

CHAPTER 2. EARLY-LINE FRESH MARKET 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 size is reduced to nine seed pieces. This is a mixed trial with round white, red, and russet varieties.

Planting Information

Planting Site	PSREU, Yelvington Farm, Hastings, FL
Planting Date	January 29, 2003
Vine Kill Date	May 1, 2002
Harvest Date	May 20, 2003
Season Length	92 days planting to vine kill; 111 days planting to harvest
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	4 (Standard: LaChipper, Red LaSoda, Russet Norkotah)
Number of Clones	28
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	AF2393-5 (604 cwt/acre or 67.7 MT/ha)
Highest Marketable Yield	AF2393-5 (439 cwt/acre or 49.2 MT/ha)
Best Appearance Rating	ND4944-2R (7.3, good to excellent)

Specific Comments

LaChipper (MFX). *Round White.* LaChipper total and marketable tuber yields were 479 and 379 cwt/acre, respectively. Potato tuber skin color was buff to white 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 6 to 8 inches. Vine type at full flower was rated as spreading to upright with a good canopy. Plant maturity at vine kill was rated as moderately senesced. Average specific gravity for LaChipper tubers was 1.070.

LaRouge (MFX). *Red.* LaRouge total and marketable tuber yields were 540 and 369 cwt/acre, respectively. Potato tuber skin color was red with a moderately smooth texture. Tuber flesh color was white. Tuber shape was rated as ‘mostly round’ to ‘round to oblong’ with an eye depth of intermediate to deep. Overall external tuber appearance was noted as 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 good canopy. Plant maturity at vine kill was rated as starting to senesce to moderately senesced. Average specific gravity for LaRouge tubers was 1.061.

Red LaSoda (MFX). *Red.* Red LaSoda total and marketable tuber yields were 523 and 374 cwt/acre, respectively. Potato tuber skin color was red with a 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 deep. 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 good canopy. Plant maturity at vine kill was rated as moderately senesced to yellow and dying. Average specific gravity for Red LaSoda tubers was 1.059.

Russet Norkotah (MFX). *Russet.* Russet Norkotah total and marketable tuber yields were 358 and 108 cwt/acre, respectively. Potato tuber skin color was brown with a moderately russet to heavy russet 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 plants less than 2 inches. Vine type at full flower was rated as upright with a good canopy. Plant maturity at vine kill was rated as starting to senesce to moderately senesced. Average specific gravity for Russet Norkotah tubers was 1.061. Twenty-seven percent of all tubers were misshaped.

A83350-9R (USDA). *Red.* A83350-9R total and marketable tuber yields were 383 and 273 cwt/acre, respectively. Potato tuber skin color was red with a moderately smooth texture. Tuber flesh color was white. Tuber shape was rated as ‘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 4 to 6 inches. Vine type at full flower was rated as spreading to upright with a fair canopy. Plant maturity at vine kill was rated as moderately senesced to yellow and dying. Average specific gravity for A83350-9R tubers was 1.061. Tubers were noted as “flat” but having “nice color”.

A96741-2R (USDA). *Red.* A96741-2R total and marketable tuber yields were 525 and 398 cwt/acre, respectively. Potato tuber skin color was red with a moderately smooth texture. Tuber flesh color was white to cream. Tuber shape was rated as ‘mostly round’ with an eye depth of deep to intermediate. 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 vine kill was rated as starting to senesce to moderately senesced. Average specific gravity for A96741-2R tubers was 1.062. Tubers were noted as “flat” but having “nice color”.

AF2393-3 (UM). *Red.* AF2393-3 total and marketable tuber yields were 293 and 145 cwt/acre, respectively. Potato tuber skin color was pink to red with a moderately smooth to smooth texture. Tuber flesh color was light yellow. Tuber shape was rated as ‘mostly oblong’ to ‘oblong’ with an eye depth of deep to intermediate. 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 spreading to upright with a poor canopy. Plant maturity at vine kill was rated as yellow and dying. Average specific gravity for AF2393-3 tubers was 1.074. The plants were noted as “tall” and plant growth was “vigorous”.

AF2393-5 (UM). *Red.* AF2393-5 total and marketable tuber yields were 604 and 439 cwt/acre, respectively. Potato tuber skin color was pink to red with a 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 deep to intermediate. Overall external tuber appearance was noted as 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 good canopy. Plant maturity at vine kill was rated as moderately senesced. Average specific gravity for AF2393-5 tubers was 1.066. Tubers were noted as "flat" but having "nice color".

