

# CHAPTER 7. STATEWIDE WHITE-SKINNED POTATO VARIETY TRIALS, 2006

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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.

## *Planting Information*

Florida Statewide White Potato Trial (Tables 17 and 18).	PSREU - Hastings Farm (PSREU), One Site in Bunnell, One Site in Hastings , and Two Sites in Immokalee (1 and 2)
Planting Dates	PSREU (2/1/06), Bunnell (1/25/06), Hastings (1/26/06), and Immokalee 1and 2 (11/30/05)
Harvest Dates	PSREU (5/18/06), Bunnell (5/9/06), Hastings (5/8/06), and Immokalee 1 and 2 (3/28/06)
Season Length	PSREU (86), Bunnell (104), Hastings (102), Immokalee 1(101), and Immokalee 2 (101)
Fertilizer Program	Grower standard practices for all sites except PSREU, which is similar to the White Variety Trial (Chapter 3).
Irrigation Program	seepage

## *Experimental Design*

Number of Sites	5
Number of Selections	8
Within Row Spacing	8 in (20.3 cm)
Between Row Spacing	38-42 in (96.5-106.6 cm)
Replications	4 at each site
Plot Size	16 ft (4.9 m) single row

## *Production Statistics- Based over all sites*

Highest Total Yield	Carrera (456 cwt/acre or 51.1 MT/ha)
Highest Marketable Yield	LaChipper (339 cwt/acre or 38.0 MT/ha)

Table 17. Production statistics for Statewide White-Skinned potato selections grown at various sites in Florida..

Clone	Total	Marketable	Size						Size Class		Specific Gravity
	Yield (cwt/A)	Yield <sup>1</sup> (cwt/A)	C	Distribution by Class (%) <sup>2</sup>					Range (%)		
				B	A1	A2	A3	A4	A1 to A3	A2 to A3	
<b>LaChipper</b>											
PSREU-Hastings	398	339	1	10	75	14	0	0	89	14	1.069
Hastings	392	344	1	8	56	19	15	1	90	34	1.071
Bunnell	326	280	1	12	70	10	7	0	87	17	1.069
Immokalee 1	383	299	1	15	63	15	6	0	84	21	1.067
Immokalee 2	248	137	4	37	56	3	0	0	59	3	1.065
<b>Adora</b>											
PSREU-Hastings	327	221	1	26	72	1	0	0	73	1	1.062
Hastings	306	265	1	11	66	22	1	0	89	23	1.065
Bunnell	290	246	1	10	83	6	0	0	89	6	1.060
Immokalee 1	190	114	3	31	64	2	0	0	66	2	1.065
Immokalee 2	109	58	4	40	56	0	0	0	56	0	1.058
<b>Ambra</b>											
PSREU-Hastings	373	267	1	12	81	6	0	0	87	6	1.054
Hastings	333	289	1	9	73	17	1	0	90	17	1.060
Bunnell	298	260	0	10	82	8	0	0	89	8	1.055
Immokalee 1	272	196	2	22	68	8	0	0	76	8	1.063
Immokalee 2	210	70	7	56	37	0	0	0	37	0	1.056
<b>Andover</b>											
PSREU-Hastings	268	228	1	8	88	3	0	0	91	3	1.075
Hastings	279	243	1	11	69	18	1	0	88	19	1.075
Bunnell	278	248	0	10	89	1	0	0	90	1	1.074

Table 17 (cont'd). Production statistics for Statewide White-Skinned potato selections grown at various sites in Florida..

