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Eastern Regional Potato Trials 2003: Summary of NE1014 Regional Project Field Testing of New Potato Clones

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Eastern Regional Potato Trials 2003:
Summary of NE1014 Regional Project Field Testing of New
Potato Clones

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Twenty-one trials were conducted in eight states and one Canadian province. Seventeen named varieties and 26 numbered clones were available to the cooperators (Table 1). Seed for all clones and varieties was grown by the University of Maine at Aroostook Research Farm. Seedpieces were prepared, cut, and suberized by the staff at the University of Maine Agricultural and Forest Experiment Station in Presque Isle, Maine. Cultural practices were generally similar to those used by commercial growers near each location.

OBJECTIVES

The objectives of this regional project are (1) to develop pest-resistant, early-maturing, long-dormant varieties that will process from cold storage; (2) to evaluate new and specialty varieties developed in the Northeast; (3) to determine climatic effects on performance to develop predictive models for potato improvement; and (4) determine heritability/linkage relationships and improve the genetic base of tetraploid cultivated varieties.

RESULTS

Total yield, marketable yield, specific gravity, tuber size, tuber defects, chip color results, boil and bake results are presented in East Region Trial Tables 2 to 7.

Round whites

For round whites, B1240-1, NY125, NY126, and NY127 had the highest total yields (Table 2). Aquilon, Snowden, B1240-1, and NY126 were the only clones in the 2003 regional trials that had US#1 yields equaling or exceeding those of Atlantic (Tables 3 and 6). On a site-by-site basis these respective varieties had US#1 yields averaging 116%, 100%, 111%, and 112% those of Atlantic. AF1569-2 also provided relatively high marketable yields (average of 90% or better over locations compared to Atlantic on a site-by-site basis). Specific gravities of Aquilon, Snowden, AF1455-20, AF2207-4, and AF2215-1 were close to or greater than Atlantic at comparable sites (Tables 4 and 6). AF1758-7 had an average specific gravity below 1.070. Atlantic, Katahdin, Kennebec, AC Sunbury, Yukon Gold, AF1455-20, AF1569-2, AF1758-7, B1240-1, B1826-1, NY126, and SC8801-2 sized well in most trials (Tables 5 and 6). Aquilon, Atlantic, Snowden, AF2215-1, AF2222-2, B1826-1, NY126 and NY128 chipped

well in most 2003 tests. In addition to these lines, AF1455-20, AF1569-2, AF1938-3, AF2115-1, AF2207-4, B1240-1, B1806-8 NY120, NY125, and NY127 produced good chips out of the field. Envoy, Katahdin, AF1758-7, AF2115-1, B1806-8, NY125, and NY126 scored well in boiling tests. Envoy, Katahdin, Kennebec, Superior, AF1569-2, AF1758-7, and AF1938-3 scored well in baking tests (Table 6).

Most of the white clones had a high incidence of external defects during 2003 and 13 of 26 had more than 10% external defects (Table 7). Clones with low external defects incidence (less than 8%) were Atlantic, Envoy, Snowden, AC Sunbury, Superior, AF2222-2, NY120, NY125, NY126, and NY128. Atlantic, Snowden, Yukon Gold, AF2207-4, AF2222-2, B1240-1, and B1806-8 had high incidence of hollow heart. Aquilon, Atlantic, Katahdin, AC Sunbury, and AF2115-1 had high incidence of internal necrosis. Snowden, AF1758-7, B1240-1, B1826-1, and NY127 also had high levels of vascular discoloration.

Reds

AC Red Island, Roselys, NDTX731-1R, and NY129 had US#1 yields that were comparable to Chieftain (Table 6). NDTX731-1R had the best overall appearance ratings of this group and had relatively low incidence of internal and external defects (Table 7). NY129 also had acceptable appearance and low defects incidence, but was not quite as pretty as NDTX731-1R. Roselys has a very unusual pale pink color. AC Red Island has a dark red, netted skin, and oblong tubers. It had high incidence of internal necrosis during 2003. Considering all attributes, NDTX731-1R was the best new red in the trials.

Russets

AF1753-16 had very high total yields, while A9014-2, A90586-11, and ATX84706-2Ru had the highest average US#1 yields (Tables 2 and 3). A9014-2, A90586-11, AF1753-16, and ATX84706-2Ru had US#1 yields equaling or exceeding those of Russet Norkotah (Tables 3 and 6). On a site-by-site basis these respective varieties had US#1 yields averaging 113%, 107%, 101%, and 128% those of Russet Norkotah. Specific gravities of Shepody, A9014-2, A90586-11, and AF1753-16 exceeded 1.080 (Table 4). Shepody, AF1753-16, and ATX84706-2Ru had very large tuber size (Tables 5 and 6). Russet Burbank, A9014-2, and

AF2133-17 had good tuber appearance (Table 6). None of the russets received outstanding boiled quality scores during 2003, while A9014-2 received good baked quality scores (Table 6).

Russet Norkotah, A9014-2, A90586-11, AF1866-8, and AF2133-17 had less than 15% external defects (Table 7). Russet Burbank, Shepody, A9014-2, AF1753-16, and AF1808-18 had more than 5% hollow heart during 2003. None of the lines had any substantial incidence of internal necrosis or vascular discoloration during 2003.

Promising 2003 Clones

Aquilon is a nice chipping variety for areas where internal heat necrosis does not cause problems. AF1758-7 completed eastern regional testing during 2003 and is promising as a scab-resistant, fresh market clone in areas with cool growing conditions. B1240-1 has shown promise for out-of-field chipping, but it is very late maturing and has not chipped consistently from storage. It has also varied widely in external and internal defects. NY126 showed very good promise for dual-purpose chipping and fresh use during 2003. NDTX731-1R was the most promising red-skinned clone. AF1753-16 was recently released as a french fry variety. A9014-2 and A90586-11 were promising russet/long-white clones based on 2003 results. Several additional red-, russet-, and white-skinned clones showed promise during 2003, but will require another year of testing before making decisions on commercialization potential.

East Region Trial Table 1. General characteristics and known disease resistance for 17 named varieties and 26 numbered clones grown at 21 locations in the Eastern United States and Eastern Canada.

