

CHAPTER 8. EARLY-LINE CHIP POTATO VARIETY TRIAL, 2003

General Comments

Potato clones in this trial are new to the variety evaluation program. At this stage seed supplies are usually limited. To maintain a replicated trial with a small seed lot, plot length is reduced to six feet. Chip quality was determined by personnel at Wise Foods, Inc.

Planting Information

Planting Site	PSREU, Yelvington Farm, Hastings, FL
Planting Date	January 29, 2003
Harvest Date	May 12, 2003
Season Length	103 days
Fertilizer Program	preplant, 100-43-86 lb/A; sidedress, 50-0-42 lb/A; 80-0-69 lb/A
Irrigation Program	seepage

Experimental Design

Number of Varieties	2 (Standard: Atlantic)
Number of Clones	32
Within Row Spacing	8 in (20 cm)
Between Row Spacing	40 in (102 cm)
Replications	4
Plot Size	6 ft (1.8 m)

Production Statistics

Early Vigor Ratings	36 days after planting
Highest Total Yield	B1992-106 (645 cwt/acre or 72.3 MT/ha)
Highest Marketable Yield	B1992-106 (557 cwt/acre or 62.4 MT/ha)
Highest Gravity	Snowden (1.082)

Specific Comments

Atlantic (MFX). Atlantic total and marketable tuber yields were 556 and 487 cwt/acre, respectively. Potato tuber skin color was tan with a netted texture. Tuber flesh color was cream. Tuber shape was rated as 'mostly round' to 'round to oblong' with an eye depth of intermediate to shallow. Overall external tuber appearance was noted as fair to good. Early plant vigor (size) was rated as 6 to 8 inches. Vine type at full flower was rated as upright with a good canopy. Plant maturity at harvest was rated as moderately senesced to yellow and dying. Average specific gravity for Atlantic tubers was 1.078. Eighteen percent of marketable tubers had hollow heart.

Snowden (MFX). Snowden total and marketable tuber yields were 568 and 519 cwt/acre, respectively. Potato tuber skin color was tan with a netted texture. Tuber flesh color was white to cream. Tuber shape was rated as 'mostly round' to 'round to oblong' with an eye depth of intermediate to shallow. Overall external tuber appearance was noted as fair to good. Early plant vigor (size) was rated as 4 to 6 inches. Vine type at full flower was rated as upright with a good canopy. Plant maturity at harvest was rated as moderately senesced to yellow and dying. Average specific gravity for Snowden tubers was 1.082.

A94322-8 (USDA). A94322-8 total and marketable tuber yields were 475 and 388 cwt/acre, respectively. Potato tuber skin color was tan to buff with a netted to slightly netted texture. Tuber flesh color was white to cream. Tuber shape was rated as 'mostly round' to 'round to oblong' with an eye depth of intermediate to shallow. Overall external tuber appearance was noted as fair to good. Early plant vigor (size) was rated as 4 to 6 inches. Vine type at full flower was rated as spreading to upright with a good canopy. Plant maturity at harvest was rated as moderately senesced to yellow and dying. Average specific gravity for A94322-8 tubers was 1.078.

AF2492-2 (UM). AF2492-2 total and marketable tuber yields were 549 and 491 cwt/acre, respectively. Potato tuber skin color was buff to white with a slightly netted to netted texture. Tuber flesh color was white to cream. Tuber shape was rated as 'round to oblong' to 'mostly oblong' with an eye depth of intermediate. Overall external tuber appearance was noted as fair to good. Early plant vigor (size) was rated as 2 to 4 inches. Vine type at full flower was rated as spreading to upright with a fair canopy. Plant maturity at harvest was rated as yellow and dying. Average specific gravity for AF2492-2 tubers was 1.077.

AF2498-6 (UM). AF2498-6 total and marketable tuber yields were 508 and 447 cwt/acre, respectively. Potato tuber skin color was tan to buff with a slightly netted texture. Tuber flesh color was white to cream. Tuber shape was rated as 'mostly round' to 'round to oblong' with an eye depth of intermediate to shallow. Overall external tuber appearance was noted as poor to fair. Early plant vigor (size) was rated as 2 to 4 inches. Vine type at full flower was rated as upright with a fair canopy. Plant maturity at harvest was rated as moderately senesced to yellow and dying. Average specific gravity for AF2498-6 tubers was 1.068.