Clone	Total Yield (cwt/A)	Marketable Yield <sup>1</sup> (cwt/A)	Size Distribution by Class (%) <sup>2</sup>						Size Class Range (%)		Specific Gravity
			C	B	A1	A2	A3	A4	A1 to A3	A2 to A3	
<b>Atlantic</b>											
PSREU-Hastings	341	298	1	6	79	14	0	0	93	14	1.077
Hastings	354	300	1	11	57	24	7	0	88	31	1.081
Bunnell	331	288	1	11	70	16	2	0	88	18	1.087
<b>Carrera</b>											
PSREU-Hastings	456	336	1	13	79	7	0	0	86	7	1.057
Hastings	264	210	1	8	49	29	13	0	91	42	1.058
Bunnell	348	292	1	12	81	7	0	0	88	7	1.060
<b>Fabula</b>											
PSREU-Hastings	412	334	0	8	82	10	0	0	92	10	1.054
Hastings	241	211	0	8	68	21	3	0	91	24	1.060
Bunnell	303	230	1	20	73	4	1	0	79	5	1.062
Immokalee 1	136	73	5	34	60	1	0	0	61	1	1.057
Immokalee 2	94	45	3	43	55	0	0	0	55	0	1.053
<b>Snowden</b>											
PSREU-Hastings	267	229	1	8	76	15	0	0	91	15	1.076
Hastings	295	247	1	14	73	11	1	0	85	12	1.078
Bunnell	299	229	1	22	70	5	1	0	77	6	1.081
<b>Snowbird</b>											
Immokalee 1	338	275	1	11	67	16	6	0	88	21	1.075
Immokalee 2	191	100	6	38	56	0	0	0	56	0	1.073

Table 17 (cont'd). Production statistics for Statewide White-Skinned potato selections grown at various sites in Florida..

Clone	Total Yield (cwt/A)	Marketable Yield <sup>1</sup> (cwt/A)	Size						Size Class		Specific Gravity
			C	Distribution by Class (%) <sup>2</sup>					Range (%)		
				B	A1	A2	A3	A4	A1 to A3	A2 to A3	
<b>Superior</b>											
PSREU-Hastings	358	301	1	8	85	7	0	0	91	7	1.073
Hastings	169	150	0	9	65	25	0	0	90	25	1.075
Bunnell	261	214	1	16	78	4	0	0	83	4	1.073
<b>Yukon Gold</b>											
PSREU-Hastings	369	312	1	8	75	16	0	0	92	16	1.076
Hastings	317	267	1	11	62	22	3	0	88	25	1.070
Bunnell	295	242	1	14	76	9	1	0	85	10	1.070
Immokalee 1	259	200	2	18	66	14	0	0	80	14	1.087
Immokalee 2	196	106	3	39	57	1	0	0	58	1	1.082
<b>B1870-3</b>											
Immokalee 1	306	181	2	35	62	0	0	0	62	0	1.077
Immokalee 2	237	69	8	62	30	0	0	0	30	0	1.073

<sup>1</sup>Marketable Yield: size classes A1 to A3.

<sup>2</sup>Size 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"

Table 18. External and internal defects of Statewide White-Skinned potato selections grown at various sites in Florida.

Clone	% Size Distribution of External Tuber Defects					% Internal Defects <sup>2</sup>						
	Growth Cracks	Mis-shapen	Sun-burned	Rotten & misc.	Total Culls <sup>1</sup>	HH	BR	CRS	IHN	Brown Center		
						L	M	H				
<b>LaChipper</b>												
PSREU-Hastings	0	0	1	2	4	0	0	0	0	0	0	0
Hastings	0	0	3	0	3	0	0	0	0	0	0	0
Bunnell	0	0	1	0	1	0	0	0	0	0	0	0
Immokalee 1	0	2	4	1	7	0	0	0	0	0	0	0
Immokalee 2	0	2	3	1	6	0	0	0	0	0	0	0
<b>Adora</b>												
PSREU-Hastings	0	0	2	6	8	0	0	0	0	0	0	0
Hastings	1	0	0	1	2	0	0	0	0	0	0	0
Bunnell	0	2	1	1	5	0	0	0	0	0	1	0
Immokalee 1	1	8	0	0	9	0	0	0	0	0	0	0
Immokalee 2	0	3	0	3	6	0	0	0	0	0	0	0
<b>Ambra</b>												
PSREU-Hastings	0	0	4	14	18	0	0	0	0	0	0	0
Hastings	0	0	3	1	4	0	0	0	0	0	0	0
Bunnell	0	0	0	3	3	0	0	0	0	0	0	0
Immokalee 1	0	1	3	1	5	0	0	0	0	0	0	0
Immokalee 2	0	2	4	5	10	0	0	0	0	0	0	0
<b>Andover</b>												
PSREU-Hastings	0	0	0	7	7	0	0	0	0	0	0	0
Hastings	0	0	1	0	1	0	0	0	0	0	0	0
Bunnell	0	0	0	1	1	0	0	0	0	0	0	0