Clone ¹	Pedigree	Skin Color ²	Skin Text. ³	Flesh Color ⁴	Tuber Shape ⁵	Utilization ⁶	Known Disease Tolerance or Resistance	
							Resistant	Moderate Resistance
Round Whites								
Aquilon	Hudson x Campbell 13	BuWh	SN	Wh	RO	Chip/Table	CS	PSc
Atlantic	Waseon x Lenape	BuWh	N	OW	R	Chip	GN, NN, PVA, PVX,	CS, VW, EB, Bwlt
Envol	F68123 x Simcoe	BuWh	S	Wh	RO	Table		
Katahdin	40658 x 24642	White	S	Wh	RO	Table	PVA	NN, VW, EB, Bleg, PVS, PVX, PVY
Kennebec	B127 x X(95-96)	White	S	Wh	O	Table	NN, PVA, PVY	Bleg, PVS, PVX, LB, EB, Wart
Snowden	B5141-6 x Wischp	BuTan	N	OW	R	Chip	EB	
Sunbury, AC	Raritan x Agitato	BuYl	S	YF1	OR	Table	GN, PVY	
Superior	X(96-56) x N59.44	BuWh	SN	OW	RO	Table	CS, NN	
Yukon Gold	W5279-4 x Norgleam	BuYl	S	YF1	RO	Table	PLRV, PVA	
AF1455-20	AF988-2 OP	BuWh	SN	OW	R	Table/Chip	GN, NN, PVY, PLRV	VW, PSc, EB, Fus
AF1569-2	Portage x Sunrise	BuWh	SN	Wh	RO	Table	NN	PSc, Fus
AF1758-7	AF303-5 x CF7608-19	BuWh	SN	Wh	RO	Table	GN, NN, CS, CRS	VW, PSc
AF1938-3	Somerset x AF1321-1	BuWh	S	Wh	RO	Table	GN, NN	
AF2115-1	Goldrus x Penobscot	White	S	Wh	O	Table/Chip	NN	ASc
AF2207-4	AF637-1 x AF879-18	BuWh	SN	Wh	OR	Chip	GN, NN	VW
AF2215-1	MaineChip x Atlantic	BuWh	SN	OW	RO	Chip	NN	
AF2222-2	SC8805-12 x ND860-2	White	S	OW	R	Table/Chip	NN	PSc
B1240-1	B0172-22 x B0186-3	BuTan	SN	OW	RO	Table/Chip	GN, PVS	LB, EB
B1806-8	B0925-4 x B0809-10	BuYl	S	YF1	OR	Table/Chip		
B1826-1	B1110-10 x B0807-2	White	S	Wh	OR	Table/Chip	GN	
NY120	Kanona x AF186-2	BuTan	N	Wh	R	Table/Chip	GN	CS, PSc
NY125	Keuka Gold x Genesee	BuYl	SN	YF ¹ / ₂	RO	Table	GN	CS
NY126	Keuka Gold x Pike	BuYl	SN	YF2	OR	Table/Chip	GN, CS	
NY127	Q237-8 x Pike	White	S	OW	R	Table	GN, Ro2	
NY128	NY121 x Pike	BuWh	SN	OW	R	Chip	GN, Ro2	LB
SC8801-2	Abnaki x SA8207-3	BuWh	S	Wh	O	Table	NN, PLRV	CS
Red Clones								
Brise du Nord	Trent x Chieftain	RD1	S	Wh	OR	Table	VW, EB	
Chieftain	La1027-18 x La1354	RD2	S	Wh	RO	Table	NN, CS, VW, RZ, LB	
Dk Rd Norland	Redkote x ND626	RD3	S	Wh	RO	Table	PVA CS, PSc, RZ, Wart	
Red Island, AC	Brigus x Redson	RD6	SN	YF ¹ / ₂	OR	Table	Wart	CS, PSc, LB

East Region Trial Table 1. Continued.

Clone ¹	Pedigree	Skin Color ²	Skin Text. ³	Flesh Color ⁴	Tuber Shape ⁵	Utilization ⁶	Known Disease Tolerance or Resistance	
							Resistant	Moderate Resistance
Roselys	Belchip x Norland	Pink	S	Wh	RO	Table	VW, RZ	
NDTX731-1R	ND169-10R x ND9476-5R	RD5	SN	Wh	R	Table		
NY129	N38-1 x ND2225-1R	RD4	SN	Wh	R	Table	GN, CS	
Russets/Long Whites								
R Burbank	Sport of Burbank	LtBr	Ru1	Wh	L	Table/Proc.	CS, Bleg	PSc, EB
R Norkotah	ND9687-5 x ND9526-4	Brown	Ru2	OW	OL	Table	CS	PSc, PLRV
Shepody	Bakeking x F58050	White	S	Wh	L	Processing	EB, RZ	
A9014-2	Gem Russet x A8341-5	LtBr	Ru2	Wh	OL	Table/Proc.	CS	CS, PSc, VW, EB, CRS
A90586-11	KSA195-90 x Ranger Russet	BuWh	SN	OW	OL	Processing	VW, CRS, PVX	LB, EB
AF1753-16	CS7981-7 x CF7608-19	Tan	N	Wh	L	Processing	NN, VW	
AF1808-18	AF1367-13 OP	Brown	Ru2	OW	OL	Table/Proc.	NN	VW, ASc, PSc
AF1866-8	(AF1166-4 x CS79123) x AF235-5	Brown	Ru2	Wh	O	Table	NN	PSc
AF2133-17	AF522-5 x CS79123-12	Brown	Ru2	Wh	OL	Table	GN, NN	PSc
ATX84706-2Ru	A7938-1 x COA7906-5	BuTan	SN	OW	OL	Processing		

¹Origin of numbered clones: A = USDA-ARS Aberdeen, ID and U. of ID; AF, SC = U. of Maine, Aroostook Research Farm, Presque Isle; TX = cross by USDA-ARS Aberdeen, ID, but selected by Texas A&M, College Station; B = USDA-ARS Beltsville, MD; NDTX = cross by North Dakota potato breeding program, but selected by Texas A&M, College Station; NY = Cornell University, Ithaca, NY.

²Skin color varies with growing conditions. This information reflects general performance and should not be used to predict exact results for a specific location or growing season. This table summarizes 2003 subjective ratings from four representative locations (ME, NJ, NY, NC), where: BuWh = buff to white; BuYl = buff to yellow; BuTan = buff to tan; RD = red (number scale: 1 = pale red; 2 = light to medium red; 3 = medium red; 4 = medium to deep red; 5 = deep red; 6 = dark red, sometimes too dull); LtBr = light brown.

³See cautions in footnote #2. This table summarizes 2003 subjective ratings from four representative locations (ME, NJ, NY, NC), where: S = smooth; SN = slight net; N = netted; Ru = russeted (1 = light; 2 = moderate; 3 = heavy).

⁴See cautions in footnote #2. This table summarizes 2003 subjective ratings from Maine, where: Wh = white; OW = off white; YF = yellow (½ = cream to very pale yellow; 1 = pale yellow; 2 = moderate yellow; 3 = bright yellow).

⁵See cautions in footnote #2. This table summarizes cumulative subjective ratings from all NE1014 locations, where: R = mostly round; RO = round to oblong; OR = oblong to round; O = oblong; OL = oblong to long; L = long. See Table 6 for numerical summary.

⁶Expected utilization is based on commercial experience and/or currently available research results, where processing = french fry processing.

⁷Known disease resistance is based on commercial experience and/or currently available research results. In some cases, disease resistance screening is in very early stages. In many cases, disease incidence can vary dramatically depending on the strain of the plant pathogen that is present. Key to codes: NN = tuber net necrosis; GN = golden nematode, race Ro1; Ro2 = golden nematode, race Ro2; CS = common scab; VW = verticillium wilt; LB = late blight; EB = early blight; PSc = powdery scab; ASc = acid scab; RZ = Rhizoctonia; Fus = Fusarium dry rot; PVA = potato virus A; PVX = potato virus X; PVS = potato virus S; PLRV = potato leafroll virus; CRS = corky ringspot virus; Bwlt = southern bacterial wilt; Bleg = blackleg; Wart = wart.