AF2500-4 (UM). AF2500-4 total and marketable tuber yields were 397 and 198 cwt/acre, respectively. Tuber appearance data is not available. Early plant vigor (size) was rated as 2 to 4 inches. Vine type at full flower was rated as upright with a fair canopy. Plant maturity at harvest was rated as moderately senesced to yellow and dying. Average specific gravity for AF2500-4 tubers was 1.055. Sixteen percent of all tubers were misshaped and 14% had growth cracks.

AF2502-6 (UM). AF2502-6 total and marketable tuber yields were 453 and 338 cwt/acre, respectively. Potato tuber skin color was tan to buff with a netted to slightly netted texture. Tuber flesh color was white to cream. Tuber shape was rated as 'mostly oblong' with an eye depth of intermediate to shallow. Overall external tuber appearance was noted as fair to good. Early plant vigor (size) was rated as 2 to 4 inches. Vine type at full flower was rated as spreading to upright with a good canopy. Plant maturity at harvest was rated as yellow and dying. Average specific gravity for AF2502-6 tubers was 1.081. Twenty percent of all tubers were misshaped.

AF2508-8 (UM). AF2508-8 total and marketable tuber yields were 474 and 387 cwt/acre, respectively. Potato tuber skin color was tan to buff with a netted to slightly netted texture. Tuber flesh color was white to cream. Tuber shape was rated as 'round to oblong' with an eye depth of intermediate to shallow. Overall external tuber appearance was noted as fair to good. Early plant vigor (size) was rated as less than 2 inches. Vine type at full

flower was rated as spreading to upright with a fair canopy. Plant maturity at harvest was rated as yellow and dying. Average specific gravity for AF2508-8 tubers was 1.068.

AF2525-1 (UM). AF2525-1 total and marketable tuber yields were 200 and 165 cwt/acre, respectively. Potato tuber skin color was tan with a netted to slightly netted texture. Tuber flesh color was cream. Tuber shape was rated as 'mostly oblong' to 'oblong' with an eye depth of intermediate to shallow. Overall external tuber appearance was noted as fair to good. Early plant vigor (size) was rated as less than 2 inches. Vine type at full flower was rated as upright with a poor canopy. Plant maturity at harvest was rated as yellow and dying to completely dead. Average specific gravity for AF2525-1 tubers was 1.054. Plants were noted as being sensitive to metribuzin.

B1990-4 (USDA). B1990-4 total and marketable tuber yields were 527 and 445 cwt/acre, respectively. Potato tuber skin color was buff with a netted to slightly netted texture. Tuber flesh color was white to cream. Tuber shape was rated as 'round to oblong' with an eye depth of intermediate to shallow. Overall external tuber appearance was noted as fair. Early plant vigor (size) was rated as 4 to 6 inches. Vine type at full flower was rated as upright to spreading with a fair canopy. Plant maturity at harvest was rated as yellow and dying. Average specific gravity for B1990-4 tubers was 1.069.

B1990-17 (USDA). B1990-17 total and marketable tuber yields were 445 and 349 cwt/acre, respectively. Potato tuber skin color was buff with a netted to slightly netted texture. Tuber flesh color was white to cream. Tuber shape was rated as 'round' to 'mostly round' with an eye depth of intermediate to shallow. Overall external tuber appearance was noted as fair to good. Early plant vigor (size) was rated as 8 to 10 inches. Vine type at full flower was rated as upright to spreading with a fair canopy. Plant maturity at harvest was rated as yellow and dying to completely dead. Average specific gravity for B1990-17 tubers was 1.065.

B1990-106 (USDA). B1990-106 total and marketable tuber yields were 645 and 557 cwt/acre, respectively. Potato tuber skin color was brown to tan with a netted texture. Tuber flesh color was white to cream. Tuber shape was rated as 'oblong' to 'mostly oblong' with an eye depth of intermediate to shallow. Overall external tuber appearance was noted as fair. Early plant vigor (size) was rated as 4 to 6 inches. Vine type at full flower was rated as upright to spreading with a good canopy. Plant maturity at harvest was rated as moderately senesced to yellow and dying. Average specific gravity for B1990-106 tubers was 1.076.