Table 18 (cont'd). External and internal defects of Statewide White-Skinned potato selections grown at various sites in Florida.

Clone	% Size Distribution of External Tuber Defects					% Internal Defects <sup>2</sup>						
	Growth	Mis-	Sun-	Rotten	Total	Brown Center						
	Cracks	shapen	burned	& misc.	Culls <sup>1</sup>	HH	BR	CRS	IHN	L	M	H
<b>Atlantic</b>												
PSREU-Hastings	0	0	3	3	6	0	0	0	0	0	0	0
Hastings	0	0	3	1	4	0	0	0	0	1	0	0
Bunnell	0	1	1	0	2	1	0	0	0	10	0	1
<b>Carrera</b>												
PSREU-Hastings	0	1	3	10	15	0	0	0	7	1	0	0
Hastings	0	2	11	1	15	0	0	0	0	0	0	0
Bunnell	0	1	1	2	4	0	0	0	6	0	0	0
<b>Fabula</b>												
PSREU-Hastings	0	0	3	9	12	0	0	0	0	0	0	0
Hastings	0	1	0	1	3	0	0	0	0	0	0	0
Bunnell	0	3	0	1	4	0	0	0	0	0	0	0
Immokalee 1	0	12	1	0	13	0	0	0	0	0	0	0
Immokalee 2	0	7	1	3	11	0	0	0	0	0	0	0
<b>Snowden</b>												
PSREU-Hastings	0	0	6	0	6	0	0	0	0	0	0	0
Hastings	0	0	1	1	2	0	0	0	0	0	0	0
Bunnell	0	0	0	0	1	0	0	0	0	0	0	0
<b>Snowbird</b>												
Immokalee 1	0	2	5	0	8	0	0	0	15	2	0	0
Immokalee 2	0	1	5	1	6	2	0	0	0	0	0	0

Table 18 (cont'd). External and internal defects of Statewide White-Skinned potato selections grown at various sites in Florida.

Clone	% Size Distribution of External Tuber Defects					% Internal Defects <sup>2</sup>						
	Growth	Mis-	Sun-	Rotten	Total	Brown Center						
	Cracks	shapen	burned	& misc.	Culls <sup>1</sup>	HH	BR	CRS	IHN	L	M	H
<b>Superior</b>												
PSREU-Hastings	0	0	0	8	8	0	0	0	0	0	0	0
Hastings	0	0	1	0	1	0	0	0	0	0	0	0
Bunnell	0	0	0	1	2	0	0	0	0	6	0	0
<b>Yukon Gold</b>												
PSREU-Hastings	0	3	4	1	8	1	0	0	1	1	0	0
Hastings	0	3	1	0	4	0	0	0	0	0	0	0
Bunnell	0	1	2	1	4	0	0	0	0	0	0	1
Immokalee 1	0	3	1	0	4	5	0	0	2	3	0	0
Immokalee 2	0	5	2	1	8	0	0	0	0	2	0	0
<b>B1870-3</b>												
Immokalee 1	0	5	0	0	5	0	0	0	0	0	0	0
Immokalee 2	0	1	1	0	2	0	0	0	0	0	0	0

<sup>1</sup>Percent of Total Yield. Total culls include the sum of growth cracks, misshapen, sunburned and rotten/misc.

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

Brown Center: L = Light, M = Moderate, H = Heavy