East Region Trial Table 2. Total yields (cwt/acre) for 17 named varieties and 26 numbered clones grown at 21 locations in the Eastern United States and Eastern Canada.

Clone	ME1 ¹	ME2 ¹	ME3 ¹	FL	NC	NJ1 ²	NJ2 ²	NY1 ³	NY2 ³	NY3 ³	NY4 ³	NY5 ³	OH	PA1 ⁴	PA2 ⁴	PA3 ⁴	PA4 ⁴	PA5 ⁴	QC1 ⁵	QC2 ⁵	VA	Mean
Round Whites																						
Aquilon	292	444		519									202									364
Atlantic	330	376	433	537	240	404	511	517	469	317	386	346		359	636	468	339	272	356	451	330	403
Envol	249			420									248						177	321		283
Katahdin	321	337	366		198	373	495	445	466				281	395	646	572	330	194			223	376
Kennebec	350	465	433		216	500		532	406				303								205	379
Snowden	282	384	446	501	259			489	489	343	497			401		662	469	238	224	424	252	403
Sunbury, AC	282		284	340	204	293	339	342	385				274						183	346	231	292
Superior	277	286	439		215	395	430	410	420	155			270	367					185	430	336	330
Yukon Gold	335	346	343	416	225	293	375	339	426				192	314			332	218	199	402	292	322
AF1455-20	280	345	357		169			377	331				280	359	688							354
AF1569-2	236	269	393		235			504	473				281	380	612	566					322	388
AF1758-7	355	230	301					430	202				192	316			316					293
AF1938-3													244									308
AF2115-1	313	321	367	424	214			410					281	394					285	362	341	308
AF2207-4	241	317	388		171	396		329	411				300	293	521		275		219	314	275	318
AF2215-1	268	344			203	390		409	409				190	390		363			249	425		348
AF2222-2	261	255	290	438	179	269		378	378				308	299		503			233	415		319
B1240-1	392	402	323		216	400	551	518	474	396	403	478	276	385	745	839	548	318	351	463	308	439
B1806-8	313		371		246	404	462						243	422					197	370	304	333
B1826-1	354		362						448	343			280	361					267	332		356
NY120	289	310	444	404	229	397		432	426	276	362	255	270						268	432	296	339
NY125	369		434		239			629	403				265	476	601	583	371	217	354	454		415
NY126	332	441	433	455	236	391		479	476	357			304	475	654	657	405	209	520	485	321	424
NY127	373		433	666	198	427		571	571	348			291	526	699	747	456	195	356	461	388	446
NY128	278	408		490	239	362		470	470	454	328	387	254	519	670	676	395	277	305	508	299	407
SC8801-2	386			427															229	461		376

East Region Trial Table 2. Continued.

Clone	ME1 ¹	ME2 ¹	ME3 ¹	FL	NC	NJ1 ²	NJ2 ²	NY1 ³	NY2 ³	NY3 ³	NY4 ³	NY5 ³	OH	PA1 ⁴	PA2 ⁴	PA3 ⁴	PA4 ⁴	PA5 ⁴	QC1 ⁵	QC2 ⁵	VA	Mean
Red Clones																						
Brise du Nord	264		534									191										330
Chieftain	334		396	445	217	391	500	395	484	336			271	390					333		428	375
Dk Rd Norland	271		313	360	207	286	365	321	414	248			252	341					349	382	315	316
Red Island, AC	308		470	473	245	338	532	400					298						256	427	327	370
Roselys	308		421																358	399		372
NDTX731-1R	333		351	473	261	333	463	498	428				270	368					351	418	255	367
NY129	346		402	460	247	284	459	507	369				192						190	407	355	351
Russets/Long Whites																						
R Burbank	273		270	371		372	554	425											215	310		349
R Norkotah	280		363	400		384	377	387						232							206	329
Shepody	358		381					430						219					254	357		333
A9014-2	337		261	424		324	508							303					310	356	176	333
A90586-11	372		342			382	481	490						242					276	326	179	343
AF1753-16	399		503	582	221									133					310	442		370
AF1808-18	282		278	383		245	268	391						131					212	253	170	261
AF1866-8	237		312											172					216	299		247
AF2133-17	273		266			257	293							191					201	324	128	242
ATX84706-2Ru	352		377	431	227	440	527							197					265	371	297	348

¹Trials were conducted in three Maine locations, Presque Isle (ME1), Exeter (ME2), and St. Agatha (ME3).

²The two trial locations for New Jersey were Upper Deerfield main-season trial (NJ1) and Pittstown late-season trial (NJ2).

³The five trial locations in New York were Riverhead, Long Island (NY1), Freeville (NY2), Wayne County, muck soil (NY3), Steuben County (NY4), Wyoming County (NY5).

⁴There were five trial locations in Pennsylvania [Rock Springs (PA1), Lehigh County (PA2), Lancaster County (PA3), Somerset County (PA4), and Erie County (PA5)].

⁵The two Quebec trials were Rawdon (QC1) and Louisville (QC2).
Additional note: Some states (ME, NY) had several clones tested in two or more trials per location. For these states, means are presented by location rather than by trial.

East Region Trial Table 3. Marketable yields (cwt/acre) for 17 named varieties and 26 numbered clones grown at 21 locations in the Eastern United States and Eastern Canada.

Clone	ME1 ¹	ME2 ¹	ME3 ¹	FL	NC	NJ1 ²	NJ2 ²	NY1 ³	NY2 ³	NY3 ³	NY4 ³	NY5 ³	OH	PA1 ⁴	PA2 ⁴	PA3 ⁴	PA4 ⁴	PA5 ⁴	QC1 ⁵	QC2 ⁵	VA	Mean	
Round Whites																							
Aquilon	253	390		460									164										317
Atlantic	268	291	401	476	200	357	461	464	417	238	334	311		234	323	306	249	145	346	400	303		329
Envol	226			362									181						159	298			245
Katahdin	280	228	291		166	326	434	398	395				215	270	356	411	220	88			166		283
Kennebec	187	299	205		142	373		354	255				213								172		244
Snowden	236	334	422	462	216			480	480		270	455		201		395	291	57	216	380	207		319
Sunbury, AC	257		245	278	176	263	287	311	354				197						168	330	214		257
Superior	245	248	405		178	351	391	358	388	115			210	208					162	377	315		282
Yukon Gold	284	250	275	334	189	263	345	311	382				135	219			250	105	180	368	273		267
AF1455-20	256	311	326		126				339	179			220	162	387								256
AF1569-2	176	210	331		166				411	391			236	214	350	339					284		283
AF1758-7	325	185	273						381	95			147	149			186						218
AF1938-3					158			361					183						246	293	296		256
AF2115-1	253	221	239	372	168			354					214	257					227	373	246		266
AF2207-4	160	219	275		112	289		274	334				249	137	125		102		196	288	212		212
AF2215-1	213	271			144	320		364	364				157	204		363			209	369			261
AF2222-2	226	223	261	358	128	200		320	320				242	132		160			180	369			233
B1240-1	326	318	247		173	334	402	464	404	316	337	403	233	242	469	598	419	184	330	344	284		341
B1806-8	278		214		185	361	411						215	248					177	323	266		268
B1826-1	293		299			383		400	400	168			220	237					245	292			282
NY120	228	276	416	322	154	346		380	370	171	305	227	190						230	403	247		284
NY125	331		388		208				570	218			218	186	187	267	186	22	321	419			271
NY126	298	381	391	391	189	337		439	421	287			242	342	411	442	317	82	511	470	290		347
NY127	322		318	600	109	340		508	508	199			204	269	214	309	193	40	306	358	335		289
NY128	229	356		436	186	287		407	407	331	232	339	196	199	185	215	154	29	284	470	241		265
SC8801-2	285		359																191	391			307

East Region Trial Table 3. Continued.