B2001-184 (USDA). B2001-184 total and marketable tuber yields were 474 and 416 cwt/acre, respectively. Potato tuber skin color was tan with a netted to light russet texture. Tuber flesh color was white to cream. Tuber shape was rated as 'round to oblong' with an eye depth of intermediate to shallow. Overall external tuber appearance was noted as fair to good. Early plant vigor (size) was rated as 2 to 4 inches. Vine type at full flower was rated as upright with a fair canopy. Plant maturity at harvest was rated as moderately senesced to yellow and dying. Average specific gravity for B2001-184 tubers was 1.074.

B2008-34 (USDA). B2008-34 total and marketable tuber yields were 386 and 334 cwt/acre, respectively. Potato tuber skin color was tan to buff with a slightly netted to netted texture. Tuber flesh color was white to cream. Tuber shape was rated as 'round to oblong' with an eye depth of shallow to very shallow. Overall external tuber appearance was noted as fair to good. Early plant vigor (size) was rated as 6 to 8 inches. Vine type at full flower was rated as upright with a fair canopy. Plant maturity at harvest was rated as yellow and dying. Average specific gravity for B2008-34 tubers was 1.074.

B2128-133 (USDA). B2128-133 total and marketable tuber yields were 364 and 288 cwt/acre, respectively. Potato tuber skin color was tan with a slightly netted texture. Tuber flesh color was white to cream. Tuber shape was rated as 'mostly oblong' to 'oblong' with an eye depth of intermediate to shallow. Overall external tuber appearance was noted as fair to good. Early plant vigor (size) was rated as 4 to 6 inches. Vine type at full flower was rated as spreading with a fair canopy. Plant maturity at harvest was rated as moderately senesced to yellow and dying. Average specific gravity for B2128-133 tubers was 1.065.

B2194-70 (USDA). B2194-70 total and marketable tuber yields were 495 and 409 cwt/acre, respectively. Potato tuber skin color was brown to tan with a netted to slightly netted texture. Tuber flesh color was cream. Tuber shape was rated as 'mostly oblong' with an eye depth of intermediate to shallow. Overall external tuber

appearance was noted as fair to good. Early plant vigor (size) was rated as 6 to 8 inches. Vine type at full flower was rated as upright to spreading with a fair canopy. Plant maturity at harvest was rated as yellow and dying. Average specific gravity for B2194-70 tubers was 1.081.

B2199-50 (USDA). B2199-50 total and marketable tuber yields were 511 and 415 cwt/acre, respectively. Potato tuber skin color was tan to buff with a netted to slightly netted texture. Tuber flesh color was white. Tuber shape was rated as ‘mostly oblong’ to ‘oblong’ with an eye depth of intermediate to shallow. Overall external tuber appearance was noted as fair to good. Early plant vigor (size) was rated as 4 to 6 inches. Vine type at full flower was rated as upright to spreading with a fair canopy. Plant maturity at harvest was rated as yellow and dying. Average specific gravity for B2199-50 tubers was 1.066. Twelve percent of marketable tubers had hollow heart.

B2224-3 (USDA). B2224-3 total and marketable tuber yields were 451 and 318 cwt/acre, respectively. Potato tuber skin color was tan with a netted texture. Tuber flesh color was white to cream. Tuber shape was rated as ‘mostly oblong’ to ‘oblong’ with an eye depth of intermediate to shallow. Overall external tuber appearance was noted as fair. Early plant vigor (size) was rated as 4 to 6 inches. Vine type at full flower was rated as spreading with a good canopy. Plant maturity at harvest was rated as moderately senesced to yellow and dying. Average specific gravity for B2224-3 tubers was 1.075.

B2240-3 (USDA). B2240-3 total and marketable tuber yields were 417 and 326 cwt/acre, respectively. Potato tuber skin color was brown to tan with a netted texture. Tuber flesh color was white. Tuber shape was rated as ‘mostly round’ to ‘round to oblong’ with an eye depth of shallow. Overall external tuber appearance was noted as fair to good. Early plant vigor (size) was rated as 4 to 6 inches. Vine type at full flower was rated as upright to spreading with a good canopy. Plant maturity at harvest was rated as moderately senesced to yellow and dying. Average specific gravity for B2240-3 tubers was 1.072.

