



December 3, 2015

Results of the 6th sampling of the first-stubble Maturity Test harvested on November 9, 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-year 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.** Included in both test are 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.

Since the last sampling, the farm has received 6.25 inches of rainfall.

Over the 2-week sampling period, the crop increased in weight by 0.03 lbs. and grew an average of 4.00 inches. The average stalk weight (2.11 lbs.) is 0.24 lbs. better than last year but 0.03 lbs. less than the 4-year average. Overall, L 99-226 (2.86 lbs.) and Ho 07-613 (2.31 lbs.) have the heaviest stalks; Ho 09-840 (1.59 lbs.) and HoCP 09-804 (1.71 lbs.) have the lightest stalks. The longest stalks were produced by L 99-226 (113 inches) and L 01-299 (108 inches); the shortest stalks were produced by HoCP 00-950 (96 in.) and Ho 09-840 (98 in.).

Brix and sucrose are similar to those attained last year but purities are higher than last year and the 4-year average; this has been the case for most of the year. Theoretical recoverable sugar (TRS) levels are equal to last year and the 4-year average. The average increase in TRS during the 2-week period was 21.0 lbs. or 1.50 lbs./day.

For the varieties, HoCP 00-950 (308 lbs./TC) and Ho 07-613 (293 lbs./TC) have the highest TRS levels. The lowest TRS levels were produced by L 01-299 (263 lbs./ton) and HoCP 96-540 (269 lbs./ton). The varieties with the largest increase in TRS during the sampling period were L 99-226 (43.4 lbs.) and Ho 09-840 (24.0 lbs.). The smallest increases in TRS were produced by HoCP 09-804 (15.1 lbs./ton) and Ho 07-613 (11.3 lbs./ton).

The seventh sampling for the 1st stubble and 3rd sampling of the plant cane maturity test are scheduled for November 23rd.

Maturity studies on first-stubble cane grown on mixed land at the Ardoyne Farm, USDA-ARS, Sugarcane Research Unit, Houma, LA, November 9, 2015¹.

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.			
		(lb.)	(in.)	(in.)	(g/cm ³)	(%)	(%)	(%)	(lb.)	(lb.)	
HoCP 96-540	2015	2.05	103	---	---	17.15	14.39	83.83	268.7	249.5	19.2
	2014	1.68	92	---	---	17.29	14.48	83.75	270.3	237.9	32.4
	2013	1.84	103	---	---	16.56	13.42	81.02	246.4	218.7	27.7
	2012	2.58	111	---	---	17.60	14.61	83.03	271.6	255.5	16.1
	2011	2.41	99	---	---	18.33	15.45	84.29	289.1	258.1	31.0
L 99-226	2015	2.86	113	---	---	17.95	15.34	85.48	289.0	245.6	43.4
	2014	2.24	104	---	---	17.44	14.65	83.95	273.6	236.6	37.0
	2013	2.64	110	---	---	17.49	14.68	83.95	274.3	228.4	45.9
	2012	3.06	123	---	---	18.11	15.34	84.74	287.8	265.3	22.5
	2011	2.90	106	---	---	18.70	16.11	86.14	304.5	265.8	38.7
HoCP 00-950	2015	2.21	96	---	---	18.84	16.18	85.90	308.4	289.0	19.4
	2014	1.69	87	---	---	18.90	16.32	86.30	311.6	298.1	13.5
	2013	1.92	99	---	---	18.13	15.59	85.97	297.3	269.2	28.1
	2012	2.21	106	---	---	18.26	15.63	85.55	297.4	290.4	7.0
	2011	2.12	91	---	---	19.28	16.67	86.47	318.7	308.8	9.9
L 01-283	2015	2.02	103	---	---	17.82	15.27	85.68	290.7	270.9	19.9
	2014	1.85	104	---	---	18.42	15.78	85.67	300.4	297.7	2.7
	2013	1.72	103	---	---	17.62	14.96	84.89	283.7	256.9	26.8
	2012	2.00	107	---	---	18.90	16.23	85.87	309.4	287.4	22.0
	2011	2.24	100	---	---	18.93	16.22	85.71	308.9	298.8	10.1
L 01-299	2015	2.13	108	---	---	16.93	14.20	83.87	262.7	245.9	16.8
	2014	1.93	112	---	---	17.04	14.19	83.23	261.3	250.3	11.0
	2013	1.66	112	---	---	16.22	13.23	81.54	241.5	206.1	35.4
	2012	2.06	114	---	---	17.77	15.03	84.58	279.1	256.1	23.0
	2011	---	---	---	---	---	---	---	---	---	---
HoCP 04-838	2015	2.15	100	---	---	17.18	14.66	85.32	270.4	250.6	19.8
	2014	1.75	91	---	---	17.60	14.98	85.11	276.1	266.7	9.4
	2013	1.93	105	---	---	17.38	14.98	86.22	277.8	248.9	28.9
	2012	2.06	106	---	---	18.02	15.60	86.56	289.7	275.6	14.1
	2011	2.21	99	---	---	18.33	15.83	86.39	293.8	279.0	14.8
Ho 07-613	2015	2.31	104	---	---	17.84	15.35	86.04	292.8	281.5	11.3
	2014	1.98	98	---	---	17.42	14.96	85.86	285.1	266.2	18.9
	2013	2.10	106	---	---	17.71	15.31	86.44	292.6	269.9	22.7
	2012	---	---	---	---	---	---	---	---	---	---
	2011	---	---	---	---	---	---	---	---	---	---
HoCP 09-804	2015	1.71	104	---	---	17.97	15.50	86.25	290.3	275.3	15.1
	2014	---	---	---	---	---	---	---	---	---	---
	2013	---	---	---	---	---	---	---	---	---	---
	2012	---	---	---	---	---	---	---	---	---	---
	2011	---	---	---	---	---	---	---	---	---	---
Ho 09-840	2015	1.59	98	---	---	17.35	14.73	84.88	273.9	249.8	24.0

Maturity studies on first-stubble cane grown on mixed land at the Ardoyne Farm, USDA-ARS, Sugarcane Research Unit, Houma, LA, November 9, 2015¹.

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.			
		(lb.)	(in.)	(in.)	(g/cm ³)	(%)	(%)	(%)	(lb.)	(lb.)	
	2014	---	---	---	---	---	---	---	---	---	---
	2013	---	---	---	---	---	---	---	---	---	---
	2012	---	---	---	---	---	---	---	---	---	---
	2011	---	---	---	---	---	---	---	---	---	---
Averages ⁵	2015	2.11	103	---	---	17.67	15.07	85.25	283.0	262.0	21.0
	2014	1.87	98	---	---	17.73	15.05	84.84	282.6	264.8	17.8
	2013	2.00	105	---	---	17.22	14.50	84.09	271.2	240.0	31.2
	2012	2.40	113	---	---	18.06	15.33	84.85	288.8	272.2	16.6
	2011	2.30	100	---	---	18.35	15.52	84.56	291.3	278.1	13.2

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 October 26, 2015 .

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