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Results of the fourth sampling (October 6th, 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.

Nighttime temperatures were cool and no rainfall occurred during the 11-day interval since the September 25th sampling. As a result stalk: heights, weights, diameters, and densities, as an average of the four varieties contained in this test since 2002 remained relatively unchanged since the previous sampling. Despite this, it is still very encouraging to once again have most of the varieties producing 2+ lb stalks at this time in the grinding season. These same weather conditions were favorable for natural ripening as Brix, sucrose, and purity percentages all increased resulting in an average increase in TRS/TC of 30 lbs for the four oldest varieties. The highest TRS/TC levels (>220 lbs/TC) were obtained with LCP 85-384, HoCP 895-845, L 97-128, and L 99-226.

Sugar levels for LCP 85-384 are about average for this sampling date. Both HoCP 91-555 and HoCP 96-540 are producing sugar levels that are slightly less than the previous three years and about equivalent to the levels obtained in 2002. TRS/TC levels for L 97-128, while high, are lower than those recorded for this sampling date in the previous three years. The Florida variety, CP 89-2143, had the lowest TRS/TC level (199 lbs/TC) of the varieties evaluated.

The next sampling of the maturity test is scheduled for October 23rd. Hopefully, weather conditions will continue to be favorable for the natural ripening process and improve TRS/TC levels in response to the application of glyphosate ripeners as well.

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Reminder. If you would like to discontinue your receipt of these reports in 2006 or if you know of individuals who would like to begin receiving this information in 2006, please contact Mrs. Sandy Roberts by email (sroberts@srrc.ars.usda.gov). Emailing insures address accuracy.

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

Good luck with your 2006 Harvest Season!!

Maturity studies on first-stubble cane grown on mixed land at the Ardoyne Farm, USDA-ARS, SRRC, Sugarcane Research Unit, Houma, LA, October 06, 2006[1].

Variety	Year	Stalk[2]				Normal juice[3]			Sugar yield	Previous sample date[4]	TRS change from previous sample
		Wt.	Lh.	Dia.	Density	Bx.	Su.	Pu.	TRS	TRS	
		(lb.)	(in.)	(in.)	(g/cm3)	(%)	(%)	(%)	(lb.)	(lb.)	(lb.)
LCP 85-384	2006	1.9	95	0.80	1.09	15.27	12.27	80.26	222.2	189.5	32.7
	2005	1.5	74	0.77	1.04	15.56	12.81	82.36	220.8	191.6	29.2
	2004	1.8	94	---	---	15.85	12.95	81.67	236.4	196.3	40.1
	2003	1.7	85	---	---	15.87	12.81	80.71	232.6	207.3	25.3
	2002	1.8	94	---	---	14.39	11.41	79.28	205.3	191.9	13.5
HoCP 85-845	2006	2.2	90	0.87	1.10	15.89	13.05	82.12	239.0	215.9	23.1
	2005	1.9	81	0.86	1.03	15.49	12.75	82.30	226.5	210.5	16.0
	2004	1.9	90	---	---	15.89	13.17	82.84	242.0	216.4	25.6
	2003	1.8	78	---	---	15.67	12.75	81.35	232.4	220.6	11.8
	2002	2.0	85	---	---	14.25	11.36	79.65	205.0	207.5	-2.5
CP 89-2143	2006	2.3	90	..95	0.99	14.37	11.32	78.81	199.1	176.6	22.5
	2005	---	---	---	---	---	---	---	---	---	---
	2004	---	---	---	---	---	---	---	---	---	---
	2003	---	---	---	---	---	---	---	---	---	---
	2002	---	---	---	---	---	---	---	---	---	---
HoCP 91-555	2006	1.6	89	0.72	1.17	15.76	11.94	75.75	207.7	175.5	32.2
	2005	1.5	87	0.69	1.23	16.76	13.63	81.39	240.0	200.3	39.7
	2004	1.8	92	---	---	16.58	13.45	81.07	242.4	192.5	49.9
	2003	1.6	81	---	---	16.96	13.63	80.40	244.7	221.9	22.8
	2002	1.7	87	---	---	15.01	11.55	76.93	202.7	181.7	20.9
Ho 95-988	2006	2.4	99	0.90	1.06	15.01	11.48	76.47	202.9	173.2	29.7
	2005	2.0	84	0.86	1.05	15.47	12.39	80.10	214.3	189.9	24.4
	2004	---	---	---	---	---	---	---	---	---	---
	2003	---	---	---	---	---	---	---	---	---	---
	2002	---	---	---	---	---	---	---	---	---	---
HoCP 96-540	2006	2.2	98	0.85	1.11	14.76	11.44	77.50	205.6	173.5	32.1
	2005	1.9	83	0.83	1.08	14.92	12.39	83.06	211.0	192.1	18.9
	2004	2.2	97	---	---	15.87	12.75	80.29	233.2	203.5	29.7
	2003	2.0	89	---	---	15.58	12.39	79.49	225.5	205.0	20.5
	2002	2.1	91	---	---	14.34	11.09	77.29	193.2	195.4	-2.2
L 97-128	2006	2.3	106	0.87	1.02	16.03	12.89	80.42	233.7	214.7	19.0
	2005	2.0	91	0.85	1.04	16.22	14.32	88.27	236.6	216.7	19.9
	2004	2.3	105	---	---	17.31	14.51	83.81	270.8	242.4	28.4
	2003	1.8	92	---	---	17.29	14.32	82.84	265.8	242.1	23.7
	2002	---	---	---	---	---	---	---	---	---	---
L 99-226	2006	2.5	99	0.90	1.08	15.78	12.61	79.86	230.2	199.7	30.5
	2005	2.3	92	0.91	1.01	15.21	13.03	85.68	213.4	196.4	17.0
	2004	---	---	---	---	---	---	---	---	---	---
	2003	---	---	---	---	---	---	---	---	---	---
(Con"t)	2002	---	---	---	---	---	---	---	---	---	---

Maturity studies on first-stubble cane grown on mixed land at the Ardoyne Farm, USDA-ARS, SRRC, Sugarcane Research Unit, Houma, LA, October 06, 2006[1].

Variety	Year	Stalk[2]				Normal juice[3]			Sugar yield	Previous sample date[4]	TRS change from previous sample
		Wt.	Lh.	Dia.	Density	Bx.	Su.	Pu.	TRS	TRS	
		(lb.)	(in.)	(in.)	(g/cm3)	(%)	(%)	(%)	(lb.)	(lb.)	(lb.)
L 99-233	2006	1.8	101	0.77	1.05	15.10	11.67	77.24	205.2	168.2	37.0
	2005	1.6	91	0.73	1.14	16.18	13.03	80.54	237.6	217.2	20.4
	2004	1.8	101	---	---	16.09	13.19	81.92	241.2	198.9	42.3
	2003	---	---	---	---	---	---	---	---	---	---
	2002	---	---	---	---	---	---	---	---	---	---
Averages[5]	2006	2.0	93.0	0.8	1.1	15.4	12.2	78.9	218.6	188.6	30.0
	2005	1.8	85	0.81	1.08	15.71	12.98	82.61	225.9	202.7	23.3
	2004	2.0	97	---	---	16.15	13.21	81.76	241.8	205.8	35.9
	2003	1.8	84	---	---	16.08	12.97	80.65	236.0	215.3	20.7
	2002	2.0	91	---	---	14.40	11.25	78.13	199.8	191.6	8.2

[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 September 25, 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).