B1992-72 (USDA). *White.* B1992-72 total and marketable tuber yields were 513 and 375 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. 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 good canopy. Plant maturity at vine kill was rated as starting to senesce to moderately senesced. Average specific gravity for B1992-72 tubers was 1.070.

B2029-1 (USDA). *White.* B2029-1 total and marketable tuber yields were 437 and 324 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 '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 good canopy. Plant maturity at vine kill was rated as moderately senesced to yellow and dying. Average specific gravity for B2029-1 tubers was 1.063. Tubers were noted as "nice" with "red eyes".

B2100-13 (USDA). *Red.* B2100-13 total and marketable tuber yields were 502 and 403 cwt/acre, respectively. Potato tuber skin color was red with a slightly netted to moderately smooth texture. Tuber flesh color was light yellow. 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 8 to 10 inches. Vine type at full flower was rated as upright with a fair canopy. Plant maturity at vine kill was rated as moderately senesced to yellow and dying. Average specific gravity for B2100-13 tubers was 1.057. Tubers were noted as having "nice color" and the plants noted as "tall".

B2152-17 (USDA). *Red.* B2152-17 total and marketable tuber yields were 439 and 307 cwt/acre, respectively. Potato tuber skin color was red with a moderately smooth texture. Tuber flesh color was cream to light yellow. 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 6 to 8 inches. Vine type at full flower was rated as upright with a good canopy. Plant maturity at vine kill was rated as moderately senesced to yellow and dying. Average specific gravity for B2152-17 tubers was 1.068. Tubers were noted as having "nice color" and plant growth was noted as "vigorous".

B2224-6 (USDA). *Russet.* B2224-6 total and marketable tuber yields were 418 and 233 cwt/acre, respectively. Potato tuber skin color was brown with a moderately to heavy russet texture. Tuber flesh color was white to cream. Tuber shape was rated as 'mostly oblong' to 'oblong' with an eye depth of shallow to very 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 spreading to upright with a fair canopy. Plant maturity at vine kill was rated as starting to senesce to moderately senesced. Average specific gravity for B2224-6 tubers was 1.062. Twenty-four percent of all tubers were mis shaped.

B2224-8 (USDA). *Russet.* B2224-8 total and marketable tuber yields were 435 and 376 cwt/acre, respectively. Potato tuber skin color was brown to dark brown with a heavy russet texture. Tuber flesh color was white. Tuber shape was rated as 'oblong to long' 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 vine kill was rated as starting to senesce to moderately senesced. Average specific gravity for B2224-8 tubers was 1.065. Plants were noted as being sensitive to metribuzin.

B2224-14 (USDA). *White.* B2224-14 total and marketable tuber yields were 423 and 289 cwt/acre, respectively. Potato tuber skin color was buff with a moderately smooth to slightly netted texture. Tuber flesh color was white to cream. Tuber shape was rated as ‘oblong’ to ‘oblong to long’ with an eye depth of shallow to very 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 spreading to upright with a good canopy. Plant maturity at vine kill was rated as starting to senesce to moderately senesced. Average specific gravity for B2224-14 tubers was 1.076. Plant growth was noted as “vigorous”. Twelve percent of all tubers were misshaped and 10% of tubers had symptoms of internal heat necrosis.

B2228-2 (USDA). *White.* B2228-2 total and marketable tuber yields were 295 and 144 cwt/acre, respectively. Potato tuber skin color was buff with a moderately smooth to slightly netted texture. Tuber flesh color was white to cream. Tuber shape was rated as ‘oblong’ to ‘oblong to long’ with an eye depth of shallow to very 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 spreading to upright with a fair canopy. Plant maturity at vine kill was rated as starting to senesce to moderately senesced. Average specific gravity for B2228-2 tubers was 1.083. Plant growth was noted as “vigorous”. Fifteen percent of all tubers were misshaped.

B2232-3 (USDA). *Russet.* B2232-3 total and marketable tuber yields were 439 and 271 cwt/acre, respectively. Potato tuber skin color was brown to dark brown with a moderately russet texture. Tuber flesh color was white. Tuber shape was rated as ‘oblong’ to ‘oblong to long’ 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 plants less than 2 inches. Vine type at full flower was rated as upright with a fair canopy. Plant maturity at vine kill was rated as starting to senesce to moderately senesced. Average specific gravity for B2232-3 tubers was 1.073. Sixteen percent of all tubers were misshaped.

