuber Shape	Skin Text.	Tuber Appear.	Total Defects	Mis- shapen	Growth Cracks	Holl. Heart	Brn. Center	Vasc. Disc.	Int. Nec.
Chieftain	3	6	3.5	5.1	0.3	4.8	0	13	3	0
AD Blue	4	6	3.0	3.3	2.7	0.7	0	0	0	0
Nordonna	2	6	3.1	0.8	0.0	0.8	3	0	10	0
Norland DR	3	7	3.2	8.9	5.3	3.6	23	0	0	0
Red Maria	2	5	3.4	0.6	0.1	0.5	0	0	13	0
Strawberry Paw	3	7	3.4	2.9	1.0	1.9	0	0	27	0
NY155	4	7	3.5	2.8	2.6	0.2	3	13	13	0
K100-3	3	7	3.4	5.5	4.5	1.0	0	0	3	0
L26-6	2	6	3.4	2.6	0.0	2.6	0	0	7	0
L26-7	3	7	3.3	4.5	4.3	0.2	7	0	7	0
L27-2	3	7	3.3	0.2	0.0	0.2	0	0	0	0
M1-1	5	7	3.1	1.9	0.4	1.5	17	0	0	0
M12-3	4	7	3.3	4.7	4.7	0.0	7	0	0	0
M22-3	3	7	3.3	0.0	0.0	0.0	0	0	0	0
M22-6	3	7	3.1	3.1	0.8	2.3	0	0	0	0

Tuber shape

1 = round, 2 = mostly round, 3 = round to oblong, 4 = mostly oblong, 5 = oblong, 6 = oblong to long, 7 = long

Skin texture

5 = netted, 6 = slight net, 7 = medium smooth, 8 = smooth, 9 = very smooth

Tuber appearance

2 = ugly, 3 = OK, 4 = nice

Early Harvest Yield Trial, Freeville NY, 2015. Page 1 of 2

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

3 Replicates

Planted May 5, harvested August 5.

Genotype Variety or Clone	Total Yield Cwt/A	Mkt. Yield		Size Distribution ¹					Size Distrib. (%)		Spec. Grav.
		Cwt/A	% of Std.	(% of total yield)					1-7/8" to 4"	2-1/2" to 4 "	
				1	2	3	4	5			
Andover	310	299	129	2	42	49	8	0	98	56	1.084
Atlantic	335	309	134	6	38	49	7	0	94	56	1.094
Superior	248	231	100	5	46	38	9	1	94	48	1.081
NY141	279	227	98	2	18	48	20	11	87	69	1.079
NY150	295	157	68	47	51	2	0	0	53	2	1.087
K27-1	315	282	122	7	39	48	5	1	92	53	1.086
L2-12	320	294	127	6	46	45	3	0	94	48	1.095

Tuber size classes:

1 = under 1.875 inches diameter, 2 = 1.875 to 2.5, 3 = 2.5 to 3.25, 4 = 3.25 to 4, 5 = over 4 inches diameter

Early Harvest Yield Trial, Freeville NY, 2015. Page 2 of 2

Genotype Variety or Clone	Tuber Attributes			External Tuber Defects (%)					Int. Tuber Defects (%)			
	Tuber Shape	Skin Text.	Tuber Appear.	Total Defects	Sun- Green	Mis- shapen	Growth Cracks	Rot	Holl. Heart	Brn. Center	Vasc. Disc.	Int. Nec.
Andover	5	6	3.5	1.7	0.3	0.9	0.6	0.0	15	0	0	0
Atlantic	3	5	3.5	2.7	1.0	0.3	1.3	0.0	13	3	0	0
Superior	4	6	2.8	0.9	0.5	0.0	0.4	0.0	7	0	0	0
NY141	3	6	3.4	5.4	1.7	3.3	0.4	0.0	3	3	0	0
NY150	3	8	3.5	0.2	0.2	0.0	0.0	0.0	0	0	0	0
K27-1	4	6	3.2	2.6	1.6	0.0	1.0	0.0	10	0	0	0
L2-12	4	6	3.2	2.0	0.4	0.2	1.4	0.0	7	3	0	0

Tuber shape 1 = round, 2 = mostly round, 3 = round to oblong, 4 = mostly oblong, 5 = oblong, 6 = oblong to long, 7 = long

Skin texture 5 = netted, 6 = slight net, 7 = medium smooth, 8 = smooth, 9 = very smooth

Tuber appearance 2 = ugly, 3 = OK, 4 = nice

Upstate New York Table 1. Yield, marketable yield, percentage of yield by grade size distribution, mean tuber number per foot and weight, percentage of defects, and specific gravity for Wayne County muck soil red and purple-skinned variety trial grown near Marion, New York - 2015.