Clone	ME1 ¹	ME2 ¹	ME3 ¹	FL	NC	NJ1 ²	NJ2 ²	NY1 ³	NY2 ³	NY3 ³	NY4 ³	NY5 ³	OH	PA1 ⁴	PA2 ⁴	PA3 ⁴	PA4 ⁴	PA5 ⁴	QC1 ⁵	QC2 ⁵	VA	Mean
Red Clones																						
Brise du Nord	240		442									133										272
Chieftain	273		367	384	168	339	433	362	400	249			207	206					309	388		316
DR Norland	242		258	252	135	254	311	273	369	164			179	164					327	348		252
Red Island, AC	274		417	410	177	241	459	362					222						214	373	244	308
Roselys	288		360																337	366		338
NDTX731-1R	302		319	427	217	267	430		458	286			210	147					291	338		300
NY129	318		378	384	206	251	427		465	293			179						177	382		313
Russets/Long Whites																						
R Burbank	241		216	168		372	120		271										156	240		223
R Norkotah	263		346	242		249	252		314				119									240
Shepody	244		262						289				140						213	258		234
A9014-2	306		243	319		238	399		343				182						288	331	87	266
A90586-11	326		294			245	338						141						218	280	113	255
AF1753-16	240		297	382	95								81						251	242		227
AF1808-18	219		249	267		136	186		285				69						175	185	117	189
AF1866-8	177		250										80						199	257		193
AF2133-17	230		217			177	204						104						180	276	68	182
ATX84706-2Ru	253		260	320	163	400	479						113						215	288		269

¹Trials were conducted in three Maine locations, Presque Isle (ME1), Exeter (ME2), and St. Agatha (ME3).

²The two trial locations for New Jersey were Upper Deerfield main-season trial (NJ1) and Pittstown late-season trial (NJ2).

³The five trial locations in New York were Riverhead, Long Island (NY1), Freeville (NY2), Wayne County, muck soil (NY3), Steuben County (NY4), Wyoming County (NY5).

⁴There were five trial locations in Pennsylvania (Rock Springs [PA1], Lehigh County [PA2], Lancaster County [PA3], Somerset County [PA4], and Erie County [PA5]).

⁵The two Quebec trials were Rawdon (QC1) and Louisville (QC2).

Additional note: Some states (ME, NY) had several clones tested in two or more trials per location. For these states, means are presented by location rather than by trial.

East Region Trial Table 4. Continued.

Clone	ME1 ¹	ME2 ¹	ME3 ¹	FL	NC	NJ1 ²	NJ2	NY1 ³	NY2 ³	NY3 ³	NY4 ³	NY5 ³	OH	PA1 ⁴	PA2 ⁴	PA3 ⁴	PA4 ⁴	PA5 ⁴	QC1 ⁵	QC2 ⁵	VA	Mean
Red Clones																						
Brise du Nord	82		82									75										80
Chieftain	74		65	59	60	60	63	70	75	68		63	97									69
DR Norland	62		61	63	52	50	56	63	64	55		63	75								53	60
Red Island, AC	80		77	70	67	66	67	75				76									65	71
Roselys	75		79																			77
NDTX731-1R	68		60	58	52	53	57		65	56		70	68								51	61
NY129	74		67	55	63	70	63		78	67		66									65	67
Russets/Long Whites																						
R Burbank	85		74	71			68		87													77
R Norkotah	81		75	62		64	70		77				74								78	73
Shepody	92		84						86				67									82
A9014-2	90		74	70		81	80						89								83	81
A90586-11	96		83			82	77		93				88								80	86
AF1753-16	96		85	68	77								88								86	83
AF1808-18	91		80	71		75	68		86				74								86	79
AF1866-8	61		70										74									68
AF2133-17	78		75			71	67						82								80	76
ATX84706-2Rus	84		75	63	68	70	70						81								85	75

¹Trials were conducted in three Maine locations, Presque Isle (ME1), Exeter (ME2), and St. Agatha (ME3).

²The two trial locations for New Jersey were Upper Deerfield main-season trial (NJ1) and Pittstown late-season trial (NJ2).

³The five trial locations in New York were Riverhead, Long Island (NY1), Freeville (NY2), Wayne County, muck soil (NY3), Steuben County (NY4), Wyoming County (NY5).

⁴There were five trial locations in Pennsylvania (Rock Springs [PA1], Lehigh County [PA2], Lancaster County [PA3], Somerset County [PA4], and Erie County [PA5]).

⁵The two Quebec trials were Rawdon (QC1) and Louisville (QC2).

Additional note: Some states (ME, NY) had several clones tested in two or more trials per location. For these states, means are presented by location rather than by trial.

East Region Trial Table 5. Percentage yield of tubers in the 2.5 to 4 inch size range for round whites and reds and russets (greater than eight ounces at most locations) for 17 named varieties and 26 numbered clones grown at 21 locations in the Eastern United States and Eastern Canada.