B2243-6 (USDA). B2243-6 total and marketable tuber yields were 348 and 137 cwt/acre, respectively. Tuber appearance data is not available. Early plant vigor (size) was rated as 2 to 4 inches. Vine type at full flower was rated as upright with a fair canopy. Plant maturity at harvest was rated as yellow and dying. Average specific gravity for B2243-6 tubers was 1.067. Twenty-one percent of all tubers were misshapen.

B2253-4 (USDA). B2253-4 total and marketable tuber yields were 571 and 432 cwt/acre, respectively. Potato tuber skin color was tan to buff with a netted to slightly netted texture. Tuber flesh color was white to cream. Tuber shape was rated as ‘round to oblong’ with an eye depth of shallow. Overall external tuber appearance was noted as fair to good. Early plant vigor (size) was rated as 6 to 8 inches. Vine type at full flower was rated as spreading to upright with a good canopy. Plant maturity at harvest was rated as yellow and dying. Average specific gravity for B2253-4 tubers was 1.062. Plant growth was noted as “vigorous”.

B2258-3 (USDA). B2258-3 total and marketable tuber yields were 464 and 343 cwt/acre, respectively. Potato tuber skin color was brown to tan with a slightly netted to moderately smooth texture. Tuber flesh color was white to cream. Tuber shape was rated as ‘mostly round’ to ‘round to oblong’ with an eye depth of shallow. Overall external tuber appearance was noted as poor to fair. Early plant vigor (size) was rated as 6 to 8 inches. Vine type at full flower was rated as spreading to upright with a fair canopy. Plant maturity at harvest was rated as moderately senesced to yellow and dying. Average specific gravity for B2258-3 tubers was 1.074.

COA96141-2 (USDA-ID). COA96141-2 total and marketable tuber yields were 494 and 362 cwt/acre, respectively. Potato tuber skin color was tan to buff with a slightly netted texture. Tuber flesh color was white. Tuber shape was rated as ‘mostly round’ to ‘round to oblong’ with an eye depth of intermediate to shallow. Overall external tuber appearance was noted as poor to fair. Early plant vigor (size) was rated as 6 to 8 inches. Vine type at full flower was rated as decumbent to spreading with a fair canopy. Plant maturity at harvest was rated as moderately senesced to yellow and dying. Average specific gravity for COA96141-2 tubers was 1.061.

COA96142-3 (USDA-ID). COA96142-3 total and marketable tuber yields were 506 and 426 cwt/acre, respectively. Potato tuber skin color was tan to buff with a slightly netted to moderately smooth texture. Tuber flesh color was white to cream. Tuber shape was rated as ‘round to oblong’ with an eye depth of intermediate to shallow. Overall external tuber appearance was noted as fair. Early plant vigor (size) was rated as 4 to 6

inches. Vine type at full flower was rated as spreading to upright with a good canopy. Plant maturity at harvest was rated as moderately senesced to yellow and dying. Average specific gravity for COA96142-3 tubers was 1.068.

MSF373-8 (MSU). MSF373-8 total and marketable tuber yields were 456 and 409 cwt/acre, respectively. Potato tuber skin color was tan to buff with a slightly netted texture. Tuber flesh color was white to cream. Tuber shape was rated as 'mostly round' to 'round to oblong' with an eye depth of intermediate to shallow. Overall external tuber appearance was noted as poor to fair. Early plant vigor (size) was rated as 4 to 6 inches. Vine type at full flower was rated as upright with a fair canopy. Plant maturity at harvest was rated as moderately senescing to yellow and dying. Average specific gravity for MSF373-8 tubers was 1.071.

MSH031-5 (MSU). MSH031-5 total and marketable tuber yields were 449 and 375 cwt/acre, respectively. Potato tuber skin color was tan to buff with a netted texture. Tuber flesh color was white to cream. Tuber shape was rated as 'round to oblong' to 'mostly oblong' with an eye depth of intermediate to shallow. Overall external tuber appearance was noted as fair. Early plant vigor (size) was rated as 4 to 6 inches. Vine type at full flower was rated as spreading with a good canopy. Plant maturity at harvest was rated as moderately senesced to yellow and dying. Average specific gravity for MSH031-5 tubers was 1.079.

