



December 18, 2015

Results of the 8th and final sampling of the first-stubble Maturity Test harvested December 7, 2015 at the USDA-ARS Sugarcane Research Unit's Ardoyne Research Farm in Schriever, LA are attached. This study is designed to examine the natural ripening process and compare the results for the same harvest dates over a 5-yr period (2011 – 2015); consequently, a glyphosate-containing ripener is not applied. Samples consist of 10 hand-cut stalks, stripped of leaves, and properly topped. **On a commercial farm, one can expect TRS/TC levels to be as much as 20% lower due to the additional trash in the cane associated with mechanical harvesting.** The study includes seven commercially released Louisiana varieties: HoCP 96-540, L 99-226, HoCP 00-950, L 01-283, L 01-299, HoCP 04-838 and Ho 07-613, along with two experimental varieties, HoCP 09-804 and Ho 09-840.

No rainfall was recorded at the farm since the last sampling.

During the 2-week sampling period the crop showed a slight increase in weight (0.10 lbs.) with no increase in length. The average stalk weight (2.19 lbs.) is 0.20 lbs. better than last year and only 0.06 lbs. less than the 4-year average. The varieties with the heaviest stalks were L 99-226 (2.98 lbs.) and HoCP 96-540 (2.52 lbs.), the varieties producing the lightest stalks were Ho 09-840 (1.66 lbs.) and HoCP 09-804 (1.89 lbs.). The longest stalks were produced by L 99-226 (119 in.) and HoCP 96-540 (111 in.); the shortest stalks were produced by HoCP 00-950 (94 in.) and Ho 09-840 (99 in.).

Brix, sucrose, and purities are about average for this sample date. Theoretical recoverable sugar (TRS) levels are 4.05 lbs./ton of cane (TC) better than last year, but 4.23 lbs./TC less than the 4-year average. The average increase in TRS during the 2-week period was 3.5 lbs.

Overall, HoCP 00-950 (311 lbs./TC) and Ho 07-613 (305 lbs./TC) have the highest TRS levels; HoCP 04-838 (282 lbs./TC) and L 01-299 (284 lbs./TC) had the lowest TRS levels. No variety produced more than a 10 lb. increase in TRS over the 2-week sampling period.

As mentioned above this is the eighth and final sampling for the 2015 1st stubble Maturity Test.

Have a Merry Christmas and a Happy New Year!

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, please contact Mrs. Brenda Aysenne by email (Brenda.Aysenne@ars.usda.gov) emailing insures address accuracy. Information regarding USDA research activities can also be found on our website:

http://www.ars.usda.gov/main/site_main.htm?modecode=64-10-00-00.

Maturity reports are prepared by Mr. Mike Duet of the USDA-ARS Sugarcane Research Unit.

Sugarcane Research Unit
5883 USDA Road, Houma, LA 70360
Voice: 985-872-5042 · Fax: 985-868-8369

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Maturity studies on first-stubble cane grown on mixed land at the Ardoyne Farm, USDA-ARS, Sugarcane Research Unit, Houma, LA, December 7, 2015¹.