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											
CHIEFTAIN	332	244	100	13	79	8	0	9.6	3.6	8	0	4	1	0	0	0	0	1.068
MICHIGAN PURPLE	432	341	140	9	56	34	2	9.8	4.6	3	1	0	7	10	0	10	0	1.076
NORDONNA	218	165	67	15	72	13	0	7.4	3.1	5	0	0	4	0	0	10	0	1.066
PURPLE HAZE	365	298	122	2	58	36	3	7.2	5.3	10	0	2	3	5	5	10	0	1.077
SPARTAN SPLASH	294	229	94	21	79	0	0	10.8	2.8	0	0	0	0	0	0	5	0	1.076
NY155	323	236	97	8	77	15	0	7.3	4.7	17	1	2	0	0	0	5	0	1.061
K100-3	201	126	52	18	80	2	0	6.5	3.3	7	3	7	2	0	0	10	0	1.057
L26-6	200	116	48	23	75	2	0	7.8	2.7	3	4	0	13	0	0	0	0	1.057
L26-7	169	112	46	23	73	0	5	7.2	2.4	3	8	0	0	0	0	0	0	1.062
L27-2	244	126	52	43	57	0	0	10.6	2.4	5	0	0	0	0	0	30	0	1.070
L29-3	292	190	78	26	72	3	0	12.0	2.5	5	2	3	0	5	0	0	0	1.073
L30-5	398	294	121	22	72	6	0	12.5	3.3	4	0	0	1	5	0	0	0	1.077
Average:	289	206	85	19	71	10	1	9.1	3.4	6	2	2	3	2	0	7	0	1.068
Maximum:	432	341	140	43	80	36	5	12.5	5.3	17	8	7	13	10	5	30	0	1.077
Minimum:	169	112	46	2	56	0	0	6.5	2.4	0	0	0	0	0	0	0	0	1.057

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 24

Vinekill Date: September 14

Harvest Date: October 2

Fertilizer: 89 N-90 P-230 K lbs. per acre

Vinekill: 1 pt./a Reglone

Irrigation: none

Upstate New York Table 2. Yield, marketable yield, percentage of yield by grade size distribution, mean tuber number per foot and weight, percentage of defects, and specific gravity for Wayne County muck soil white-skinned variety trial grown near Marion, New York - 2015.

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											
EVA	254	221	101	8	88	4	0	6.8	3.9	4	1	0	0	0	0	0	0	1.084
JACQUELINE LEE	199	91	41	42	58	0	0	7.7	2.8	9	4	0	0	0	0	0	0	1.075
KEUKA GOLD	427	364	165	9	77	15	0	10.9	4.1	5	0	0	2	0	0	0	0	1.076
REBA	289	220	100	9	77	14	0	7.2	4.2	11	4	0	0	5	0	0	0	1.077
NY149	343	247	112	22	78	0	0	13.2	2.7	6	0	0	0	0	0	15	0	1.073
NY150	145	32	14	76	24	0	0	12.8	1.1	5	0	0	0	0	0	0	0	1.077
NY151	346	231	105	19	74	7	0	12.3	2.9	15	0	0	0	0	0	0	0	1.066
K11-2	266	204	93	17	75	8	0	8.9	3.1	6	0	0	0	0	0	5	0	1.071
Average:	284	201	91	25	69	6	0	10.0	3.1	8	1	0	0	1	0	3	0	1.075
Maximum:	427	364	165	76	88	15	0	13.2	4.2	15	4	0	2	5	0	15	0	1.084
Minimum:	145	32	14	8	24	0	0	6.8	1.1	4	0	0	0	0	0	0	0	1.066

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 24

Vinekill Date: September 14

Harvest Date: October 2

Fertilizer: 89 N-90 P-230 K lbs. per acre

Vinekill: 1 pt./a Reglone

Irrigation: none

Upstate New York Table 3. 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 - 2015.

