

## CHAPTER 12. STATEWIDE POTATO VARIETY TRIAL, 2002

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### *General Comments*

A goal of the statewide potato variety trial is to identify advanced potato selections for Florida production. Established varieties were included to provide a baseline for comparison. The clone main effect data, an average over all test sites, is presented.

### *Planting Information*

Planting Sites	Hastings REC, Yelvington Farm, Hastings, FL (UF) Flagler County Grower Site, Bunnell, FL (FC) St. Johns County Grower Site 1, Hastings, FL (STJ-1) St. Johns County Grower Site 2, Hastings, FL (STJ-2)
Planting Dates	UF (1/30/02), STJ-1 (1/24/02), STJ-2 (1/24/02), FC (1/25/02)
Harvest Dates	UF (5/15/02), STJ-1 (5/7/02), STJ-2 (5/8/02), FC (5/14/02)
Season Length	UF (100), STJ-1 (103), STJ-2 (104), FC (109)
Fertilizer Program	IFAS program: 200 lb N/acre, P (soil test), K (soil test).
Irrigation Program	seepage

### *Experimental Design (4 sites x multiple clone factorial design)*

Number of Sites	4
Number of Selections	White (6), Red (5), Russet (4), Chip (5)
Within Row Spacing	8 in (20.3 cm)
Between Row Spacing	40 in (102 cm)
Replications	4 at each site
Plot Size	16 ft (4.9 m) single row

### *Production Statistics*

Highest Total Yield	Fabula (393 cwt/acre), Red LaSoda-LaRouge (351 cwt/acre), AF1763-16 (422 cwt/acre), Atlantic 381 (cwt/acre)
Highest Marketable Yield	Fabula (357 cwt/acre), Red LaSoda (324 cwt/acre), AF1763-16 (296 cwt/acre), Atlantic (352 cwt/acre)
Best Overall Appearance	Eva-Vivaldi (6.9), B1145-2 (7.1), Russet Norkotah (6.1)
Best Chip Rating	B0564-8 (2.0)
Specific Comments	See individual variety reports

Table 31. Variety main effect production statistics for white-skinned fresh market potato selections.

Variety Main Effect	Total	Marketable	Size					Size Class		Specific Gravity
	Yield	Yield <sup>1</sup>	Distribution by Class (%) <sup>2</sup>					Range (%)		
	(cwt/A)	(cwt/A)	1	2	3	4	5	2 to 4	3 to 4	
LaChipper	319	288	7	61	26	6	0	93	32	1.071
Eva	368	323	8	69	21	3	0	92	24	1.070
Fabula	393	357	4	52	31	14	0	96	45	1.061
Vivaldi	365	297	17	75	8	1	0	83	9	1.064
Yukon Gold	335	307	5	51	36	8	0	95	44	1.074
AF1775-2	319	282	6	57	28	9	0	94	37	1.072
LSD <sup>3</sup>										
<i>P Value</i>										

<sup>1</sup>Marketable Yield: size classes 2 to 4

<sup>2</sup>Size classes: 1 = <1 7/8", 2 = 1 7/8 to 2.5", 3 = 2.5 to 3.25", 4 = 3.25 to 4", 5 = >4"

<sup>3</sup>Means separated within columns by the LSD mean separation test.

Table 32. Variety main effect internal and external quality statistics for white-skinned fresh market potato selections.

Variety	% Internal Tuber Defects <sup>1</sup>				External Tuber Defects (cwt/A)					APP <sup>1</sup>
	HH	BR	CRS	IHN	Growth Cracks	Mis-shapen	Sun-burned	Rotten & misc.	Total Culls <sup>2</sup>	
LaChipper	0	0	0	0	0	1	0	0	1	6.8
Eva	0	0	0	1	0	1	1	1	2	6.9
Fabula	0	0	0	2	1	0	0	1	3	6.5
Vivaldi	0	0	0	5	0	1	1	0	2	6.9
Yukon Gold	1	0	0	6	0	0	0	1	2	6.2
AF1775-2	2	0	0	19	0	1	1	0	2	4.9

*LSD*<sup>3</sup>

*P Value*

<sup>1</sup>See rating system outlined in Tables 1 and 2.

<sup>2</sup>Total culls include the sum of growth cracks, mishapen, sunburned and rotten/misc.

Table 33. Variety main effect production statistics for red-skinned potato selections.

Variety Main Effect	Total	Marketable	Size					Size Class		Specific Gravity
	Yield	Yield <sup>1</sup>	Distribution by Class (%) <sup>2</sup>					Range (%)		
	(cwt/A)	(cwt/A)	1	2	3	4	5	2 to 4	3 to 4	
Red LaSoda	351	324	6	55	31	8	0	94	39	1.060
LaRouge	351	318	6	60	27	7	0	94	33	1.064
B0984-1	295	270	5	48	28	19	0	95	47	1.070
B1145-2	224	181	17	75	8	1	0	83	8	1.062
B1758-3	237	191	15	70	12	2	0	85	15	1.065
LSD <sup>3</sup>										
<i>P Value</i>										

<sup>1</sup>Marketable Yield: size classes 2 to 4

<sup>2</sup>Size classes: 1 = <1 7/8", 2 = 1 7/8 to 2.5", 3 = 2.5 to 3.25", 4 = 3.25 to 4", 5 = >4"

<sup>3</sup>Means separated within columns by the LSD mean separation test.