MSJ461-1 (MSU). MSJ461-1 total and marketable tuber yields were 413 and 310 cwt/acre, respectively. Potato tuber skin color was tan to buff with a netted to slightly netted texture. Tuber flesh color was white to cream. Tuber shape was rated as 'mostly round' to 'round to oblong' with an eye depth of intermediate to shallow. Overall external tuber appearance was noted as poor to fair. Early plant vigor (size) was rated as 6 to 8 inches. Vine type at full flower was rated as spreading to upright with a fair canopy. Plant maturity at harvest was rated as yellow and dying. Average specific gravity for MSJ461-1 tubers was 1.072.

ND4778-2 (NDSU). ND4778-2 total and marketable tuber yields were 97 and 56 cwt/acre, respectively. Potato tuber skin color was buff to white with a moderately smooth texture. Tuber flesh color was white to cream. Tuber shape was rated as 'mostly round' with an eye depth of shallow. Overall external tuber appearance was noted as fair to good. Early plant vigor (size) was rated as 2 to 4 inches. Vine type at full flower was rated as spreading to upright with a poor canopy. Plant maturity at harvest was rated as starting to senesce to moderately senesced. Average specific gravity for ND4778-2 tubers was 1.069. Plants were noted as being sensitive to metribuzin.

ND8216-6 (NDSU). ND8216-6 total and marketable tuber yields were 479 and 259 cwt/acre, respectively. Potato tuber skin color was tan to buff with a slightly netted texture. Tuber flesh color was white. Tuber shape was rated as 'mostly oblong' with an eye depth of intermediate. Overall external tuber appearance was noted as fair. Early plant vigor (size) was rated as 2 to 4 inches. Vine type at full flower was rated as upright to spreading with a fair canopy. Plant maturity at harvest was rated as yellow and dying. Average specific gravity for ND8216-6 tubers was 1.071. Twenty-six percent of all tubers were misshaped.

ND8217B-2 (NDSU). ND8217B-2 total and marketable tuber yields were 444 and 349 cwt/acre, respectively. Tuber appearance data is not available. Early plant vigor (size) was rated as 4 to 8 inches. Vine type at full flower is not available. Plant maturity at harvest was rated as completely dead. Average specific gravity for ND8217B-2 tubers is not available. Plants were noted as being *severely* sensitive to metribuzin.

NDA5507-3Y (NDSU). NDA5507-3Y total and marketable tuber yields were 536 and 472 cwt/acre, respectively. Potato tuber skin color was tan to buff with a slightly netted to moderately smooth texture. Tuber flesh color was white to cream. Tuber shape was rated as 'round to oblong' to 'mostly oblong' with an eye depth of intermediate to shallow. Overall external tuber appearance was noted as fair to good. Early plant vigor (size) was rated as 6 to 8 inches. Vine type at full flower was rated as spreading to upright with a fair canopy. Plant maturity at harvest was rated as yellow and dying to completely dead. Average specific gravity for NDA5507-3Y tubers was 1.064.

AND99239-4 (NDSU). AND99239-4 total and marketable tuber yields were 511 and 464 cwt/acre, respectively. Potato tuber skin color was buff with a slightly netted to moderately smooth texture. Tuber flesh color was white to cream. Tuber shape was rated as 'mostly round' to 'round to oblong' with an eye depth of

intermediate to shallow. Overall external tuber appearance was noted as fair to good. Early plant vigor (size) was rated as 4 to 6 inches. Vine type at full flower was rated as upright with a good canopy. Plant maturity at harvest was rated as moderately senesced to yellow and dying. Average specific gravity for AND99239-4 tubers was 1.067.