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											
ATLANTIC	373	334	100	8	70	20	2	9.1	4.5	0	0	0	0	0	0	5	0	1.105
SNOWDEN	340	299	89	12	76	12	0	10.0	3.7	0	0	0	0	0	0	45	0	1.105
MANISTEE	302	263	79	5	44	45	5	5.4	6.2	2	0	0	0	0	0	5	0	1.100
WANETA	319	292	88	5	67	27	1	6.6	5.3	1	0	0	0	0	0	0	0	1.093
NY152	372	314	94	15	77	8	0	11.9	3.4	0	0	0	0	0	0	0	0	1.097
NY153	314	275	82	12	72	15	0	8.5	4.1	0	0	0	0	0	0	0	0	1.106
NY154	350	309	93	10	68	21	0	9.2	4.2	1	1	0	0	0	0	0	0	1.095
NY157	335	293	88	12	80	8	0	10.1	3.7	0	0	0	0	0	0	0	0	1.096
K27-3	284	233	70	16	80	3	0	10.2	3.1	0	0	1	0	0	0	0	0	1.098
K28-7	356	309	93	12	82	6	0	10.7	3.7	1	0	1	0	0	0	5	0	1.102
K31-4	389	348	104	8	69	22	2	8.7	4.9	1	0	0	0	0	0	0	0	1.098
L2-12 *	326	267	80	17	77	6	0	10.8	3.3	1	0	1	0	0	0	0	0	1.101
L8-12 *	362	331	99	9	82	9	0	9.6	4.1	0	0	0	0	0	0	0	0	1.108
Average:	340	297	89	11	73	16	1	9.3	4.2	1	0	0	0	0	0	5	0	1.100
Maximum:	389	348	104	17	82	45	5	11.9	6.2	2	1	1	0	0	0	45	0	1.108
Minimum:	284	233	70	5	44	3	0	5.4	3.1	0	0	0	0	0	0	0	0	1.093

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 Dates: September 11 & 15

Harvest Date: October 15

Fertilizer: 128N - 256P- 128K - 4S - 4Zn - 0.24B lbs. per acre

Vinekill: 1 pt./a Reglone + crop oil

Irrigation: none

Top dressed with 200 lbs Calcium Amonium Nitrate per acre (54 lb N and 16 lb CA)

36" bed width by 8 inch within row spacing

Applied in furrow: 7 oz. Quadris and 2.67 oz. Platinum

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

Upstate New York Table 4. 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 Castile, New York - 2015.

Variety or Clone	Total	Mkt. Yield		Size Distribution ¹				Mean Tuber		Percent External				Percent Internal				Spec. Grav.
	Yield	Cwt/A	% of Std.	(% of total yield)				#/ft	wt(oz)	Tuber Defects				Tuber Defects				
	Cwt/A			1	2	3	4			SUN	KNB	GC	ROT	HH	BC	VD	NEC	
ATLANTIC	462	420	100	7	72	21	0	10.2	4.7	1	1	1	0	15	20	0	0	1.105
LAMOKA	414	367	87	9	83	8	0	10.4	4.2	1	1	1	0	0	5	0	0	1.105
MANISTEE	396	331	79	9	67	24	0	9.6	4.3	3	0	5	0	0	0	0	0	1.098
PINNACLE	444	380	91	10	70	21	0	11.4	4.1	1	0	3	0	20	5	0	0	1.107
SNOWDEN	471	434	103	6	80	14	0	10.9	4.5	1	0	1	0	0	0	0	0	1.105
NY152	474	424	101	10	75	16	0	12.3	4.0	1	0	0	0	20	0	0	0	1.094
NY153	425	371	88	12	76	13	0	11.9	3.7	1	0	0	0	10	0	0	0	1.101
NY154	528	474	113	7	82	11	0	11.8	4.7	2	0	1	0	5	0	0	0	1.095
NY157	408	358	85	11	82	7	0	12.2	3.5	0	0	0	0	0	5	0	0	1.094
K27-3	453	408	97	8	79	13	0	11.2	4.2	1	0	1	0	25	0	0	0	1.105
K28-7	458	423	101	7	81	12	0	10.3	4.6	0	0	0	0	0	0	0	0	1.109
K31-4	454	407	97	8	78	14	0	10.6	4.5	1	1	0	0	0	0	0	0	1.101
Average:	449	400	95	9	77	14	0	11.1	4.2	1	0	1	0	8	3	0	0	1.101
Maximum:	528	474	113	12	83	24	0	12.3	4.7	3	1	5	0	25	20	0	0	1.109
Minimum:	396	331	79	6	67	7	0	9.6	3.5	0	0	0	0	0	0	0	0	1.094