Clone	ME1 ¹	ME2 ¹	ME3 ¹	FL	NC	NJ1 ²	NJ2 ²	NY1 ³	NY2 ³	NY3 ³	NY4 ³	NY5 ³	OH	PA1 ⁴	PA2 ⁴	PA3 ⁴	PA4 ⁴	PA5 ⁴	QC1 ⁵	QC2 ⁵	VA	Mean
Round Whites																						
Aquilon	29	67		38																		45
Atlantic	37	70	51	63	38	38	66	60	49					17	8	18	29	6	51	47	76	43
Envol	29		39																14	31		28
Katahdin	44	69	63		35	35	69	51	55					21	6	23	17	5			53	39
Kennebec	33	59	71		18	28		50	62												60	48
Snowden	15	53	40	59	26				37					4		7	8	0	27	23	52	28
Sunbury, AC	64		62	32	40	43	64	55	75										10	28	78	50
Superior	34	48	59		36	18	59	26	56					11					22	30	83	40
Yukon Gold	63	66	65	56	45	25	65	64	55					17		27	0	0	32	41	82	47
AF1455-20	49	63	67		30				61					7								41
AF1569-2	39	47	65		32				65					20	9	16					77	41
AF1758-7	51	47	65						50					5		14						39
AF1938-3					42			47											35	17	69	42
AF2115-1	52	51	61	44	38			52						16					16	30	63	42
AF2207-4	18	36	36		14	6		19	29					8	0		0		12	13	51	19
AF2215-1	20	63			40	21			36					13		15			21	26		28
AF2222-2	19	26	16	37	20	3			17					4		4			8	9	15	15
B1240-1	48	66	56		47	46	76	66	70					19	15	26	36	16	41	34	80	46
B1806-8	30		41		19	26	48							12					5	12	66	29
B1826-1	60		68			43			59					28					40	22		46
NY120	15	29	18	33	16	24		30	27										5	8	61	24
NY125	19		33		23				38					3	4	5	4	1	25	10		15
NY126	36	69	64	43	50	33		65	61					27	14	20	16	0	39	41	72	41
NY127	38		45	58	38	16			38					9	5	8	4	0	23	22	66	26
NY128	13	45		49	18	16			16					5	1	4	4	0	29	34	54	21
SC8801-2	63		77																21	60		55

East Region Trial Table 5. Continued.

Clone	ME1 ¹	ME2 ¹	ME3 ¹	FL	NC	NJ1 ²	NJ2 ²	NY1 ³	NY2 ³	NY3 ³	NY4 ³	NY5 ³	OH	PA1 ⁴	PA2 ⁴	PA3 ⁴	PA4 ⁴	PA5 ⁴	QC1 ⁵	QC2 ⁵	VA	Mean
Red Clones																						
Brise du Nord	15		74																			45
Chieftain	38		62	46	34	31	50	35	34					11					33	19		36
DR Norland	16		27	8	34	6	38	14	25					6					28	11	58	23
Red Island, AC	36		69	37	36	5	37	38											18	24	55	36
Roselys	55		73																50	41		55
NDTX731-1R	23		54	54	45	14	54		61					2					36	12	56	36
NY129	28		55	39	45	11	62		38										22	33	57	38
Russets/Long Whites																						
R Burbank	25		29	1			22		21										8	24		19
R Norkotah	30		36	13		5	30		15					53							23	26
Shepody	49		62						51					63					23	33		47
A9014-2	42		48	13		5	49							61					23	32	16	32
A90586-11	22		28			4	32		27					57					13	21	18	25
AF1753-16	47		57	25	8									56					36	22		36
AF1808-18	49		43	16		0	44		30					54					17	9	23	29
AF1866-8	27		57											47					9	21		32
AF2133-17	38		30			2	28							54					28	18	6	26
ATX84706-2Rus	70		77	35	30	76	82							58					39	49	39	56

¹Trials were conducted in three Maine locations, Presque Isle (ME1), Exeter (ME2), and St. Agatha (ME3).
²The two trial locations for New Jersey were Upper Deerfield main-season trial (NJ1) and Pittstown late-season trial (NJ2).
³The five trial locations in New York were Riverhead, Long Island (NY1), Freeville (NY2), Wayne County, muck soil (NY3), Steuben County (NY4), Wyoming County (NY5).
⁴There were five trial locations in Pennsylvania (Rock Springs [PA1], Lehigh County [PA2], Lancaster County [PA3], Somerset County [PA4], and Erie County [PA5]).
⁵The two Quebec trials were Rawdon (QC1) and Louisville (QC2).
 Additional note: Some states (ME, NY) had several clones tested in two or more trials per location. For these states, means are presented by location rather than by trial.

East Region Trial Table 6. Average (sites x years) US#1 yield, specific gravity, and tuber size distribution relative to standard varieties, tuber appearance and shape ratings, chip color, and bake and boil scores for 17 named and 26 numbered round-white clones. Number of comparisons (sites x years) are in parentheses.

Variety	Year(s)	Comparison to Std ¹										Chip Color ⁴					Boil Score ⁷	Bake Score ⁷
		US#1 % of std	Spec. Grav.	Size Distrib.	Appearance Rating ²	Shape Rating ³	Out of Field ⁵	50-55°F Storage	45°F Storage	Reconditioned ⁶	Recon-ditioned ⁶							
Round Whites																		
Aquilon	2003	116(3)	1(3)	-12(3)	6.0(4)	2.6(4)	0	0	0	4	0	0	2	3	0	0	0	
Aquilon	3	97(20)	-2(19)	-13(18)	6.2(19)	2.8(19)	1	0	0	6	1	0	3	6	0	1	0	
Atlantic	2003	100(24)	0(22)	0(21)	6.0(20)	2.0(18)	2	0	0	2	1	1	8	2	0	1	1	
Atlantic	14	100(259)	0(255)	0(206)	6.3(233)	2.0(155)	33	21	6	72	19	20	36	17	10	25	13	
Envol	2003	70(4)	-12(2)	-19(4)	5.9(5)	3.0(3)	0	0	0	0	0	0	0	0	1	2	0	
Envol	3	72(22)	-10(18)	-10(22)	6.1(23)	3.3(19)	2	1	0	1	2	4	0	0	1	3	1	
Katahdin	2003	89(15)	-19(15)	2(14)	6.2(14)	2.9(14)	0	0	0	0	0	6	0	0	4	4	0	
Katahdin	14	94(179)	-15(168)	-2(140)	6.2(201)	2.7(115)	9	7	14	5	16	44	0	1	30	2	2	
Kennebec	2003	78(8)	-18(8)	-4(8)	4.6(9)	5.2(9)	0	0	0	3	0	4	1	0	4	0	2	
Kennebec	14	94(165)	-12(164)	0(130)	5.3(161)	4.4(88)	8	5	16	26	20	39	7	2	27	24	18	
Snowden	2003	100(16)	-3(14)	-15(14)	5.0(13)	1.8(12)	2	0	0	7	2	0	7	1	0	0	2	
Snowden	12	96(138)	-1(131)	-16(101)	5.8(138)	2.0(93)	31	3	1	53	12	9	30	5	2	9	9	
Sunbury, AC	2003	71(11)	-8(9)	-2(11)	6.6(12)	3.4(10)	0	2	0	0	0	2	0	0	0	0	0	
Superior	2003	84(13)	-14(11)	-9(12)	5.8(13)	3.4(11)	0	2	0	3	0	3	1	1	1	1	2	
Superior	14	88(167)	-11(159)	-8(127)	6.0(202)	3.0(120)	23	14	18	21	21	31	2	6	16	29	17	
Yukon Gold	2003	81(16)	-8(13)	-0(16)	6.5(16)	3.3(14)	0	0	0	0	0	6	0	0	2	2	1	
Yukon Gold	14	84(122)	-7(112)	1(90)	6.6(128)	3.0(84)	4	1	4	5	11	36	0	1	14	19	10	
AF1455-20	2003	86(8)	-2(8)	2(7)	5.2(8)	2.5(8)	1	0	0	2	2	1	0	2	2	0	1	
AF1455-20	3	82(29)	-3(29)	-4(26)	5.4(28)	2.4(28)	5	0	0	4	5	4	3	4	4	2	1	
AF1569-2	2003	98(10)	-20(10)	0(9)	5.8(10)	2.8(10)	2	0	0	2	1	2	0	0	3	0	1	
AF1569-2	3	93(31)	-16(29)	-2(28)	6.1(30)	2.6(28)	4	0	0	4	3	5	1	1	7	1	1	
AF1758-7	2003	74(7)	-27(7)	-4(6)	4.7(7)	3.1(7)	0	0	0	2	0	4	0	1	2	2	0	
AF1758-7	4	89(39)	-26(35)	-5(33)	5.7(39)	2.9(34)	4	0	0	4	2	15	1	3	5	10	1	
AF1938-3	2003	80(5)	-14(3)	-12(5)	5.8(5)	3.0(4)	3	0	0	1	0	1	1	1	1	1	0	
AF1938-3	3	85(22)	-12(25)	-6(24)	5.8(25)	3.0(24)	9	0	0	4	0	6	3	2	4	1	2	
AF2115-1	2003	80(10)	-8(8)	-9(10)	5.2(11)	4.0(9)	2	0	0	1	0	5	0	1	3	2	0	
AF2207-4	2003	64(13)	3(11)	-26(13)	5.1(14)	3.7(12)	2	0	0	3	4	0	2	2	0	0	1	
AF2215-1	2003	88(9)	-2(7)	-13(9)	5.2(10)	2.8(8)	1	0	0	6	0	0	2	2	0	0	1	

