

## Chapter 8. Late Harvest Potato Variety Trial, 2006<sup>1</sup>

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**General Comments:** A goal of the Late Harvest potato variety trial is to identify varieties that yield well and have an acceptable appearance when harvested later in the season when growing conditions are usually more stressful.

### Planting Information

Planting Site	PSREU - Hastings Farm, Hastings, FL
Planting Date	February 14, 2006
Vine Kill Date	May 25, 2006
Harvest Date	June 14, 2006
Season Length	100 days planting to vine kill; 120 days planting to harvest
Fertilizer Program	preplant, 100-43-86 lb/A; sidedress 50-0-43 (2 appl.)
Irrigation Program	seepage

### Experimental Design

Number of Selections	15
Within Row Spacing	8 in (20.3 cm)
Between Row Spacing	40 in (101.6)
Replications	4
Plot Size	16 ft (4.9 m) single row

### Production Statistics

Highest Total Yield	Fabula (468 cwt/acre or 52.4 MT/ha)
Highest Marketable Yield	Atlantic (393 cwt/acre or 44.0 MT/ha)
Best Appearance Rating	LaChipper and Belrus (7.0, good to excellent)
Highest Specific Gravity	Atlantic (1.086)

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**Table 2.** Production statistics for "Late Harvested" White, Red, and Russet-Skinned potato selections.

Clone	Total Yield (cwt/A)	Marketable Yield <sup>1</sup>		Size									Specific Gravity
		(cwt/A)	% of standard	Distribution by Class (%) <sup>2</sup>			Size Class Range (%)						
				C	B	A1	A2	A3	A4	A1 to A3	A2 to A3		
Atlantic	448	393	100	1	6	62	25	6	0	93	31	1.086	
Adora	373	251	64	1	22	70	6	0	0	76	6	1.067	
Andover	342	291	74	1	8	76	14	2	0	91	16	1.082	
Belrus	306	255	65	2	14	81	3	1	0	84	3	1.085	
Cherry Red	346	280	71	2	15	73	8	3	0	84	10	1.081	
Fabula	468	374	95	0	4	70	16	9	0	95	25	1.062	
Goldrush	365	303	77	1	12	69	13	4	0	87	17	1.071	
LaChipper	401	327	83	2	12	74	7	5	0	86	12	1.071	
LaRouge	453	388	99	1	8	76	12	3	0	91	15	1.070	
Red LaSoda	436	378	96	0	6	60	25	9	0	94	34	1.067	
Red Pontiac	435	355	90	1	8	69	15	6	0	90	21	1.068	
Russet Burbank	412	226	57	3	29	58	11	0	0	69	11	1.073	
Russet Norkotah	348	217	55	2	14	73	5	5	0	84	11	1.063	
Sebago	417	324	82	1	12	78	5	4	0	86	9	1.070	
Vivaldi	442	251	64	3	38	59	0	0	0	59	0	1.067	
<i>MSD3</i>	98	117		ns	11	ns	20	7	ns	12	20	0.005	
<i>P Value</i>	0.0001	0.0003		0.1198	0.0001	0.0537	0.0092	0.0022	0.4635	0.0001	0.0005	0.0001	

<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"

<sup>3</sup>Means separated within columns by Tukey's Studentized Range (HSD) Test.

**Table 3.** Plant growth characteristics and tuber appearance of "Late Harvested" White, Red, and Russet-Skinned potato selections.

Clone	Plant Growth Characteristics <sup>1</sup>				Tuber Appearance <sup>2</sup>
	% Stand	Early Vigor	Vine Type	Vine Maturity	
Atlantic	99	na	9-6	5.3	6
Adora	100	na	9-6	2.3	5
Andover	97	na	8	1.8	6
Belrus	99	na	9	3.0	7
Cherry Red	100	na	9	2.8	6
Fabula	85	na	8	5.5	6
Goldrush	100	na	9	3.0	8
LaChipper	100	na	9-6	1.5	7
LaRouge	100	na	9-6	3.0	6
Red LaSoda	100	na	9-6	3.5	5
Red Pontiac	100	na	9-6	2.3	3
Russet Burbank	98	na	8.8	5.3	4
Russet Norkotah	91	na	8-9	3.0	4
Sebago	98	na	8.5	4.3	5
Vivaldi	98	na	8-9	2.3	5

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

**Table 4.** External and internal defects of "Late Harvested" White, Red, and Russet-Skinned potato selections.

Clone	% 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	L	M	H
Atlantic	0	0	1	4	5	0	0	0	5	0	0	0
Adora	0	4	3	6	12	0	0	0	0	0	0	0
Andover	0	0	1	6	7	0	0	0	0	0	0	0
Belrus	0	0	0	1	1	0	0	0	0	0	0	0
Cherry Red	0	0	0	3	3	0	0	0	0	0	0	0
Fabula	0	0	1	15	17	0	0	0	0	0	0	0
Goldrush	0	2	0	2	4	0	0	0	0	0	0	0
LaChipper	0	1	2	3	5	0	0	0	0	0	0	0
LaRouge	1	1	0	4	6	0	0	0	0	1	1	1
Red LaSoda	1	1	1	5	7	0	0	0	0	0	1	0
Red Pontiac	0	0	1	9	9	0	0	0	1	1	0	0
Russet Burbank	1	15	1	5	21	0	0	0	4	0	0	0
Russet Norikotah	0	0	0	29	30	0	0	0	0	0	0	1
Sebago	0	0	3	7	10	0	0	0	4	0	0	0
Vivaldi	0	0	1	4	5	0	0	0	0	0	0	0
<i>MSD</i> <sup>3</sup>	1	2	3	10	10	0	0	0	5	ns	ns	ns
<i>P Value</i>	0.0073	0.0001	0.0389	0.0039	0.0006	-	-	-	0.0201	0.4635	0.4635	0.4635

<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

<sup>3</sup>Means separated within columns by Tukey's Studentized Range (HSD) Test.