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 14

Fertilizer: 180N - 149P - 240K - 15S lbs. per acre

Other: 1 qt./a Double Nickel and 3 pt./a Vydate in furrow

Vinekill Dates: September 24 & October 1

Vinekill: 2 pt./a Reglone and LI-700 (2x)

Harvest Date: October 6

Irrigation: 2" through center pivot
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 white-skinned clones grown at Riverhead, N.Y. - 2015.

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"	4"	> 4"	2 to 4 in.	2.5 to 4 in.	
Season-122 days											
Reba	417	393	100	2	16	59	23	0	98	82	69
Norwis	211	185	47	2	15	58	22	3	95	80	65
Marcy	481	461	117	2	16	72	10	0	98	82	81
Superior	373	337	86	3	22	67	8	0	97	75	70
AF5215-2	294	252	64	12	58	30	0	0	88	30	68
MI Purple Sport	392	356	91	3	24	64	9	0	97	73	65
NY140	448	423	108	2	22	61	14	0	98	76	75
NY141	433	395	101	2	14	71	14	1	98	84	75
NY150	250	172	44	30	62	8	0	0	70	8	76
NY151	469	433	110	3	18	59	20	0	97	79	65
NY157	366	344	88	4	30	59	7	0	96	66	74
K11-2	382	357	91	4	31	61	4	0	96	65	66
L2-12	367	338	86	5	32	60	3	0	95	63	81
L7-2	388	365	93	3	33	62	2	0	97	64	82
L30-5	387	342	87	9	56	35	0	0	91	35	78
B2869-29	490	426	109	4	36	57	3	1	95	60	83
<i>Fischer's Protected</i>											
<i>LSD (0.05)</i>	<i>(103)</i>	<i>(65)</i>									<i>(5)</i>

Planted on 4/24/15, fertilizer rate was 176-176-240/A, vine killed on 8/24/15, harvested on 9/22/15.

¹ -1.0 is excluded from specific gravity readings.

Long Island Table 3. Maturity, tuber shape, and internal and external defects of advanced white-skinned clones grown at Riverhead, N.Y. - 2015.

Clone	Maturity ¹	Tuber Data ¹		Tuber Defects (%)					Percentage				
	on 8/6/2015	Shape	Appear- ance	Total	Sun- burn	Mis- shapen	Growth cracks	Other ²	Hollow heart	Brown center	Internal Necrosis		
											Sl.	Mod.	Sev.
Season-122 days													
Reba	6	R-O	7	4	0	1	0	3	10	10	8	0	0
Norwis	5	R-O	7	8	0	2	0	6	8	3	8	0	0
Marcy	7	R-O	6	2	0	0	0	2	0	0	8	0	0
Superior	2	R-O	6	7	2	5	0	1	3	0	0	0	0
AF5215-2	2	R	7	3	0	1	0	2	23	18	0	0	0
MI Purple Sport	2	R-O	7	7	0	1	0	5	0	5	0	0	0
NY140	7	R-O	8	4	1	0	0	2	3	0	0	0	0
NY141	4	R-O	7	7	1	1	1	3	5	3	5	3	0
NY150	3	R	7	1	0	1	0	1	0	3	0	0	0
NY151	4	R-O	8	4	2	2	0	1	0	0	0	0	0
NY157	4	R-O	7	2	0	1	0	1	3	0	8	0	0
K11-2	2	R-O	7	2	0	1	1	0	0	0	0	0	0
L2-12	2	R-O	7	4	0	0	1	3	3	0	3	0	0
L7-2	5	R-O	8	3	0	1	0	2	0	0	0	0	0
L30-5	4	O-R	7	3	0	1	0	2	0	0	0	0	0
B2869-29	5	R-O	6	9	0	0	1	8	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.S. No. 1 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 intermediate Maine, USDA, and Michigan white-skinned clones grown at Riverhead, N.Y. - 2015.