B2246-14 (USDA). *White.* B2246-14 total and marketable tuber yields were 398 and 316 cwt/acre, respectively. Potato tuber skin color was buff to white with a slightly netted texture. Tuber flesh color was white to cream. Tuber shape was rated as ‘oblong to long’ to ‘mostly 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 vine kill was rated as starting to senesce to moderately senesced. Average specific gravity for B2246-14 tubers was 1.071. Plants were noted as “compact”.

B2254-3 (USDA). *White.* B2254-4 total and marketable tuber yields were 295 and 231 cwt/acre, respectively. Potato tuber skin color was buff with a moderately smooth texture. Tuber flesh color was 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 4 to 6 inches. Vine type at full flower was rated as spreading to upright with a poor canopy. Plant maturity at vine kill was rated as moderately senesced to yellow and dying. Average specific gravity for B2254-4 tubers was 1.079.

B2257-11 (USDA). *White.* B2257-11 total and marketable tuber yields were 550 and 385 cwt/acre, respectively. Potato tuber skin color was buff to white with a slightly netted to moderately smooth 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 poor to fair. Early plant vigor (size) was rated as 8 to 10 inches. Vine type at full flower was rated as spreading to upright with a good canopy. Plant maturity at vine kill was rated as starting to senesce to moderately senesced. Average specific gravity for B2257-11 tubers was 1.070.

B2259-3 (USDA). *White.* B2259-3 total and marketable tuber yields were 505 and 331 cwt/acre, respectively. Potato tuber skin color was buff with a slightly netted to moderately smooth 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 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 vine kill was rated as starting to senesce to moderately senesced. Average specific gravity for B2259-3 tubers was 1.063. Twenty-one percent of all tubers had growth cracks.

MSE192-8Rus (MSU). *Russet.* MSE192-8Rus total and marketable tuber yields were 279 and 146 cwt/acre, respectively. Tuber characteristics are not available. Early plant vigor (size) was rated as less than 2 inches. Vine type at full flower was rated as upright with a fair canopy. Plant maturity at vine kill was rated as starting to senesce to moderately senesced. Average specific gravity for MSE192-8Rus tubers was 1.063. Plants were noted as “compact”.

ND3196-1R (NDSU). *Red.* ND3196-1R total and marketable tuber yields were 341 and 267 cwt/acre, respectively. Potato tuber skin color was red with a moderately smooth to smooth texture. Tuber flesh color was white. Tuber shape was rated as ‘round to oblong’ with an eye depth of intermediate to deep. 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 good canopy. Plant maturity at vine kill was rated as starting to senesce to moderately senesced. Average specific gravity for ND3196-1R tubers was 1.061.

ND4833-1R (NDSU). *Red.* ND4833-1R total and marketable tuber yields were 183 and 17 cwt/acre, respectively. Tuber characteristics are not available. Early plant vigor (size) was rated as 6 to 8 inches. Vine type at full flower is not available. Plant maturity at vine kill was rated as yellow and dying to completely dead. Average specific gravity for ND4833-1R tubers is not available. Plants were noted as sensitive to metribuzin.

ND4944-1R (NDSU). *Red.* ND4944-1R total and marketable tuber yields were 256 and 132 cwt/acre, respectively. Potato tuber skin color was red with a 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 6 to 8 inches. Vine type at full flower was rated as spreading to upright with a fair canopy. Plant maturity at vine kill was rated as moderately senesced to yellow and dying. Average specific gravity for ND4944-1R tubers was 1.069.

ND4944-2R (NDSU). *Red.* ND4944-2R total and marketable tuber yields were 485 and 235 cwt/acre, respectively. Potato tuber skin color was purple to red with a slightly netted to moderately smooth texture. Tuber flesh color was white. Tuber shape was rated as ‘round to oblong’ with an eye depth of intermediate to shallow. Overall external tuber appearance was noted as good to excellent. 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 vine kill was rated as starting to senesce to moderately senesced. Average specific gravity for ND4944-2R tubers was 1.063. Plant growth was noted as “vigorous”.

