

University of Florida Potato Variety Spotlight: *Red LaSoda*¹

Lincoln Zotarelli, Doug Gergela, Chad M. Hutchinson, David Dinkins, and Edsel Redden²

General Comments: Red LaSoda is the red-skinned fresh-market potato standard for Florida. Red LaSoda was observed in 1949 as a deep red mutant of LaSoda in the Louisiana potato breeding program. Originally, LaSoda was a selection from a cross of Triumph and Katahdin. Red LaSoda was released by the USDA and the Louisiana Agricultural Experiment Station in 1953. It has been in trials over many seasons and at many locations in Florida including university and grower sites. Production and quality results provided here are summarized from the red-skinned fresh-market trials conducted by the University of Florida over the past 14 seasons.

General Characteristics: Red LaSoda has white to cream-colored flesh with a round to oblong tuber shape. It has smooth, red to pink-colored skin with deep to intermediate eye depth. The variety has good yield potential and a relatively low specific gravity compared to other red-skinned potato varieties adapted for Florida production (Tables 1 and 2).

Season Length: The time from planting to vine kill is approximately 85–95 days depending on growing conditions during the season. Tuber size should be checked regularly late in the season. Plants should be vine killed when size distribution meets desired goals. The time from vine kill to harvest varies by season. At least two to three weeks should be allowed for tubers to mature and set skin.



Figure 1. Typical tuber skin and internal flesh color of Red LaSoda. Credits: C. Hutchinson

Fertilization and Growth: University trials have used approximately 200 lb N/acre. Nitrogen should be managed so that it “runs out” late in the season to improve tuber maturity and skin set. It may require less nitrogen than the UF/IFAS Extension general recommendation of 200 lb N/acre in heavier soils to achieve this goal. P and K should be applied based on soil tests.

Foliage develops rapidly with determinant growth resulting in early to mid-season maturity.

1. This document is HS1078, one of a series of the Horticultural Sciences Department, UF/IFAS Extension. Original publication date July 2006. Revised August 2013. Visit the EDIS website at <http://edis.ifas.ufl.edu>.

2. Lincoln Zotarelli, Doug Gergela, and Chad Hutchinson, Horticultural Sciences Department, University of Florida/IFAS; David Dinkins, St. Johns County Cooperative Extension Office; Edsel Redden, Putnam County Cooperative Extension Office, UF/IFAS Extension, Gainesville, 32611.

The Institute of Food and Agricultural Sciences (IFAS) is an Equal Opportunity Institution authorized to provide research, educational information and other services only to individuals and institutions that function with non-discrimination with respect to race, creed, color, religion, age, disability, sex, sexual orientation, marital status, national origin, political opinions or affiliations. For more information on obtaining other UF/IFAS Extension publications, contact your county's UF/IFAS Extension office.

U.S. Department of Agriculture, UF/IFAS Extension Service, University of Florida, IFAS, Florida A & M University Cooperative Extension Program, and Boards of County Commissioners Cooperating. Nick T. Place, dean for UF/IFAS Extension.

Planting: Tubers should break dormancy before planting. A seed piece of 2½ to 3 oz is desired for planting. Plant spacing should be 5 to 8 inches in-row with 36 to 40 inches between rows. Closer in-row spacing will reduce harvested tuber size. Excessive soil moisture late in the season will degrade lenticel appearance and delay skin set.

Diseases: Red LaSoda has general disease resistance characteristics. The variety is susceptible to scab, early blight, late blight, corky ring spot, and bacterial wilt. A standard extension-recommended disease control program should be followed.

Seed Source: Open variety, available through many seed sources.

Other Information: Hutchinson, C. M., E. H. Simonne, G. J. Hochmuth, D. N. Maynard, W. M. Stall, S. M. Olson, S. E. Webb, T. G. Taylor and S. A. Smith. 2006. "Potato Production in Florida." In: *Vegetable Production Guide for Florida*. S. M. Olson and E. H. Simonne, eds. University of Florida.

