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Results of the initial sampling (August 25th) of the 2008, First-Stubble, Sugarcane Maturity Test at the USDA-ARS Sugarcane Research Laboratory's Ardoyne Research Farm at Schriever, LA are attached. The first sampling is generally done at the start of the last week in August. The study is designed to examine the natural ripening process and compare the results for the same harvest dates over a 5-yr period (2004 – 2008); consequently, a glyphosate-containing ripener is not applied. Samples consist of 15, hand-cut stalks of clean, trash-free and properly topped cane from each of four replications. **When mechanically harvested, one can expect TRS/TC levels to be 10 to 20% lower as a result of additional trash in the cane.** The study includes seven released Louisiana varieties: LCP 85-384, HoCP 91-555, Ho 95-988, HoCP 96-540, L 97-128, L 99-233, HoCP 00-950, and the newly released L 01-283. The variety, HoCP 85-845, was dropped from testing and L 99-226 was inadvertently omitted when the study was planted in 2006. Over the years, density measurements have been fairly consistent over the various sampling dates. As a result, and due to labor constraints, density measurements will only be made during the first, fourth, and eighth sampling of this maturity test. Harvestable sugarcane stalks in all plots were counted on August 25th. Stalk counts, stalk weights, and TRS levels will be used to provide an estimation of cane (tons/A) and sugar (lbs/A) yields for the various varieties in this test.

The Ardoyne Farm has received frequent rains throughout the growing season and at the time of this sampling, the crop is not lodged. When averaged over all of the varieties contained in this test since 2004, sugarcane stalks of the core varieties (LCP 85-384, HoCP 91-555, Ho 95-988, HoCP 96-540, L 97-128, and L 99-233) are about average in weight, length, diameter, and density. Of the varieties, L 97-128 and L 99-233 had the longest stalks and L 97-128 and HoCP 96-540 the heaviest. As expected, HoCP 00-950 has the shortest stalks of the varieties in this test, but its stalk weight is similar to HoCP 96-540 and L 97-128.

Brix, sucrose, and purities are all generally lower than in 2007 and more or less equivalent to those in 2006 at this sampling date, and as a result, the average theoretically recoverable sugar (TRS) levels are nearly 32 lbs./ton of cane (TC) lower in 2008 than in 2007. Of the varieties with major plantings for harvest in 2008, L 97-128 continues to have the highest early TRS levels producing 156 lbs. of sugar/TC; nearly 36 lbs./TC higher than HoCP 96-540. One of the strongest arguments for the release of both HoCP 00-950 in 2007 and L 01-283 in 2008 was their early sugar. As can be seen, HoCP 00-950 has the highest TRS/TC level at 182 lbs., which is 26



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and 62 lbs./TC higher than L 97-128 and HoCP 96-540, respectively. L 01-283 produced 168 lbs./TC, which was higher than all varieties except HoCP 00-950. Of the varieties, the highest cane yields were found with HoCP 96-540 and L 97-128. Only two of the varieties, L 97-128 and HoCP 00-950 produced sugar yields in excess of 6500 lbs./A.

The second sampling for the maturity test is scheduled for September 8th.

Reminder. If you would like to discontinue your receipt of these reports or if you know of individuals who would like to begin receiving this information in 2008, please contact Mrs. Sandy Roberts by email (Sandra.Roberts@ars.usda.gov) Emailing insures address accuracy. Information regarding USDA research activities can also be found on our website: www.ars.usda.gov/msa/srrc/sru .

Maturity reports are prepared by Dr. Ed Richard and Mr. Mike Duet of the USDA-ARS Sugarcane Research Lab.

Maturity studies on first-stubble cane grown on mixed land at the Ardoyne Farm, USDA-ARS, SRRC, Sugarcane Research Unit, Houma, LA, August 25, 2008¹.