East Region Trial Table 6. Continued.

Variety	Year(s)	Comparison to Std ¹										Chip Color ⁴													
		US#1 % of std	Spec. Grav.	Size Distrib.	Appearance Rating ²	Shape Rating ³	Out of Field ⁵	50-55°F Storage	45°F Storage	Recon- ditioned ⁶	Boil Score ⁷	Bake Score ⁷													
AF2222-2	2003	70(11)	-10(9)	-29(11)	6.2(12)	1.9(10)	1	0	0	5	0	0	1	1	0	2	2	0	0	1	0	0	0		
B1240-1	2003	111(19)	-7(17)	4(16)	5.9(16)	2.6(14)	2	0	0	6	0	3	1	2	1	3	1	2	0	1	1	0	0	1	
B1240-1	3	108(49)	-6(45)	6(44)	6.0(45)	2.6(41)	10	0	0	17	2	5	4	2	5	6	4	4	1	1	1	1	0	1	
B1806-8	2003	83(9)	-7(7)	-19(9)	6.1(10)	3.4(8)	3	0	0	0	1	2	0	0	1	0	2	1	1	0	0	0	0	0	
B1826-1	2003	85(8)	-10(6)	3(7)	6.0(8)	3.5(6)	1	0	0	3	0	0	1	0	0	2	0	0	2	0	0	0	0	0	
NY120	2003	87(14)	-10(12)	-28(11)	6.5(12)	1.7(10)	3	0	0	3	1	2	0	0	2	2	3	1	2	2	0	0	0	0	
NY125	2003	86(12)	-16(10)	-18(11)	6.0(11)	3.2(9)	1	0	0	1	0	1	0	0	0	0	1	0	2	0	0	0	0	0	
NY126	2003	112(17)	-9(15)	-1(16)	5.8(16)	3.4(14)	3	0	0	6	0	1	2	0	0	1	3	0	2	0	0	0	0	0	
NY127	2003	88(15)	-18(13)	-12(14)	5.5(14)	2.0(12)	3	0	0	0	1	2	0	0	1	0	1	1	1	1	0	0	0	0	
NY128	2003	87(17)	-7(15)	-19(14)	6.0(14)	1.9(12)	3	0	0	5	0	1	2	0	0	4	2	0	0	1	2	0	0	0	
SC8801-2	2003	83(4)	-17(2)	7(4)	6.1(4)	5.0(2)	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	1	0	0	
Red Clones																									
Brise du Nord	2003	91(3)	14(3)	-4(3)	4.0(3)	4.3(3)	0	0	0	0	0	3	0	0	0	0	0	0	0	0	1	1	0	0	0
Brise du Nord	2	93(14)	14(14)	-9(13)	4.0(14)	3.8(14)	0	0	0	0	0	3	0	0	0	0	0	0	0	0	1	1	0	0	0
Chieftain	2003	100(14)	0(12)	0(12)	5.9(13)	3.0(11)	0	0	0	0	0	5	0	0	0	0	0	0	0	0	3	0	0	0	0
Chieftain	14	100(110)	0(101)	0(80)	6.0(98)	2.8(56)	1	0	2	0	3	22	0	0	3	0	1	2	18	2	1	18	2	1	5
Norland, Dk Red	2003	80(13)	-8(11)	-16(11)	6.3(13)	3.1(12)	0	0	0	1	0	2	0	0	0	0	0	0	0	0	1	3	0	1	0
Norland, Dk Red	11	76(81)	-5(73)	-17(71)	6.2(96)	3.0(67)	2	1	4	5	8	9	0	0	2	1	1	1	1	9	6	1	6	2	1
Red Island, AC	2003	98(10)	8(8)	-5(9)	6.0(11)	4.2(9)	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0
Roselys	2003	102(4)	10(2)	18(4)	6.0(4)	3.5(2)	0	0	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0
Roselys	2	106(15)	8(11)	19(15)	6.0(15)	3.2(11)	0	0	0	0	0	5	0	0	0	0	0	0	0	1	0	0	1	0	0
NDTX31-1R	2003	99(13)	-8(11)	-2(11)	6.4(13)	1.9(12)	0	0	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0
NY129	2003	98(12)	2(10)	-2(10)	6.1(12)	2.2(10)	0	0	0	0	0	4	0	0	0	0	0	0	0	3	0	0	0	0	0

East Region Trial Table 6. Continued.

