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The results of the sixth sampling (November 3, 2008) 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 by comparing 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, L 99-226 was inadvertently omitted when the study was planted in 2006. Harvestable sugarcane stalks in all plots were counted on August 25th. These stalk counts, along with the stalk weights and TRS levels from this harvest date, were used to provide an estimation of cane (t/A) and sugar (lbs./A) yields for the various varieties in this test.

Stalk breakage did occur for a number of the varieties in this test as a result of Hurricane Gustav on September 1st and to a lesser extent Hurricane Ike on September 12th. Efforts are made to include only whole stalks properly topped for this study; as has been done in the past. The Ardoyne Farm has received very little rainfall in the month of October.

There was essentially no change in both stalk heights and weights for the six core varieties (LCP 85-384, HoCP 91-555, Ho 95-988, HoCP 96-540, L 97-128, and L 99-233) since the October 20th sampling 14 days earlier. This is somewhat expected since the growing season is nearing the end and the crop's energy is directed more to food (sucrose) production and storage and less to growth. Failure to see more of an increase in growth is also associated with the lack of soil moisture. Stalk heights and weights for this sampling date continue to appear to be "average" based on data collected since 2004. Of the varieties, L 99-233 has the longest stalks and HoCP 96-540 and L 97-128 the heaviest. Not surprisingly, LCP 85-384 had the shortest and lightest stalks of the varieties in this study.

The dry, sunny weather continues to promote maturation as Brix, sucrose, and purities are no longer behind those in 2007 for the core varieties and only slightly behind those of the three years prior to 2007. The average increase in TRS since the previous sampling was 25 lbs./TC for the six core varieties. It is interesting to also note that HoCP 96-540 and L 97-128 essentially have

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the same TRS levels (263 lbs./TC). The two newest varieties, HoCP 00-950 and L 01-283, have the highest TRS levels at 286 lbs./TC. TRS levels for L 01-283 are now equivalent to HoCP 00-950 because of its 33 lbs./TC increase in TRS compared to HoCP 00-950's 3 lbs./TC increase since the previous sampling 14 days earlier. Estimated cane and sugar yields for the core varieties averaged 40.4 t/A and 10,809 lbs./A, respectively. This is actually a slight decrease in cane yield (2 t/A) and only a slight increase in sugar yield (approximately 400 lbs./A) since the October 20th sampling with the former undoubtedly due to the dry soil conditions. The highest cane yields were found with HoCP 96-540 (42.5 t/A), L 99-233 (46.7 t/A), HoCP 00-950 (42.0 t/A), and L 01-283 (45.1 t/A). Three of these varieties, L 99-233, HoCP 00-950, and L 01-283 produced sugar yields in excess of 12,000 lbs./A.

The seventh sampling of the first-stubble maturity test is scheduled for November 17th.

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, November 3, 2008[1].