Variety	Year	Stalk ²				Normal juice ³			Sugar yield	Estimated yield	
		Wt. (lb.)	Lh. (in.)	Dia. (in.)	Density (g/cm ³)	Bx. (%)	Su. (%)	Pu. (%)	TRS (lbs/ton)	Cane (tons/A)	Sugar (lbs/A)
LCP 85-384	2008	1.3	71	0.73	1.27	10.93	7.40	67.55	121.5	28.3	3471
	2007	1.3	70	0.77	1.05	12.28	8.22	66.90	134.1	---	---
	2006	1.7	75	0.82	1.14	10.65	6.84	64.12	108.6	---	---
	2005 ⁴	---	---	---	---	---	---	---	---	---	---
	2004	1.4	77	---	---	---	---	69.72	148.5	---	---
HoCP 91-555	2008	1.6	74	0.81	1.14	11.64	7.34	62.93	113.7	33.8	3844
	2007	1.3	73	0.78	1.11	13.90	9.39	67.44	152.6	---	---
	2006	1.3	71	0.77	1.10	11.07	6.32	57.02	90.6	---	---
	2005 ⁴	---	---	---	---	---	---	---	---	---	---
	2004	1.4	71	---	---	---	---	64.24	131.8	---	---
Ho 95-988	2008	1.6	68	0.88	1.09	11.18	7.19	64.28	114.1	31.1	3552
	2007	1.8	75	0.87	1.16	12.53	8.30	66.21	134.4	---	---
	2006	1.8	74	0.89	1.02	10.62	6.28	58.98	93.5	---	---
	2005 ⁴	---	---	---	---	---	---	---	---	---	---
	2004	---	---	---	---	---	---	---	---	---	---
HoCP 96-540	2008	1.9	76	0.9	1.04	11.11	7.33	65.98	119.8	35.6	4268
	2007	1.6	73	0.82	1.17	13.06	9.33	71.43	160.2	---	---
	2006	2.0	80	0.91	1.05	11.20	7.30	65.10	118.2	---	---
	2005 ⁴	---	---	---	---	---	---	---	---	---	---
	2004	1.7	74	---	---	---	---	68.98	147.5	---	---
L 97-128	2008	2.0	85	0.89	1.07	12.64	9.07	71.72	156.0	34.3	5343
	2007	1.8	80	0.82	1.15	14.48	10.6	73.09	182.3	---	---
	2006	2.1	89	0.88	1.05	12.48	8.62	69.04	144.9	---	---
	2005 ⁴	---	---	---	---	---	---	---	---	---	---
	2004	1.8	81	---	---	---	---	73.15	184.0	---	---
L 99-233	2008	1.7	86	0.78	1.13	11.71	7.87	67.13	127.5	39.3	4981
	2007	1.4	81	0.71	1.21	12.95	8.72	67.31	141.4	---	---
	2006	1.6	81	0.75	1.18	10.98	6.78	61.71	104.6	---	---
	2005 ⁴	---	---	---	---	---	---	---	---	---	---
	2004	1.4	81	---	---	---	---	67.61	140.3	---	---
HoCP 00-950	2008	1.8	70	0.88	1.13	13.81	10.28	74.38	182.3	36.2	6601
	2007	1.6	68	0.87	1.11	15.27	11.35	74.29	201.3	---	---
	2006	---	---	---	---	---	---	---	---	---	---
	2005 ⁴	---	---	---	---	---	---	---	---	---	---
	2004	---	---	---	---	---	---	---	---	---	---
L 01-283	2008	1.7	77	0.81	1.17	13.17	9.61	72.77	168.5	36.7	6108
	2007	---	---	---	---	---	---	---	---	---	---
	2006	---	---	---	---	---	---	---	---	---	---
	2005 ⁴	---	---	---	---	---	---	---	---	---	---
	(Cont'd)	2004	---	---	---	---	---	---	---	---	---
Averages ⁵	2008	1.7	77	0.8	1.1	11.5	7.7	66.6	125.4	33.7	4243
	2007	1.5	74	0.79	1.13	13.36	9.36	70.00	157.1	---	---
	2006	1.7	77	0.85	1.10	11.11	7.13	64.07	113.2	---	---
	2005 ⁴	---	---	---	---	---	---	---	---	---	---
	2004	1.5	76	---	---	---	---	69.20	151.3	---	---

¹ Data for each parameter represents the average of four replications of 15 stalks each.

² Stalk diameter and density based on a subsample consisting of 8 randomly selected stalks from the 15-stalk sample of each rep, will be taken on the 1st, 4th and the 8th maturity study sampling dates.

³ Brix factor = 0.8854; Sucrose factor = 0.8105.

⁴ No data taken due to hurricane Katrina for year 2005.

⁵ Averages are based only on varieties included in previous year's first-stubble maturity study (LCP 85-384, HoCP 91-555, Ho 95-988, HoCP 96-540, L 97-128, and L 99-233).