Clone	Total	Marketable Yield		Size Distribution (%)					Size Distribution		Specific ¹ Gravity
	Yield		percentage	2 to	2.5 to	3.25 to	4"	> 4"	2 to	2.5 to	
	cwt/A	cwt/A	of standard	< 2"	2.5"	3.25"	4"	> 4"	4 in.	4 in.	
Season-122 days											
Reba	453	428	100	1	14	64	21	0	99	84	70
Norwis	263	212	50	2	15	49	30	3	94	79	66
AF5280-5	457	426	100	3	29	63	4	0	96	67	65
AF5225-1	517	486	113	6	41	49	4	0	94	53	66
BNC177-5	474	434	101	4	30	60	6	0	96	66	77
BNC182-5	477	452	106	3	14	63	21	0	97	84	80
B2833-8	396	357	83	8	45	40	7	0	92	47	80
B2833-16	412	387	90	3	25	67	5	0	97	72	79
B2834-8	350	332	78	3	20	63	15	0	97	78	81
B2950-9	438	404	94	7	44	47	1	0	93	49	77
MSQ086-3	535	462	108	7	42	48	2	0	93	51	74
MSQ131-A	385	257	60	1	3	22	55	20	79	76	65
MSS487-2	414	251	59	6	38	49	7	0	94	55	71
MSV093-1	491	458	107	2	22	65	10	0	98	76	71
MSL211-3	412	359	84	4	28	59	8	1	96	68	68
MSR137-2	469	437	102	3	23	69	6	0	97	75	80
<i>Fisher's Protected</i>											
LSD (0.05)	(59)	(55)									(4)

Planted on 4/24/15, fertilizer rate was 175-175-240/A, vine killed on 8/24/15, harvested on 9/16/15.

¹ -1.0 is excluded from specific gravity readings.

Long Island Table 5. Maturity, tuber shape, and internal and external defects of intermediate Maine, USDA, and Michigan white-skinned clones grown at Riverhead, N.Y. - 2015.

Clone	Maturity ¹	Tuber Data ¹		Tuber Defects (%)					Percentage					
	on	Shape	Appear-	Total	Sun-	Mis-	Growth	Other ²	Hollow	Brown	Internal Necrosis			
	8/24/2015										ance	burn	shapen	cracks
Season-122 days														
Reba	1	R-O	7	4	1	0	0	3	3	5	3	0	0	
Norwis	1	R-O	6	14	0	2	0	12	13	3	5	3	0	
AF5280-5	1	R-O	7	3	1	1	0	2	0	0	3	0	0	
AF5225-1	4	R-O	7	0	0	0	0	0	3	0	5	0	0	
BNC177-5	4	R-O	6	5	0	1	0	4	8	3	3	0	0	
BNC182-5	3	R	6	2	0	1	0	2	3	8	13	0	0	
B2833-8	1	R-O	6	3	0	1	0	2	8	0	0	0	0	
B2833-16	1	R-O	5	3	0	0	0	2	15	0	0	0	0	
B2834-8	1	R-O	6	3	0	0	0	2	0	0	3	0	0	
B2950-9	1	R-O	6	0	0	0	0	0	0	0	8	0	0	
MSQ086-3	3	R-O	7	7	0	1	2	4	0	0	5	0	0	
MSQ131-A	1	R	5	16	0	0	1	15	0	0	3	0	0	
MSS487-2	3	R	2	35	0	0	0	35	5	0	5	0	0	
MSV093-1	4	R-O	6	5	0	2	0	2	3	0	0	3	0	
MSL211-3	1	O-R	7	9	0	0	0	8	0	0	3	0	0	
MSR137-2	5	R-O	6	4	0	0	2	3	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.S. 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 of NE 1231 white-skinned clones grown at Riverhead, N.Y. - 2015.

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-122 days											
Atlantic	437	416	100	2	12	67	19	0	98	86	80
Katahdin	360	336	81	3	27	60	10	0	97	70	66
Kennebec	320	258	62	5	44	50	2	0	95	51	69
Superior	376	339	81	3	24	67	6	0	97	73	68
Yukon Gold	399	348	84	1	15	63	21	0	99	84	77
AF0038-17	466	442	106	2	17	67	13	0	97	80	77
AF4138-8	455	433	104	3	27	63	7	0	97	70	66
AF4648-2	345	329	79	2	23	64	11	0	98	75	81
AF4975-3	333	299	72	3	18	56	22	1	96	78	80
NY148	482	463	111	3	25	64	9	0	97	72	81
<i>Fisher's Protected</i>											
<i>LSD (0.05)</i>	<i>(61)</i>	<i>(56)</i>									<i>(15)</i>

Planted on 4/24/15, fertilizer rate was 175-175-240/A, vine killed on 8/24/15, harvested on 9/11/15.