Variety	Year(s)	Comparison to Std ¹										Chip Color ⁴				
		US#1 % of std	Spec. Grav.	Size Distrib.	Appearance Rating ²	Shape Rating ³	Out of Field ⁵	50-55°F Storage	45°F Storage	Recon- ditioned ⁶	Boil Score ⁷	Bake Score ⁷				
Russets/Long Whites																
Russet Burbank	2003	84(6)	4(5)	-5(6)	4.2(8)	7.0(5)	0	0	0	0	0	2	0	2	0	1
Russet Burbank	14	93(43)	7(36)	-6(31)	4.0(104)	7.4(53)	0	1	0	1	6	31	0	0	19	20
Russet Norkotah	2003	100(8)	0(8)	0(8)	6.2(7)	6.5(8)	0	0	0	0	0	4	0	0	2	1
Russet Norkotah	7	100(67)	0(61)	0(50)	6.4(60)	6.6(51)	0	0	0	0	0	3	27	0	0	12
Shepody	2003	94(4)	6(4)	23(4)	5.0(5)	6.8(4)	0	0	0	0	0	4	0	0	2	0
Shepody	7	96(35)	7(29)	19(24)	5.0(34)	7.0(22)	0	0	0	1	4	11	0	0	7	2
A9014-2	2003	113(6)	9(6)	6(6)	6.3(6)	6.7(7)	0	0	0	2	0	1	0	1	0	1
A9014-2	2	122(12)	10(12)	8(12)	6.0(12)	6.6(13)	0	0	0	2	0	1	0	1	0	1
A90586-11	2003	107(7)	11(7)	-1(6)	5.1(8)	6.9(7)	0	0	0	0	0	4	0	0	2	0
A90586-11	2	127(16)	13(14)	3(15)	5.5(17)	6.4(16)	0	0	0	0	0	7	0	0	3	0
AF1753-16	2003	101(4)	11(4)	13(4)	4.2(6)	6.7(5)	0	0	0	0	0	4	0	0	2	0
AF1753-16	3	94(16)	9(14)	20(14)	4.3(12)	6.8(15)	0	0	0	0	0	9	0	0	3	1
AF1808-18	2003	78(8)	6(8)	7(8)	5.5(9)	6.6(8)	0	0	0	0	0	3	0	0	1	0
AF1866-8	2003	69(3)	-8(3)	4(3)	5.1(4)	5.3(3)	0	0	0	0	0	3	0	0	1	1
AF2133-17	2003	73(6)	2(6)	-3(6)	6.0(7)	6.3(6)	0	0	0	0	1	3	0	0	2	0
AF2133-17	2	76(14)	0(12)	3(14)	6.0(15)	5.9(12)	0	0	0	0	1	6	0	0	3	0
ATX84706-2Ru	2003	128(7)	3(7)	35(7)	5.8(9)	5.8(8)	0	0	0	0	3	0	1	0	2	0
ATX84706-2Ru	2	126(18)	3(16)	41(18)	5.7(20)	5.8(17)	0	0	0	0	4	1	2	0	1	2

¹Standard varieties were as follows: Atlantic was used as the standard for all whites; Chieftain was used for all reds; and Russet Norkotah was used for all russets and long-tuber-type clones. All relative comparisons are calculated by location and then averaged over locations for presentation. US#1 data are the relative yield as a percentage of the standard. Specific gravity data (1.0 excluded) are the difference vs the standard (minus sign indicates lower specific gravity than the standard). Size distribution for whites and reds is the percentage of yield from 2½ to 4 inches in diameter and is expressed as the difference relative to the standard (minus sign indicates smaller tubers than standard). Size distribution for the russet and long varieties is calculated the same way, but is based on the percentage of yield consisting of tubers greater than 8 oz in weight.

²Average value from visual ratings using standard NE1014 rating codes where 1 = very poor appearance and 9 = excellent appearance.

³Average value from visual ratings using standard NE1014 rating codes where 1 = round, 5 = oblong, and 8 = long.

⁴From left-to right, the number of trials with good, borderline, and poor chipping scores, respectively.

⁵Out of field samples were fried three to twelve days after harvest in New Jersey, North Carolina, Virginia, and the New York early maturity trial.

⁶Chips were reconditioned in Maine, Upstate New York, New Brunswick, and Ohio trials. Initial storage temperature ranged from 38 to 45°F

⁷From left-to-right, the scores are good, fair, and poor. Data are from Maine, New Brunswick, New York, Pennsylvania, and Ohio.

East Region Trial Table 7. Average (sites x years) percent tuber defects for 17 named and 26 numbered round-white clones. Number of comparisons (sites x years) are in parentheses.

Variety	Year(s)	% External Tuber Defects				% Internal Tuber Defects ²		
		Total ¹	Sun-burn	Mis-shapen	Growth cracks	Hollow Heart	Internal Necrosis	Vascular Discolor.
Round Whites								
Aquilon	2003	8.5(4)	3.2(3)	1.0(3)	2.8(3)	1.0(4)	4.0(2)	0.0(1)
Aquilon	3	11.1(18)	2.1(11)	3.0(11)	5.0(11)	1.5(20)	14.2(12)	0.0(3)
Atlantic	2003	7.5(19)	5.0(15)	1.1(15)	0.9(15)	12.4(21)	15.2(16)	3.9(7)
Atlantic	14	8.4(141)	4.1(115)	2.1(118)	1.2(121)	7.9(172)	21.9(112)	2.2(34)
Envol	2003	7.9(5)	1.0(4)	1.4(4)	0.9(4)	0.3(3)	0.0(2)	0.0(1)
Envol	3	10.3(19)	1.7(12)	5.0(12)	1.9(12)	0.4(18)	0.3(14)	1.0(5)
Katahdin	2003	12.1(10)	11.9(5)	1.1(5)	0.3(5)	4.7(14)	1.8(11)	0.0(3)
Katahdin	14	11.7(111)	6.9(90)	1.4(85)	0.6(92)	4.4(150)	6.2(85)	1.3(20)
Kennebec	2003	29.5(9)	17.0(5)	4.8(5)	4.2(5)	2.0(9)	2.6(6)	0.8(3)
Kennebec	14	20.4(91)	8.8(74)	4.9(74)	3.0(74)	2.9(114)	4.1(67)	0.3(14)
Snowden	2003	3.9(12)	3.0(10)	0.8(10)	0.4(10)	10.4(13)	0.1(10)	10.5(5)
Snowden	12	5.5(68)	2.7(60)	1.6(60)	0.3(60)	3.0(100)	2.6(67)	8.0(22)
Sunbury, AC	2003	7.5(12)	1.4(7)	1.4(7)	0.5(7)	3.3(10)	3.8(8)	0.0(3)
Superior	2003	7.3(13)	2.3(8)	3.0(8)	0.7(8)	0.2(12)	2.8(9)	4.4(4)
Superior	14	7.1(107)	1.6(81)	3.1(81)	1.0(83)	1.2(136)	2.1(96)	2.5(21)
Yukon Gold	2003	10.4(14)	5.1(9)	2.9(9)	1.1(9)	8.1(14)	1.2(11)	0.0(4)
Yukon Gold	14	11.4(77)	4.2(58)	2.4(58)	0.9(59)	5.8(87)	6.6(66)	2.2(17)
AF1455-20	2003	12.6(7)	3.1(5)	1.9(5)	0.7(5)	6.0(9)	0.0(6)	0.6(4)
AF1455-20	3	11.7(22)	3.1(12)	4.3(12)	0.9(12)	2.5(28)	2.1(22)	0.5(10)
AF1569-2	2003	11.9(8)	9.5(5)	0.2(5)	1.2(5)	1.4(11)	0.0(8)	0.0(4)
AF1569-2	3	12.2(21)	7.5(11)	1.1(11)	1.7(11)	1.1(23)	1.9(22)	0.0(9)
AF1758-7	2003	15.9(6)	3.0(5)	4.5(5)	0.6(5)	0.8(8)	0.0(5)	11.7(3)
AF1758-7	4	13.5(23)	2.6(20)	4.2(20)	0.8(20)	0.5(31)	4.9(21)	5.4(8)
AF1938-3	2003	12.2(6)	1.7(3)	3.0(3)	3.7(3)	0.0(5)	0.0(4)	0.0(3)
AF1938-3	3	14.9(24)	4.9(14)	1.4(14)	2.8(14)	1.6(25)	1.2(20)	0.0(9)
AF2115-1	2003	15.1(10)	8.7(7)	2.1(7)	1.9(7)	4.8(9)	3.8(6)	0.0(2)
AF2207-4	2003	11.6(11)	9.1(7)	1.0(7)	1.0(7)	9.5(12)	2.2(9)	0.0(3)
AF2215-1	2003	12.5(8)	7.2(5)	1.8(5)	0.7(5)	3.0(8)	2.1(6)	0.0(3)
AF2222-2	2003	5.3(10)	1.3(7)	1.7(7)	0.2(7)	7.6(10)	0.8(7)	0.0(3)
B1240-1	2003	12.4(15)	4.6(10)	0.8(10)	3.7(10)	14.0(17)	0.5(14)	7.5(6)
B1240-1	3	12.7(34)	6.2(18)	1.1(18)	4.0(18)	11.8(34)	3.6(35)	3.8(11)
B1806-8	2003	8.5(9)	2.8(4)	0.5(4)	0.6(4)	8.2(8)	0.4(6)	0.0(2)
B1826-1	2003	13.6(8)	4.2(6)	1.7(6)	4.2(6)	0.4(7)	0.0(5)	6.7(3)
NY120	2003	4.3(15)	1.7(11)	0.2(11)	0.2(11)	3.0(13)	0.8(10)	1.7(6)
NY125	2003	6.6(8)	4.5(6)	1.0(6)	0.0(6)	7.0(10)	0.0(8)	1.2(4)
NY126	2003	7.2(13)	2.2(9)	1.4(9)	0.7(9)	6.0(15)	1.4(12)	6.2(4)
NY127	2003	12.5(11)	4.9(7)	2.2(7)	2.1(7)	1.6(13)	0.0(11)	7.5(4)
NY128	2003	4.9(13)	2.9(9)	0.7(9)	0.1(9)	6.4(15)	0.5(12)	4.2(6)
SC8801-2	2003	16.1(4)	8.5(4)	4.7(4)	1.4(4)	2.5(2)	N/A	N/A