NY120 (Cornell). NY120 total and marketable tuber yields were 444 and 349 cwt/acre, respectively. Potato tuber skin color was tan with a netted to slightly netted texture. Tuber flesh color was white. Tuber shape was rated as 'round' to 'mostly round' with an eye depth of shallow to very shallow. Overall external tuber appearance was noted as good. Early plant vigor (size) was rated as 8 to 10 inches. Vine type at full flower was rated as upright to spreading with a good canopy. Plant maturity at harvest was rated as moderately senesced to yellow and dying. Average specific gravity for NY120 tubers was 1.076. Plant growth was noted as "vigorous".

Table 26. Production statistics for Early-Line Chipping potato selections.

Clone	Total	Marketable Yield ¹		Size						Size Class		Specific Gravity
	Yield (cwt/A)	(cwt/A)	% of standard	Distribution by Class (%) ²						Range (%)		
				C	B	A1	A2	A3	A4	A1 to A3	A2 to A3	
Atlantic	556	487	100	4	6	30	34	26	0	90	60	1.078
Snowden	568	519	106	4	2	40	45	9	0	94	54	1.082
A94322-8	475	388	80	8	6	51	26	9	0	86	35	1.078
AF2492-2	549	491	101	4	2	33	34	26	2	93	60	1.077
AF2498-1	584	488	100	6	6	51	29	8	0	88	37	1.076
AF2498-6	508	447	92	5	4	46	24	22	0	92	46	1.068
AF2500-4	397	198	41	29	8	33	19	11	0	63	30	1.055
AF2502-6	453	338	69	2	1	39	42	15	0	96	57	1.081
AF2508-8	474	387	79	5	4	30	29	31	0	91	60	1.068
AF2525-1	200	165	34	9	11	73	6	0	0	79	6	1.054
AND99239-4	511	464	95	4	4	58	28	6	0	92	34	1.067
B1990-4	527	445	91	5	5	48	29	13	0	90	42	1.069
B1990-17	445	349	72	12	8	44	30	6	0	80	36	1.065
B1992-106	645	557	114	5	4	45	26	20	0	91	46	1.076
B2001-184	474	416	85	5	4	37	28	26	0	91	54	1.074
B2008-34	386	334	68	5	5	60	28	1	0	89	29	1.074
B2128-133	364	288	59	6	10	72	11	2	0	85	13	1.065
B2194-70	495	409	84	8	9	69	9	5	0	83	14	1.081
B2199-50	511	415	85	7	8	51	20	15	0	85	35	1.066
B2224-3	451	318	65	9	12	67	12	0	0	79	12	1.075

Table 26 (con't). Production statistics for Early-Line Chipping potato selections.

Clone	Total Yield (cwt/A)	Marketable Yield ¹		Size Distribution by Class (%) ²						Size Class Range (%)		Specific Gravity
		(cwt/A)	% of standard	C	B	A1	A2	A3	A4	A1 to A3	A2 to A3	
B2240-3	417	326	67	13	9	52	24	2	0	78	26	1.072
B2243-6	348	137	28	33	12	47	7	0	0	55	7	1.067
B2253-4	571	432	89	9	8	58	18	8	0	83	26	1.062
B2258-3	464	343	70	12	7	54	20	7	0	81	27	1.074
COA96141-2	494	362	74	13	10	57	15	5	0	78	21	1.061
COA96142-3	506	426	87	5	2	30	31	33	0	93	64	1.068
MSF373-8	456	409	84	3	2	25	33	35	2	93	68	1.071
MSH031-5	449	375	77	7	8	72	12	0	0	85	12	1.079
MSJ461-1	413	310	64	12	10	47	20	9	2	77	29	1.072
NDA5507-3Y	536	472	97	4	7	55	29	6	0	89	34	1.064
ND4778-2	97	56	12	47	15	35	2	2	0	39	4	1.069
ND8216-6	479	259	53	12	11	51	22	4	0	77	26	1.071
ND8217B-2	8	4	1	73	0	0	27	0	0	27	27	na
NY120	444	349	72	11	9	54	23	3	0	80	26	1.076
<i>MSD</i> ³	117	83		15	4	17	20	11	ns	16	18	0.005
<i>P Value</i>	0.0001	0.0001		0.0001	0.0001	0.0001	0.0004	0.0001	0.0820	0.0001	0.0001	0.0001

¹Marketable Yield: size classes A1 to A3.