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. - 2015.

Clone	Maturity ¹ on	Tuber Data ¹		Tuber Defects (%)					Percentage				
	8/24/2015	Shape	Appearance	Total	Sun-burn	Mis-shapen	Growth cracks	Other ²	Hollow heart	Brown center	Internal Necrosis		
											Sl.	Mod.	Sev.
Season-122 days													
Atlantic	2	R-O	7	3	0	1	1	1	35	8	8	20	0
Katahdin	1	O-R	7	3	1	1	1	1	3	10	8	0	0
Kennebec	1	O-L	5	15	0	15	1	0	0	0	0	0	0
Superior	1	R-O	7	7	1	3	1	2	8	0	8	0	0
Yukon Gold	1	R-O	7	12	0	1	0	10	8	0	3	0	0
AF0038-17	2	R-O	8	2	1	0	0	1	13	0	8	0	0
AF4138-8	1	R-O	8	2	0	1	0	1	0	0	3	0	0
AF4648-2	2	R-O	7	3	1	0	1	0	0	0	0	3	0
AF4975-3	1	R-O	7	7	0	2	2	3	13	8	23	0	0
NY148	4	R	7	1	0	0	0	1	3	0	45	15	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.S. No. 1 grade. Mechanical defects, however, were not scored.

Long Island Table 8. Yield, marketable yield, percentage of yield by grade, size distribution and specific gravity of red and purple-skinned clones grown at Riverhead, N.Y. - 2015.

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-120 days											
Chieftain	580	548	100	2	17	69	11	1	97	80	66
Dark Red Norland	450	427	78	3	31	66	1	0	97	67	65
Raspberry	355	310	57	10	55	28	8	0	90	36	70
Red Maria	499	463	84	1	7	51	38	3	96	89	65
AF4985-1	482	420	77	2	15	61	22	1	97	83	65
B1816-5	333	307	56	6	52	42	0	0	94	43	72
BNC201-1	367	349	64	3	31	64	2	0	97	67	77
BNC244-10	420	376	69	10	52	37	0	0	90	38	81
C000291-5R	337	318	58	3	20	40	37	0	97	77	65
C0098012-5R	391	342	62	7	51	39	2	0	93	41	70
MST386-1P	491	436	80	1	10	47	38	4	95	85	78
<i>Fisher's Protected</i>											
LSD (0.05)	(101)	(107)									(2)

Planted on 4/26/15, fertilizer rate was 175-175-240/A, vine killed on 8/24/15, harvested on 9/1/15.

¹ -1.0 is excluded from specific gravity readings.

Long Island Table 9. Maturity, tuber shape, and internal and external defects of red and purple-skinned clones grown at Riverhead, N.Y. - 2015.

Clone	Maturity ¹ on	Tuber Data ¹		Tuber Defects (%)					Percentage				
	8/24/2015	Shape	Appearance	Total	Sun-burn	Mis-shapen	Growth cracks	Other ²	Hollow heart	Brown center	Internal Necrosis Sl. Mod. Sev.		
Season-120 days													
Chieftain	1	O-R	6	3	0	0	2	0	3	3	25	0	0
Dark Red Norland	1	O-R	7	2	0	1	1	1	8	0	5	0	0
Raspberry	1	O	7	4	0	0	0	3	0	0	0	0	0
Red Maria	2	R	7	4	0	0	1	3	10	8	0	0	0
AF4985-1	1	R-O	5	10	2	2	5	1	30	20	0	0	0
B1816-5	1	O-R	7	2	0	1	0	0	0	0	0	0	0
BNC201-1	1	R-O	6	3	0	0	0	2	3	0	0	0	0
BNC244-10	1	R	7	1	0	1	0	0	0	3	0	0	0
C000291-5R	3	R-O	5	3	0	0	2	1	10	0	3	0	0
C0098012-5R	2	R-O	7	6	0	1	2	3	0	3	0	0	0
MST386-1P	2	R-O	5	7	0	3	3	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.S. No. 1 grade. Mechanical defects, however, were not scored.



Harvesting four-hill plots on Mount Pleasant. Red clones separate the plots of white clones.