Variety	Year	Stalk[2]				Normal juice[3]			Sugar yield	Previous sample date[4]	TRS change from previous	Estimated yield[6]	
		Wt.	Lh.	Dia.	Density	Bx.	Su.	Pu.	TRS	TRS	sample	Cane	Sugar
		(lb.)	(in.)	(in.)	(g/cm3)	(%)	(%)	(%)	(lb.)	(lb.)	(lb.)	(tons/A)	(lbs/A)
LCP 85-384	2008	1.7	90	---	---	17.77	14.80	83.27	272.7	246.9	25.8	35.8	9765
	2007	1.7	96	0.72	1.30	17.22	14.55	84.48	270.0	218.2	51.8	---	---
	2006	2.0	100	0.81	1.50	17.58	14.92	84.90	277.6	263.4	14.2	---	---
	2005	1.6	82	0.74	1.16	18.00	15.11	83.93	279.4	251.0	28.4	---	---
	2004	1.8	100	---	---	17.53	14.70	83.84	271.8	265.0	6.8	---	---
HoCP 91-555	2008	1.9	93	---	---	18.13	15.09	83.18	275.2	248.7	26.5	40.2	11071
	2007	1.9	98	0.77	1.21	17.97	15.16	84.35	278.3	242.2	36.1	---	---
	2006	1.9	97	0.76	1.17	18.08	15.51	85.77	281.4	259.7	21.7	---	---
	2005	1.7	92	0.77	1.10	18.22	15.12	82.96	275.4	261.3	14.1	---	---
	2004	1.8	100	---	---	18.46	15.49	83.92	283.8	270.7	13.1	---	---
Ho 95-988	2008	2.0	92	---	---	17.35	14.42	83.09	265.5	243.2	22.3	37.5	9988
	2007	2.2	97	0.86	1.14	16.51	13.63	82.54	250.1	229.6	20.5	---	---
	2006	2.3	101	0.85	1.13	17.58	14.99	85.30	279.4	255.9	23.5	---	---
	2005	2.3	88	0.92	1.04	17.31	14.50	83.79	268.1	251.6	16.5	---	---
	2004	---	---	---	---	---	---	---	---	---	---	---	---
HoCP 96-540	2008	2.3	99	---	---	17.15	14.22	82.85	263.9	236.2	27.7	42.5	11212
	2007	2.2	99	0.81	1.23	16.45	13.38	81.33	246.2	213.1	33.1	---	---
	2006	2.4	104	0.87	1.12	17.22	14.48	84.06	270.7	258.1	12.6	---	---
	2005	2.0	96	0.80	1.17	17.27	14.31	82.90	265.9	249.2	16.7	---	---
	2004	2.2	102	---	---	17.24	14.10	81.76	260.1	250.3	9.8	---	---
L 97-128	2008	2.4	102	---	---	17.44	14.25	81.69	262.9	242.6	20.3	39.5	10362
	2007	2.2	109	0.79	1.19	17.80	15.03	84.45	278.9	247.1	31.8	---	---
	2006	2.5	114	0.87	1.02	17.93	15.17	84.59	284.4	275.7	8.7	---	---
	2005	2.0	94	0.82	1.10	17.95	14.93	83.17	277.7	256.6	21.1	---	---
	2004	2.4	108	---	---	18.31	15.40	84.12	287.9	291.7	-3.8	---	---
L 99-233	2008	2.0	109	---	---	17.38	14.56	83.79	266.4	240.0	26.4	46.7	12455
	2007	1.8	109	0.71	1.14	17.02	14.19	83.34	259.1	208.4	50.7	---	---
	2006	2.0	112	0.78	1.05	17.29	14.50	83.87	268.1	244.3	23.8	---	---
	2005	1.6	94	0.74	1.05	17.31	14.51	83.81	268.2	254.4	13.8	---	---
	2004	1.9	110	---	---	17.73	14.64	82.54	268.8	261.3	7.4	---	---
HoCP 00-950	2008	2.0	94	---	---	18.17	15.21	83.67	286.4	283.3	3.1	42.0	12045
	2007	2.0	95	0.78	1.25	18.59	15.96	85.84	304.1	279.8	24.3	---	---
	2006	---	---	---	---	---	---	---	---	---	---	---	---
	2005	---	---	---	---	---	---	---	---	---	---	---	---
	2004	---	---	---	---	---	---	---	---	---	---	---	---
L 01-283	2008	2.1	98	---	---	18.24	15.19	83.29	285.6	252.5	33.1	45.1	12895
	2007	---	---	---	---	---	---	---	---	---	---	---	---
	2006	---	---	---	---	---	---	---	---	---	---	---	---
	2005	---	---	---	---	---	---	---	---	---	---	---	---
(Cont'd)	2004	---	---	---	---	---	---	---	---	---	---	---	---

Maturity studies on first-stubble cane grown on mixed land at the Ardoyne Farm, USDA-ARS, SRRC, Sugarcane Research Unit, Houma, LA, November 3, 2008[1].

Variety	Year	Stalk[2]				Normal juice[3]			Sugar yield	Previous sample date[4]	TRS change from previous	Estimated yield[6]	
		Wt.	Lh.	Dia.	Density	Bx.	Su.	Pu.	TRS	TRS	sample	Cane	Sugar
		(lb.)	(in.)	(in.)	(g/cm3)	(%)	(%)	(%)	(lb.)	(lb.)	(lb.)	(tons/A)	(lbs/A)
Averages[5]	2008	2.0	98	---	---	17.54	14.56	82.98	267.8	242.9	24.9	40.4	10809
	2007	2.0	101	0.77	1.21	17.29	14.50	83.79	267.5	228.4	39.1	---	---
	2006	2.1	98	0.82	1.23	17.58	14.93	84.94	276.3	264.5	11.8	---	---
	2005	1.8	91	0.79	1.12	17.53	14.66	83.64	271.1	254.9	16.2	---	---
	2004	2.1	103	---	---	17.72	14.79	83.44	273.1	266.6	6.5	---	---

[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] Previous sample date was October 20, 2008.

[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).

[6] Estimated cane yield is the product of stalk weight and millable stalk counts, estimated sugar yield is the product of TRS and estimated cane yield