²Size classes: C = .5 to 1.5" , B = 1.5 to 1 7/8", A1 = 1 7/8 to 2.5", A2 = 2.5 to 3.25", A3 = 3.25 to 4", A4 = >4"

³Means separated within columns by Waller-Duncan's k-ratio t test.

Table 27. Plant growth and tuber characteristics of Early-Line Chipping potato selections.

Clone	Plant Growth Characteristics				Tuber Characteristics ¹						Chip Rating ²
	% Stand	Early Vigor	Vine Type	Vine Maturity	IFC	SC	ST	TS	ED	APP	
Atlantic	89	5.5	9	3.5	2.0	6.0	5.0	2.7	6.7	6.0	4
Snowden	100	5.0	9	3.3	1.7	6.0	5.0	2.7	5.7	6.3	3
A94322-8	94	4.8	9-6	4.5	1.3	6.7	5.3	2.3	6.7	5.3	4
AF2492-2	100	3.8	8-5	3.0	1.3	7.3	5.7	3.3	5.0	5.3	4
AF2498-1	100	4.5	9-6	3.7	1.3	7.0	6.7	3.3	5.0	4.3	4
AF2498-6	100	3.5	8	2.7	1.3	6.7	6.0	2.7	6.3	4.7	4
AF2500-4	72	3.5	8	4.0	<i>na</i>	<i>na</i>	<i>na</i>	<i>na</i>	<i>na</i>	<i>na</i>	<i>na</i>
AF2502-6	100	3.5	9-6	3.0	1.3	6.3	5.7	4.0	6.7	5.7	3
AF2508-8	81	3.0	8-5	3.0	1.7	6.3	5.7	3.0	5.3	5.7	3
AF2525-1	96	2.5	7	2.3	2.0	6.0	5.7	4.7	6.3	5.7	5
AND99239-4	89	4.8	9	3.5	1.0	7.0	6.7	2.3	6.7	6.0	5
B1990-4	100	5.3	5-8	3.0	1.3	7.0	5.7	3.0	6.0	5.0	3
B1990-17	100	6.5	5-8	2.8	1.7	7.0	5.3	1.7	6.7	6.7	3
B1992-106	97	4.8	9-6	4.5	1.7	5.3	5.0	4.3	6.0	5.0	3
B2001-184	100	3.8	8	3.8	1.7	6.0	4.3	3.0	6.0	5.3	3
B2008-34	94	5.8	8	3.0	1.3	6.3	5.3	1.3	7.3	6.7	4
B2128-133	97	4.8	5	3.3	1.3	6.0	6.0	4.3	5.7	5.3	4
B2194-70	97	5.5	8-5	3.0	2.0	5.7	5.3	4.0	6.0	6.0	4
B2199-50	92	5.0	8-5	3.0	1.0	6.7	5.7	4.3	6.7	5.3	4
B2224-3	100	4.5	6	3.3	1.3	6.0	5.0	4.7	6.3	5.0	4

Table 27 (con't). Plant growth and tuber characteristics of Early-Line Chipping potato selections.

Clone	Plant Growth Characteristics				Tuber Characteristics ¹						Chip Rating ²
	% Stand	Early Vigor	Vine Type	Vine Maturity	IFC	SC	ST	TS	ED	APP	
B2240-3	97	4.8	8-5	3.3	1.0	5.7	5.0	2.7	7.0	6.0	3
B2243-6	86	4.3	8	3.0	<i>na</i>	<i>na</i>	<i>na</i>	<i>na</i>	<i>na</i>	<i>na</i>	<i>na</i>
B2253-4	94	6.0	9-6	3.0	1.7	6.3	5.7	3.0	7.0	5.7	5
B2258-3	97	6.0	5-8	3.3	1.7	5.7	6.3	2.7	7.0	4.7	3
COA96141-2	97	5.5	5-2	3.5	1.0	6.7	6.0	2.3	6.7	4.7	3
COA96142-3	97	5.0	6-9	3.5	1.3	6.3	6.7	3.0	6.7	5.0	3
MSF373-8	86	4.8	8	4.3	1.3	6.7	6.0	2.7	5.7	4.7	4
MSH031-5	97	4.8	6	3.5	1.7	6.3	5.0	3.7	6.0	5.0	4
MSJ461-1	92	5.8	8-5	3.0	1.3	6.7	5.3	2.3	6.7	4.7	3
NDA5507-3Y	92	6.3	5-8	2.3	3.0	6.5	6.7	3.3	6.3	5.7	4
ND4778-2	89	4.0	4-7	5.8	1.3	7.3	7.0	2.0	7.0	6.0	<i>na</i>
ND8216-6	92	4.3	5-8	3.0	1.0	6.5	6.0	4.0	5.0	5.0	4
ND8217B-2	86	4.8	<i>na</i>	1.0	<i>na</i>	<i>na</i>	<i>na</i>	<i>na</i>	<i>na</i>	<i>na</i>	<i>na</i>
NY120	97	6.8	9-6	3.5	1.0	6.0	5.3	1.3	7.7	7.0	3