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. (%)	TRRS (lb.)	TRRS (lb.)	(lb.)
HoCP 96-540	2015	2.52	111	0.85	1.12	17.86	15.15	84.83	284.5	282.9	1.6
	2014	1.71	95	0.75	1.13	17.42	14.75	84.64	276.5	279.7	-3.2
	2013	2.14	107	0.79	1.13	15.34	13.50	87.99	271.3	260.9	10.4
	2012	2.71	118	0.85	1.69	18.86	16.28	86.31	307.9	291.4	16.5
	2011	2.31	100	0.85	1.14	18.84	16.24	86.23	307.1	301.7	5.4
L99-226	2015	2.98	119	0.94	1.00	18.15	15.68	86.39	296.8	292.5	4.3
	2014	2.78	111	0.90	1.07	17.82	15.30	85.83	288.6	283.3	5.3
	2013	2.91	115	0.92	1.06	15.74	12.92	82.05	293.5	294.3	-0.8
	2012	3.00	128	0.90	1.53	19.04	16.61	87.24	315.7	310.6	5.0
	2011	2.87	108	0.93	1.09	18.70	16.08	85.98	303.7	304.4	-0.7
HoCP 00-950	2015	2.09	94	0.83	1.13	18.77	16.26	86.63	311.2	310.5	0.6
	2014	1.86	88	0.79	1.18	18.68	16.14	86.40	308.5	317.1	-8.6
	2013	2.03	99	0.80	1.13	18.75	16.36	87.25	313.9	308.3	5.6
	2012	2.21	109	0.85	1.50	19.17	16.70	87.14	320.4	312.1	8.3
	2011	2.28	96	0.86	1.14	19.32	16.73	86.59	320.0	317.3	2.7
L 01-283	2015	2.06	107	0.77	1.16	18.37	15.85	86.28	302.7	294.9	7.8
	2014	1.75	103	0.73	1.12	18.62	16.17	86.85	309.7	311.2	-1.6
	2013	1.78	103	0.72	1.19	17.89	15.40	86.06	293.7	285.1	8.6
	2012	2.09	112	0.75	1.74	19.21	16.72	87.01	320.4	318.1	2.3
	2011	2.28	103	0.81	1.20	18.88	16.27	86.15	310.4	306.7	3.7
L 01-299	2015	2.19	110	0.79	1.13	17.69	15.19	85.89	284.0	280.3	3.7
	2014	1.78	110	0.71	1.12	17.20	14.62	85.02	272.1	276.8	-4.7
	2013	1.81	112	0.68	1.24	17.42	14.94	85.77	279.1	260.8	18.3
	2012	2.13	119	0.73	1.78	18.39	15.89	86.35	297.7	291.7	6.0
	2011	---	---	---	---	---	---	---	---	---	---
HoCP 04-838	2015	2.02	104	0.76	1.18	17.64	15.22	86.27	282.2	272.5	9.7
	2014	1.72	94	0.77	1.10	18.04	15.59	86.40	289.2	284.8	4.4
	2013	2.07	106	0.77	1.17	17.58	15.23	86.62	285.2	283.8	1.4
	2012	2.20	114	0.80	1.58	18.81	16.49	87.64	307.9	292.1	15.8
	2011	2.19	97	0.83	1.19	18.68	16.09	86.13	298.2	289.1	9.1
Ho 07-613	2015	2.29	105	0.83	1.10	18.22	15.90	87.26	305.1	299.3	5.8
	2014	2.36	105	0.84	1.12	17.91	15.53	86.72	296.5	298.5	-2.0
	2013	2.48	110	0.82	1.19	18.33	16.06	87.63	308.9	296.2	12.7
	2012	---	---	---	---	---	---	---	---	---	---
	2011	---	---	---	---	---	---	---	---	---	---
HoCP 09-804	2015	1.89	108	0.73	1.16	18.55	16.10	86.78	302.2	304.5	-2.3
	2014	---	---	---	---	---	---	---	---	---	---
	2013	---	---	---	---	---	---	---	---	---	---
	2012	---	---	---	---	---	---	---	---	---	---
	2011	---	---	---	---	---	---	---	---	---	---
Ho 09-840	2015	1.66	99	0.72	1.13	17.93	15.39	85.81	287.4	287.4	0.0

Maturity studies on first-stubble cane grown on mixed land at the Ardoyne Farm, USDA-ARS, Sugarcane Research Unit, Houma, LA, December 7, 2015¹.

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/cm3)	Bx. (%)	Su. (%)	Pu. (%)	TRS (lb.)	TRS (lb.)	(lb.)
	2014	---	---	---	---	---	---	---	---	---	---
	2013	---	---	---	---	---	---	---	---	---	---
	2012	---	---	---	---	---	---	---	---	---	---
	2011	---	---	---	---	---	---	---	---	---	---
Averages ⁵	2015	2.19	106	0.80	1.12	18.13	15.64	86.24	295.1	291.6	3.5
	2014	1.99	101	0.80	1.10	18.00	15.40	86.00	291.1	293.6	-2.6
	2013	2.20	107	0.79	1.15	17.38	14.99	86.20	291.4	282.4	9.0
	2012	2.50	116	0.84	1.58	18.85	16.37	86.80	311.4	304.0	7.4
	2011	2.30	102	0.85	1.11	18.72	16.08	85.87	303.5	299.7	3.8

¹ Data for each parameter represents the average of four replications of 10 stalks each.

² Stalk diameter and density will be taken on the 1st, 4th and the 8th maturity study sampling dates.

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

⁴ Previous scheduled sample date was November 23, 2015 .

⁵ Averages are based on all varieties in the first-stubble maturity study.