East Region Trial Table 7. Continued.

Variety	Year(s)	% External Tuber Defects				% Internal Tuber Defects ²		
		Total ¹	Sun-burn	Mis-shapen	Growth cracks	Hollow Heart	Internal Necrosis	Vascular Discolor.
Red Clones								
Brise du Nord	2003	16.4(3)	0.5(2)	0.6(2)	3.6(2)	33.3(3)	0.0(1)	0.0(1)
Brise du Nord	2	19.3(13)	1.7(8)	3.8(6)	7.7(8)	10.6(14)	2.0(11)	1.5(4)
Chieftain	2003	6.3(13)	1.3(9)	1.6(9)	1.2(9)	0.0(14)	10.6(9)	0.0(4)
Chieftain	14	6.7(65)	1.6(49)	1.4(51)	1.4(50)	0.6(81)	12.6(52)	0.3(17)
Norland, Dk Red	2003	8.6(13)	1.1(8)	1.5(8)	1.9(8)	1.9(12)	0.5(10)	0.0(4)
Norland, Dk Red	11	4.6(56)	1.1(39)	1.6(38)	1.2(30)	0.9(71)	0.8(59)	0.4(16)
Red Island, AC	2003	8.8(11)	2.6(6)	1.8(6)	1.9(6)	0.6(9)	7.3(7)	0.0(2)
Roselys	2003	4.9(4)	1.2(4)	0.6(4)	2.0(4)	2.5(2)	N/A	N/A
Roselys	2	12.1(12)	1.8(8)	2.1(8)	2.4(8)	0.5(10)	1.0(7)	0.0(1)
NDTX731-1R	2003	7.6(13)	1.3(8)	2.8(8)	3.0(8)	0.2(12)	1.1(9)	1.2(4)
NY129	2003	3.0(13)	0.8(8)	0.8(8)	1.0(8)	0.0(11)	1.3(8)	2.5(4)
Russets/Long Whites								
Russet Burbank	2003	24.7(7)	0.3(6)	16.4(6)	1.6(6)	6.2(5)	0.0(4)	0.0(1)
Russet Burbank	14	20.1(67)	1.3(61)	15.2(61)	1.2(57)	7.8(74)	8.2(35)	1.0(8)
Russet Norkotah	2003	8.0(7)	1.2(4)	5.0(4)	0.4(4)	3.9(8)	1.6(6)	0.0(1)
Russet Norkotah	7	8.9(39)	1.6(29)	4.5(29)	0.6(29)	4.4(49)	1.2(29)	0.8(7)
Shepody	2003	23.3(5)	7.2(5)	11.9(5)	2.4(5)	10.8(4)	0.0(2)	0.0(1)
Shepody	7	33.0(21)	7.4(20)	12.1(20)	0.8(20)	3.7(25)	1.8(10)	3.6(7)
A9014-2	2003	7.8(8)	0.9(5)	3.4(5)	0.6(5)	9.6(6)	0.5(5)	N/A
A9014-2	2	9.5(14)	0.9(11)	5.1(11)	0.6(11)	8.3(11)	0.5(11)	0.0(2)
A90586-11	2003	11.4(8)	5.0(5)	6.0(5)	0.6(5)	3.3(7)	1.0(5)	0.0(1)
A90586-11	2	13.7(15)	5.9(8)	6.3(8)	0.7(8)	2.9(13)	0.8(10)	0.0(2)
AF1753-16	2003	36.4(6)	8.2(5)	19.2(5)	5.1(5)	7.2(5)	0.0(3)	0.0(1)
AF1753-16	3	43.4(15)	7.7(10)	16.4(10)	6.4(10)	3.1(14)	0.0(8)	0.0(1)
AF1808-18	2003	17.5(9)	5.3(6)	6.2(6)	1.2(6)	5.1(8)	0.4(6)	2.5(1)
AF1866-8	2003	14.2(4)	1.5(4)	6.3(4)	6.3(4)	2.5(3)	0.0(1)	N/A
AF2133-17	2003	10.0(7)	2.1(4)	4.2(4)	1.8(4)	0.4(6)	0.0(4)	N/A
AF2133-17	2	13.5(13)	1.4(8)	7.9(8)	0.9(8)	0.4(12)	0.0(8)	0.0(1)
ATX84706-2Ru	2003	20.8(8)	2.5(5)	4.3(5)	14.1(5)	5.0(8)	1.1(6)	0.0(1)
ATX84706-2Ru	2	22.0(17)	4.3(9)	4.8(9)	9.9(9)	3.2(16)	0.5(13)	0.8(3)

¹Total defects may contain defects (common scab, rot, etc.) other than the three categories listed in this table.

²Typically 30 to 40 tubers per clone are cut and examined for internal defects at each location. For most eastern test locations where internal necrosis is reported the specific internal defect being rated is internal heat necrosis (IHN).