

CHAPTER 6. STATEWIDE RED-SKINNED POTATO VARIETY TRIALS, 2006

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 Red Potato Trial (Tables 15 and 16).	PSREU - Hastings Farm (PSREU), One Site in Bunnell and One Site in Hastings
Planting Dates	PSREU (2/1/06), Bunnell (1/25/06), Hastings (1/26/06)
Harvest Dates	PSREU (5/18/06), Bunnell (5/9/06), Hastings (5/8/06)
Season Length	PSREU (86), Bunnell (104), Hastings (102)
Fertilizer Program	Grower standard practices for all sites except PSREU, which is similar to the Red Variety Trial (Chapter 4).
Irrigation Program	Seepage at all sites.

Experimental Design

Number of Sites	3
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	Red LaSoda (422 cwt/acre or 47.3 MT/ha)
Highest Marketable Yield	Red LaSoda 13 (374 cwt/acre or 41.9 MT/ha)

Table 15. Production statistics for Statewide Red-Skinned potato selections grown at various sites in Florida.

Clone	Total Yield (cwt/A)	Marketable Yield ¹ (cwt/A)	Size Distribution by Class (%) ²						Size Class Range (%)		Specific Gravity
			C	B	A1	A2	A3	A4	Range (%)		
									A1 to A3	A2 to A3	
Red LaSoda											
PSREU-Hastings	422	370	0	5	69	24	1	0	94	25	1.061
Hastings	351	314	1	9	73	17	0	0	90	17	1.067
Bunnell	336	296	1	10	71	16	2	0	89	18	1.064
Red LaSoda 10											
PSREU-Hastings	388	354	1	6	74	19	1	0	94	20	1.062
Hastings	318	275	2	11	77	9	2	0	87	10	1.065
Bunnell	343	306	1	9	75	13	1	0	90	15	1.062
Red LaSoda 13											
PSREU-Hastings	419	374	1	5	64	30	0	0	94	30	1.060
Hastings	345	303	1	9	72	18	0	0	90	18	1.067
Bunnell	368	336	1	8	69	19	3	0	92	22	1.063
Cherry Red											
PSREU-Hastings	346	297	1	10	83	6	0	0	89	6	1.073
Hastings	279	230	2	13	83	2	0	0	85	2	1.073
Bunnell	277	213	1	21	77	1	0	0	78	1	1.068

Table 15 (cont'd). Production statistics for Statewide Red-Skinned potato selections grown at various sites in Florida.

Clone	Total Yield (cwt/A)	Marketable Yield ¹ (cwt/A)	Size Distribution by Class (%) ²						Size Class Range (%)		Specific Gravity
			C	B	A1	A2	A3	A4	A1 to A3	A2 to A3	
LaRouge											
PSREU-Hastings	399	352	1	7	81	11	0	0	93	11	1.063
Hastings	287	249	2	11	77	10	0	0	87	10	1.068
Bunnell	287	239	1	13	77	9	0	0	86	9	1.064
Red Pontiac											
PSREU-Hastings	374	322	1	7	73	16	3	0	92	18	1.062
Hastings	355	322	1	7	61	28	3	0	92	31	1.062
Bunnell	330	288	1	11	77	10	1	0	88	11	1.060
NY129											
PSREU-Hastings	299	234	1	13	83	3	0	0	86	3	1.061
Hastings	287	236	2	15	77	5	0	0	83	5	1.062
Bunnell	321	252	1	20	77	1	0	0	78	1	1.062
NY136											
PSREU-Hastings	341	256	2	21	72	4	1	0	77	5	1.065
Hastings	309	246	2	19	71	6	2	0	79	9	1.071
Bunnell	360	285	1	20	75	4	1	0	79	4	1.067

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"

Table 16. External and internal defects of Statewide Red-Skinned potato selections grown at various sites in Florida.

Clone	% External Tuber Defects					% Internal Defects ²						
	Growth Cracks	Mis-shapen	Sun-burned	Rotten & misc.	Total Culls ¹	HH	BR	CRS	IHN	Brown Center		
						L	M	H				
Red LaSoda												
PSREU-Hastings	0	0	1	7	7	0	0	0	0	1	0	0
Hastings	1	0	0	0	1	0	0	0	0	0	0	0
Bunnell	0	0	0	1	1	0	0	0	0	3	0	0
Red LaSoda 10												
PSREU-Hastings	0	0	1	1	3	0	0	0	0	1	0	0
Hastings	0	0	0	0	1	0	0	0	0	0	0	0
Bunnell	0	0	0	0	1	0	0	0	0	0	0	0
Red LaSoda 13												
PSREU-Hastings	0	1	2	2	6	0	0	0	0	6	0	0
Hastings	1	0	1	1	2	0	0	0	0	5	0	0
Bunnell	0	0	0	0	1	0	0	0	0	4	0	0
Cherry Red												
PSREU-Hastings	0	0	1	3	4	0	0	0	0	0	0	0
Hastings	1	1	0	0	3	0	0	0	0	0	0	0
Bunnell	0	2	0	0	2	0	0	0	0	0	0	0

Table 16 (cont'd). External and internal defects of Statewide Red-Skinned potato selections grown at various sites in Florida.

Clone	% External Tuber Defects					% Internal Defects ²						
	Growth Cracks	Mis-shapen	Sun-burned	Rotten & misc.	Total Culls ¹	HH	BR	CRS	IHN	Brown Center		
						L	M	H				
LaRouge												
PSREU-Hastings	0	0	2	3	5	1	0	0	0	6	3	0
Hastings	0	0	0	0	1	0	0	0	0	0	0	0
Bunnell	1	0	0	1	2	0	0	0	0	1	1	0
Red Pontiac												
PSREU-Hastings	0	0	1	4	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	1	1	0	0	0	0	0	0	0
NY129												
PSREU-Hastings	0	0	1	7	8	0	0	0	0	0	0	0
Hastings	0	0	0	0	0	0	0	0	0	0	0	0
Bunnell	0	0	0	0	0	0	0	0	0	0	0	0
NY136												
PSREU-Hastings	0	0	1	1	2	0	0	0	0	0	0	0
Hastings	0	0	0	0	1	0	0	0	0	0	0	0
Bunnell	0	0	0	0	0	0	0	0	0	0	0	0

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

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

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