Potato Association of America variety database: http://potatoassociation.org/Industry%20Outreach/varieties/Red%20Rounds/red_la_soda.html

Table 1. Summary of production statistics and specific gravity of Red LaSoda, a red-skinned fresh-market potato variety grown at the UF/IFAS research and demonstration farm in Hastings, FL

Year	Total Yield	Marketable Yield ¹	Size						Size Class	%	Culls	Specific Gravity
			C	B	A1	A2	A3	A4				
		Distribution by Class % ²							Range %			
	(cwt/A)	(cwt/A)	C	B	A1	A2	A3	A4	A1 to A3	A2 to A4		
1998	469	352	--	3	23	35	18	0	76	53	22	1.058
1999	396	329	--	4	64	18	1	0	83	19	13	1.053
2000	326	298	--	4	35	38	18	0	91	46	5	1.072
2001	305	279	--	3	42	42	13	0	97	55	6	1.064
2002	373	341	--	3	43	44	10	0	97	54	6	1.061
2003	495	419	--	3	37	34	20	1	92	55	7	1.059
2004	402	326	7	6	55	26	6	0	88	32	7	1.070
2005	337	299	1	7	55	34	3	0	92	37	3	1.066
2006	431	399	1	4	66	28	0	0	95	28	3	1.063
2007	377	329	1	10	64	20	6	0	89	26	2	1.060
2008	276	192	3	5	64	5	2	0	71	7	3	1.068
2009	435	338	1	6	50	20	23	0	93	43	16	1.058
2010	375	294	2	12	73	8	5	0	86	10	73	1.076
2011	383	262	3	12	55	23	7	0	84	22	55	1.058
2012	282	138	2	7	47	12	31	0	90	48	47	1.054
Average	377	306	2	6	52	26	11	0	88	36	18	1.063

¹Marketable yield: Sum of size classes A1 to A3.²Size classes: C = ½ to 1½ inches, B = 1½ to 1 7/8 inches, A1 = 1 7/8 to 2½ inches, A2 = 2½ to 3¼ inches, A3 = 3¼ to 4 inches, A4 >4 inches; Size distribution by class: Class (wt)/(Total Yield [wt] – culls [wt])

Table 2. Yield, vine maturity, tuber characteristics, and internal tuber defects of Red LaSoda, a red-skinned fresh-market potato variety grown at the UF/IFAS research and demonstration farm in Hastings, FL

Year	Vine		Tuber Characteristics ¹					Internal Defects ²				
	Maturity ¹	(vine kill)	IFC	SC	ST	TS	ED	APP	HH	BR	CRS	IHN
1998	-	-	-	2.0	7.5	2.0	3.0	6.0	-	-	-	-
1999	-	-	-	2.0	7.0	3.0	3.0	4.0	1	0	0	0
2000	6.3	-	-	2.0	7.3	2.7	5.3	5.0	1	0	0	1
2001	5.8	1.5	1.5	2.7	7.0	2.7	5.3	3.7	0	0	0	0
2002	3.0	1.5	1.5	3.0	7.0	3.5	3.5	6.5	1	0	0	0
2003	6.0	1.7	1.7	2.7	7.3	2.7	3.7	5.7	1	0	0	4
2004	6.3	1.3	1.3	2.3	7.0	2.3	3.7	5.7	1	0	0	0
2005	5.8	1.5	1.5	2.5	6.5	3.5	4.5	5.5	0	0	0	0
2006	8.0	1.0	1.0	2.5	7.0	2.5	4.0	6.0	0	0	0	0
2007	5.5	1.0	1.0	3.0	7.0	3.5	4.5	5.5	1	0	0	0
2008	6.1	2.0	2.0	3.0	8.0	2.5	5.0	5.0	0	0	0	0
2009	4.0	1.5	1.5	2.0	7.0	3.0	3.0	6.0	0	0	1	0
2010	7.4	1.3	1.3	2.0	6.9	3.5	3.0	6.2	6	0	0	0
2011	5.8	1.0	1.0	2.8	6.8	3.0	3.0	5.8	2	0	6	0
2012	7.3	1.0	1.0	2.5	7.0	3.0	3.0	5.5	0	0	0	0

¹See rating system outlined in Florida Rating Code Table (Table 3).²Percent tuber defects. HH = hollow heart, BR = brown rot, CRS = corky ring spot, IHN = internal heat necrosis.

Table 3. Florida rating codes for potato tuber characteristics¹

Tuber Characteristics							
Rating Code	Vine Maturity	Internal Flesh Color	Skin Color	Skin Texture	Tuber Shape	Eye Depth	Overall Appearance
1	dead	white	purple	partial russet	round	very deep	very poor
2	+-	cream	red	heavy russet	mostly round	--	--
3	yellow and dying	light yellow	pink	moderate russet	round to oblong	deep	poor
4	+-	medium yellow	dark brown	light russet	mostly oblong	--	--
5	moderately senesced	dark yellow	brown	netted	oblong	intermediate	fair
6	+-	pink	tan	slightly netted	oblong to long	--	--
7	starting to senesce	red	buff	moderately smooth	mostly long	shallow	good
8	+-	blue	white	smooth	long	--	--
9	green and vigorous	purple	cream	very smooth	cylindrical	very shallow	excellent

¹Based on the standard NE 1031 rating codes for plant and tuber characteristics.