ND6489-3Y (NDSU). *Red.* ND6489-3Y total and marketable tuber yields were 572 and 378 cwt/acre, respectively. Potato tuber skin color was tan to buff with a moderately smooth texture. Tuber flesh color was cream to light yellow. Tuber shape was rated as ‘round to oblong’ to ‘mostly round’ 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 with a fair canopy. Plant maturity at vine kill was rated as starting to senesce to moderately senesced. Average specific gravity for ND6489-3Y tubers was 1.067. Plants were noted as “tall”. Sixteen percent of all tubers were misshaped.

ND8056-2R (NDSU). *Red.* ND8056-2R total and marketable tuber yields were 472 and 354 cwt/acre, respectively. Potato tuber skin color was red to pink with a moderately smooth to smooth texture. Tuber flesh color was cream to light yellow. Tuber shape was rated as ‘round to oblong’ to ‘mostly oblong’ with an eye depth of shallow to intermediate. 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 vine kill was rated as moderately senesced to yellow and dying. Average specific gravity for ND8056-2R tubers was 1.068.

ND8058-3R (NDSU). *Red.* ND8058-3R total and marketable tuber yields were 336 and 162 cwt/acre, respectively. Tuber characteristics are not available. 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 vine kill was rated as moderately senesced to yellow and dying. Average specific gravity for ND8058-3R tubers was 1.062.

ND8060-3R (NDSU). *Red.* ND8060-3R total and marketable tuber yields were 433 and 258 cwt/acre, respectively. Potato tuber skin color was red to pink with a moderately smooth to smooth texture. Tuber flesh color was white. 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 4 to 6 inches. Vine type at full flower was rated as spreading to upright with a good canopy. Plant maturity at vine kill was rated as moderately senesced to yellow and dying. Average specific gravity for ND8060-3R tubers was 1.064.

ND8083-1P (NDSU). *Red.* ND8083-1P total and marketable tuber yields were 431 and 344 cwt/acre, respectively. Potato tuber skin color was red to pink with a smooth texture. Tuber flesh color was cream to light yellow. 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 4 to 6 inches. Vine type at full flower was rated as spreading to upright with a fair canopy. Plant maturity at vine kill was rated as starting to senesce to moderately senesced. Average specific gravity for ND8083-1P tubers was 1.074. Tuber skin color was noted as "salmon" colored.

Table 3. Production statistics for Early-Line Fresh Market 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	
LaChipper	479	379	100	9	6	43	24	18	0	85	42	1.070
LaRouge	540	369	97	11	5	40	32	11	0	84	44	1.061
Red LaSoda	523	374	99	9	7	38	30	16	0	84	46	1.059
Russet Norkotah	358	108	29	37	24	34	4	2	0	39	5	1.061
A83350-9R	382	273	72	18	11	47	17	6	0	71	24	1.061
A96741-2R	525	398	105	9	3	42	22	22	2	86	44	1.062
AF2393-3	293	145	38	30	21	49	1	0	0	49	1	1.074
AF2393-5	604	439	116	9	8	57	18	7	0	83	25	1.066
B1992-72	513	375	99	10	7	44	22	16	0	82	38	1.070
B2029-1	437	324	85	11	12	64	13	0	0	77	13	1.063
B2100-13	502	403	106	6	4	45	40	5	0	90	45	1.057
B2152-17	439	307	81	17	12	52	14	4	0	71	18	1.068
B2224-6	418	233	61	8	11	55	24	3	0	81	27	1.062
B2224-8	435	376	99	5	5	62	26	1	0	90	28	1.065
B2224-14	423	289	76	8	11	71	10	1	0	81	10	1.076
B2228-2	295	144	38	18	24	56	1	0	0	58	1	1.083
B2232-3	439	271	71	15	11	60	13	1	0	74	14	1.073
B2246-14	398	316	83	9	9	61	20	2	0	82	22	1.071
B2254-3	295	231	61	8	14	71	7	0	0	78	7	1.079
B2257-11	550	385	101	12	10	56	17	6	0	78	22	1.070

Table 3 (con't). Production statistics for Early-Line Fresh Market potato selections.