¹ - See rating system outlined in Tables 1 and 2 (pages 8 and 9).

² - For descriptions, see general potato variety production information.

Table 28. External and internal tuber defects of Early-Line Chipping potato selections.

Clone	% External Tuber Defects					% Internal Defects ²			
	Growth Cracks	Mis-shapen	Sun-burned	Rotten & misc.	Total Culls ¹	HH	BR	CRS	IHN
Atlantic	0	0	3	0	3	18	0	0	3
Snowden	0	0	3	0	3	3	0	0	0
A94322-8	0	2	1	1	5	0	0	0	0
AF2492-2	0	0	2	1	3	2	0	0	0
AF2498-1	0	0	3	1	5	0	0	0	0
AF2498-6	0	1	1	2	4	0	0	0	2
AF2500-4	14	16	0	4	34	7	0	0	4
AF2502-6	0	20	2	0	22	2	0	0	0
AF2508-8	0	6	4	1	10	3	0	0	2
AF2525-1	0	0	0	0	0	0	0	0	0
AND99239-4	0	1	0	1	2	0	0	0	0
B1990-4	1	0	1	4	6	0	0	0	0
B1990-17	1	0	1	0	2	0	0	0	0
B1992-106	0	3	2	0	5	3	0	0	0
B2001-184	1	1	0	0	2	0	0	0	0
B2008-34	0	0	2	0	3	2	0	0	0
B2128-133	1	1	2	2	7	0	0	0	0
B2194-70	0	0	1	0	1	5	0	0	2
B2199-50	0	2	2	2	5	12	0	0	0
B2224-3	0	8	3	0	10	3	0	0	0

Table 28 (con't). External and internal tuber defects of Early-Line Chipping potato selections.

Clone	% External Tuber Defects					% Internal Defects ²			
	Growth Cracks	Mis-shapen	Sun-burned	Rotten & misc.	Total Culls ¹	HH	BR	CRS	IHN
B2240-3	0	1	0	1	1	2	0	0	0
B2243-6	2	21	0	7	30	3	0	0	0
B2253-4	2	5	2	0	10	0	0	0	0
B2258-3	0	5	2	2	8	0	0	0	0
COA96141-2	0	3	2	1	7	0	0	0	0
COA96142-3	2	5	2	2	10	5	0	0	0
MSF373-8	0	1	1	1	4	0	0	0	0
MSH031-5	0	0	1	0	1	0	0	0	0
MSJ461-1	0	1	1	0	2	0	0	0	3
NDA5507-3Y	0	2	0	0	2	0	0	0	0
ND4778-2	0	0	0	0	0	0	0	0	2
ND8216-6	0	26	4	0	30	0	0	0	0
ND8217B-2	0	0	0	0	0	0	0	0	0
NY120	0	0	1	0	2	2	0	0	0
<i>MSD</i> ³	2	7	3	2	8	6	ns	ns	ns
<i>P Value</i>	0.0001	0.0001	0.0262	0.0001	0.0001	0.0001	-	-	0.3517

¹Percent of Total Yield. Total culls include the sum of growth cracks, mishapen, sunburned and rotten/misc.

²Percent tubers; HH, hollow heart; BR, brown rot; CRS, corky ring spot; IHN, internal heat necrosis.

³Means separated within columns by Waller-Duncan's k-ratio t test.