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Results of the eighth and **final** sampling (December 5, 2006) of the First-Stubble Sugarcane Maturity Test at the USDA-ARS Sugarcane Research Laboratory's Ardoyne Research Farm at Schriever, LA are attached. The study examines the natural ripening process and compares the results over a 5-yr period (2002 – 2006) for the same harvest dates; 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 first-stubble study includes eight released Louisiana varieties: LCP 85-384, HoCP 85-845, HoCP 91-555, Ho 95-988, HoCP 96-540, L 97-128, L 99-226, and L 99-233 and one Florida variety, CP 89-2143. The variety CP 70-321 is no longer included in the maturity studies because of declining acreage.

The Ardoyne Farm experienced its first freeze of the 2006 harvest season on November 21st the day after the November 20th sampling of the maturity test. The freeze damaged some of the leaves, but did not damage the terminal buds. As expected, there was little to no change in stalk: weights, heights, diameters, or densities over the 2-week sampling interval. Since the first-stubble crop has generally reached the top of its seasonal maturity curve at this time of year, we are also not seeing a significant increase in Brix, sucrose, or purity percentages; hence, recoverable sugar levels (TRS/TC). Recoverable sugar levels for the four varieties in the test since 2002 are at the same level now as they were in 2005; the difference being that in 2006 first-stubble stalk weights for these four varieties are averaging 0.2 lbs/stalk more than in 2005. It is interesting to note that sugar levels in clean, whole stalks of HoCP 96-540 and L 97-128 are similar at this sampling date. The newly-released L99-233 is producing recoverable sugar levels that are similar to HoCP 96-540 and L 97-128 with L99-226 still producing the highest TRS/TC at 305 lbs./TC – a level that is equaled only by the previously released HoCP 91-555. The Florida variety, CP 89-2143, continues to lag behind the Louisiana varieties when it comes to sugar recovery.

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 2007, please contact Mrs. Sandy Roberts by email (sroberts@srcc.ars.usda.gov). Emailing insures address accuracy. Information regarding USDA research activities can also be found on our website: www.ars.usda.gov/msa/srcc/sru .

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

Happy Holidays and Good luck with the remainder of the 2006 Harvest Season!!



Southern Regional Research Center
Sugarcane Research Unit
5883 USDA Road \$ Houma, LA 70360
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Variety	Year	Stalk ²				Normal juice ³			Sugar yield	Previous sample date ⁴	TRS change from previous sample
		Wt. (lb.)	Lh. (in.)	Dia. (in.)	Density (g/cm ³)	Bx. (%)	Su. (%)	Pu. (%)	TR (lb.)	TR (lb.)	(lb.)
L 99-233	2006	2.2	116	0.81	1.06	18.13	15.61	86.09	292.1	290.7	1.4
	2005	1.8	102	0.76	1.02	18.22	15.52	85.18	289.0	268.2	20.8
	2004	1.9	118	0.72	1.15	17.93	16.32	91.14	285.2	261.5	23.7
	2003	---	---	---	---	---	---	---	---	---	---
	2002	---	---	---	---	---	---	---	---	---	---
Averages ⁵	2006	2.2	99.6	0.8	1.2	18.3	15.7	85.8	293.7	289.3	4.4
	2005	2.0	92	0.80	1.15	18.40	15.73	85.46	293.8	271.1	22.7
	2004	2.2	102	0.78	1.25	17.62	16.10	91.41	279.7	271.1	8.6
	2003	2.0	91	---	---	18.60	16.10	86.55	301.9	304.2	-2.2
	2002	2.1	97	---	---	17.80	15.30	86.00	284.5	277.6	6.9

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.

³ Brix factor = .8854; Sucrose factor = .8105.

⁴ Previous sample date was November 20, 2006.

⁵ Averages are based only on varieties included in previous year's first-stubble maturity study (LCP 85-384, HoCP 85-845, HoCP 91-555, and HoCP 96-540).