Clone	Total Yield	Marketable Yield ¹		Size Distribution by Class (%) ²						Size Class Range (%)		Specific Gravity
	(cwt/A)	(cwt/A)	% of standard	C	B	A1	A2	A3	A4	A1 to A3	A2 to A3	
B2259-3	505	331	87	8	4	38	31	18	0	88	49	1.063
MSE192-8Rus	279	146	39	19	21	59	0	0	0	59	0	1.063
ND3196-1R	341	267	70	7	4	49	32	9	0	89	40	1.061
ND4944-1R	256	132	35	28	19	48	6	0	0	53	6	1.069
ND4944-2R	485	235	62	32	17	43	7	0	0	51	7	1.063
ND4833-1R ⁴	183	17	4	66	27	7	0	0	0	7	0	<i>na</i>
ND6489-3Y	572	378	100	12	9	51	23	5	0	80	29	1.067
ND7987-1R	454	368	97	9	7	54	23	8	0	84	30	1.059
ND8056-2R	472	354	93	12	9	68	10	1	0	78	10	1.068
ND8058-3R	336	162	43	29	23	48	0	0	0	48	0	1.062
ND8060-3R	433	258	68	22	19	59	1	0	0	60	1	1.064
ND8083B-1P	431	344	91	7	8	67	17	0	0	84	17	1.074
<i>MSD</i> ³	65	69		9	6	18	11	8	ns	12	14	0.006
<i>P Value</i>	<i>0.0001</i>	<i>0.0001</i>		<i>0.0001</i>	<i>0.0001</i>	<i>0.0001</i>	<i>0.0001</i>	<i>0.0001</i>	<i>0.4944</i>	<i>0.0001</i>	<i>0.0001</i>	<i>0.0001</i>

¹Marketable Yield: size classes A1 to A3.

²Size classes: C = 0.5 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.

⁴Entry not included in statistical analysis.

Table 4. Plant growth and tuber characteristics of Early-Line Fresh Market potato selections.

Clone	Plant Growth Characteristics				Tuber Characteristics ¹					
	% Stand	Early Vigor	Vine Type	Vine Maturity	IFC	SC	ST	TS	ED	APP
LaChipper	100	5.8	6-9	5.0	1.3	7.3	6.3	2.3	5.3	5.7
LaRouge	94	5.5	6-9	5.3	1.0	2.0	7.0	2.3	3.7	5.0
Red LaSoda	86	5.8	6-9	4.8	1.3	2.0	7.0	3.0	4.0	4.7
Russet Norkotah	100	3.3	9	6.0	1.7	5.0	2.7	4.7	6.0	5.3
A83350-9R	86	4.8	5-8	3.8	1.0	2.0	7.0	3.0	5.3	6.3
A96741-2R	97	5.5	5-8	5.3	1.7	2.0	7.0	3.0	4.7	5.3
AF2393-3	97	6.5	7-4	3.0	3.0	2.8	7.7	4.3	4.7	5.3
AF2393-5	75	5.7	9-6	5.0	1.3	2.3	7.0	3.3	4.3	5.0
B1992-72	94	6.3	9-6	6.3	1.3	6.7	6.3	3.0	5.0	4.3
B2029-1	100	5.8	6-9	4.8	3.0	7.7	7.0	3.3	5.7	6.0
B2100-13	94	6.5	8	4.0	3.0	2.0	6.7	2.3	5.3	6.7
B2152-17	97	6.0	9	3.8	2.3	2.0	7.0	1.7	5.3	6.3
B2224-6	92	4.8	8-5	5.8	1.3	5.0	2.7	4.3	7.3	4.7
B2224-8	100	4.3	9-6	6.8	1.0	4.0	2.0	6.0	6.3	5.7
B2224-14	89	4.5	9-6	6.0	1.3	7.0	6.3	5.3	7.3	4.3
B2228-2	100	4.0	8-5	5.3	1.3	7.0	6.7	5.3	7.3	4.7
B2232-3	92	3.3	8	5.8	1.0	4.3	3.0	5.3	7.7	5.7
B2246-14	97	6.0	9-6	5.3	1.3	7.7	6.0	3.3	7.0	5.3
B2254-3	92	5.0	4-7	4.0	2.0	7.0	7.0	3.0	7.0	5.3
B2257-11	89	7.0	6-9	5.8	1.0	7.3	6.3	4.3	6.0	4.7

Table 4 (con't). Plant growth and tuber characteristics of Early-Line Fresh Market potato selections.