Table 34. Variety main effect internal and external quality statistics for red-skinned potato selections.

Variety	% Internal Tuber Defects <sup>1</sup>				External Tuber Defects (cwt/A)					APP <sup>1</sup>
	HH	BR	CRS	IHN	Growth Cracks	Mis- shapen	Sun- burned	Rotten & misc.	Total Culls <sup>2</sup>	
Red LaSoda	1	0	0	0	0	0	0	0	1	5.7
LaRouge	1	0	0	1	0	1	0	0	2	5.5
B0984-1	1	0	0	8	0	0	0	1	1	6.9
B1145-2	0	0	0	0	0	0	0	1	1	7.1
B1758-3	1	0	0	7	0	1	0	1	2	6.4

*LSD*<sup>3</sup>

*P Value*

<sup>1</sup>Percent tubers: HH, hollow heart; BR, brown rot; CRS, corky ringspot; IHN, internal heat necrosis.

<sup>2</sup>Total culls include the sum of growth cracks, mishapen, sunburned and rotten/misc.

Table 35. Variety main effect production statistics for russet-skinned potato selections.

Variety Main Effect	Total	Marketable	Size					Size Class		Specific Gravity
	Yield	Yield <sup>1</sup>	Distribution by Class (%) <sup>2</sup>					Range (%)		
	(cwt/A)	(cwt/A)	1	2	3	4	5	2 to 4	3 to 4	
Russet Norkotah	349	293	12	64	20	4	0	88	24	1.063
BelRus	226	186	16	71	12	1	0	84	13	1.079
Gem Russet	147	96	30	65	3	1	0	70	4	1.069
AF 1753-16	422	296	11	73	13	3	0	89	16	1.071
LSD <sup>3</sup>										
<i>P Value</i>										

<sup>1</sup>Marketable Yield: size classes 2 to 4

<sup>2</sup>Size classes: 1 = <1 7/8", 2 = 1 7/8 to 2.5", 3 = 2.5 to 3.25", 4 = 3.25 to 4", 5 = >4"

<sup>3</sup>Means separated within columns by the LSD mean separation test.

Table 36. Variety main effect internal and external quality statistics for russet-skinned potato selections.

Variety	% Internal Tuber Defects <sup>1</sup>				External Tuber Defects (cwt/A)					APP <sup>1</sup>
	HH	BR	CRS	IHN	Growth Cracks	Mis-shapen	Sun-burned	Rotten & misc.	Total Culls <sup>2</sup>	
Russet Norkotah	0	0	0	1	0	2	0	1	3	6.1
BelRus	0	0	0	1	0	0	0	0	1	6.9
Gem Russet	1	0	0	4	0	2	0	0	2	4.8
AF 1753-16	0	0	0	0	0	10	1	0	11	6.0

*LSD*<sup>3</sup>

*P Value*

<sup>1</sup>Percent tubers: HH, hollow heart; BR, brown rot; CRS, corky ringspot; IHN, internal heat necrosis.

<sup>2</sup>Total culls include the sum of growth cracks, mishapen, sunburned and rotten/misc.

Table 37. Variety main effect production statistics for chip potato selections.

Variety Main Effect	Total Yield (cwt/A)	Marketable Yield <sup>1</sup> (cwt/A)	Size Distribution by Class (%) <sup>2</sup>					Size Class Range (%)		Specific Gravity
			1	2	3	4	5	2 to 4	3 to 4	
			Atlantic	381	352	4	51	33	11	
Atlantic	338	298	9	53	28	10	0	91	38	1.080
Snowden	372	343	6	57	28	9	0	94	37	1.079
B0564-8	330	300	8	59	24	10	0	92	34	1.075
B0766-3	329	300	6	58	26	10	0	94	35	1.076

LSD<sup>3</sup>  
P Value

<sup>1</sup>Marketable Yield: size classes 2 to 4

<sup>2</sup>Size classes: 1 = <1 7/8", 2 = 1 7/8 to 2.5", 3 = 2.5 to 3.25", 4 = 3.25 to 4", 5 = >4"

<sup>3</sup>Means separated within columns by the LSD mean separation test.

Table 38. Variety main effect internal and external quality statistics for chip potato selections.

Variety Main Effects	% Internal Tuber Defects <sup>1</sup>				External Tuber Defects (cwt/A)					Chip Rating <sup>3</sup>
	HH	BR	CRS	IHN	Growth Cracks	Mis- shapen	Sun- burned	Rotten & misc.	Total Culls <sup>2</sup>	
Atlantic	3	0	0	8	0	1	1	0	2	3.3
Atlantic	3	0	0	7	0	0	1	0	1	3.3
Snowden	0	0	0	2	0	0	1	0	1	2.3
B0564-8	0	0	0	0	0	0	0	1	1	2.0
B0766-3	1	0	0	0	0	0	0	0	1	2.3
<i>LSD<sup>3</sup></i>										
<i>P Value</i>										

<sup>1</sup>Percent tubers: HH, hollow heart; BR, brown rot; CRS, corky ringspot; IHN, internal heat necrosis.

<sup>2</sup>Total culls include the sum of growth cracks, mishapen, sunburned and rotten/misc.

<sup>3</sup>For descriptions, see general potato variety production information.