Clone	Plant Growth Characteristics				Tuber Characteristics ¹					
	% Stand	Early Vigor	Vine Type	Vine Maturity	IFC	SC	ST	TS	ED	APP
B2259-3	92	4.8	9-6	6.5	1.0	7.0	6.0	2.7	6.3	5.0
MSE192-8Rus	89	2.5	8	6.3	<i>na</i>	<i>na</i>	<i>na</i>	<i>na</i>	<i>na</i>	<i>na</i>
ND3196-1R	89	3.0	8	5.3	1.0	2.0	7.3	3.0	4.7	5.3
ND4944-1R	89	5.8	5-8	3.5	1.3	2.0	8.0	2.7	6.0	5.7
ND4944-2R	97	5.8	6-9	4.8	1.0	1.8	6.3	3.0	5.3	7.3
ND4833-1R	97	6.0	<i>na</i>	1.5	<i>na</i>	<i>na</i>	<i>na</i>	<i>na</i>	<i>na</i>	<i>na</i>
ND6489-3Y	97	4.5	8.0	6.5	2.7	6.7	7.0	3.7	6.7	5.0
ND7987-1R	92	4.8	8-5	4.8	1.0	1.8	6.3	2.0	5.3	6.7
ND8056-2R	94	4.8	5-8	4.8	2.7	2.7	7.7	3.7	6.0	6.0
ND8058-3R	97	5.5	5-2	3.5	<i>na</i>	<i>na</i>	<i>na</i>	<i>na</i>	<i>na</i>	<i>na</i>
ND8060-3R	97	4.5	9-6	4.0	1.0	2.3	7.7	2.7	5.7	6.7
ND8083B-1P	94	4.5	8-5	6.3	2.7	2.5	8.0	3.0	5.3	5.7

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

Table 5. External and internal tuber defects of Early-Line Fresh Market potato selections.

Clone	% External Tuber Defects					% Internal Defects ²			
	Growth Cracks	Mis- shapen	Sun- burned	Rotten & misc.	Total Culls ¹	HH	BR	CRS	IHN
LaChipper	0	2	4	0	7	5	0	0	0
LaRouge	3	12	2	3	19	1	0	0	1
Red LaSoda	1	9	4	0	15	1	0	0	0
Russet Norkotah	0	27	0	3	30	1	0	0	0
A83350-9R	0	0	2	1	3	0	0	0	0
A96741-2R	0	0	2	10	12	0	0	0	0
AF2393-3	0	2	0	1	3	0	0	0	0
AF2393-5	1	3	5	4	13	0	0	0	0
B1992-72	2	3	6	2	13	8	0	0	0
B2029-1	0	2	0	1	3	0	0	0	1
B2100-13	1	5	1	4	11	15	0	0	4
B2152-17	0	0	0	0	1	0	0	0	0
B2224-6	6	24	0	3	33	0	0	0	3
B2224-8	0	5	0	0	5	1	0	0	1
B2224-14	1	12	3	1	16	3	0	0	10
B2228-2	0	15	0	1	17	0	0	0	0
B2232-3	0	16	0	1	17	3	0	0	0
B2246-14	0	3	0	1	4	3	0	0	1
B2254-3	0	3	0	0	3	0	0	0	1
B2257-11	0	6	2	3	10	3	0	0	0

Table 5 (con't). External and internal tuber defects of Early-Line Fresh Market potato selections.

Clone	% External Tuber Defects					% Internal Defects ²			
	Growth Cracks	Mis- shapen	Sun- burned	Rotten & misc.	Total Culls ¹	HH	BR	CRS	IHN
B2259-3	21	0	1	2	24	11	0	0	3
MSE192-8Rus	1	7	0	6	14	0	0	0	0
ND3196-1R	1	5	1	6	12	8	0	0	0
ND4944-1R	0	1	0	1	2	0	0	0	0
ND4944-2R	1	0	1	8	10	0	0	0	0
ND4833-1R ⁴	0	0	2	0	2	0	0	0	0
ND6489-3Y	0	16	2	1	19	1	0	0	0
ND7987-1R	0	0	1	2	3	0	0	0	0
ND8056-2R	0	1	2	2	5	0	0	0	0
ND8058-3R	0	0	0	1	1	1	0	0	0
ND8060-3R	0	0	0	0	1	0	0	0	0
ND8083B-1P	0	1	3	2	5	0	0	0	0
<i>MSD</i> ³	3	5	4	4	8	6	ns	ns	3
<i>P Value</i>	<i>0.0001</i>	<i>0.0001</i>	<i>0.0098</i>	<i>0.0001</i>	<i>0.0001</i>	<i>0.0001</i>	-	-	<i>0.0001</i>

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.

⁴Entry not included in statistical analysis.