



December 20, 2018

Results of the 8th and final sampling of the first-stubble Maturity Test harvested on November 30, 2018 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 (2014 – 2018); 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 the test are six commercial varieties: HoCP 96-540, L 01-283, L 01-299, HoCP 04-838, HoCP 09-804, L 11-183 and three experimental varieties L 12-201, Ho 12-615 and Ho 12-630.

Since the last sampling Ardoyne Farm has received 1.32 in. of rain. All of the varieties sampled have some degree of lodging at this point.

Over the 2-week sampling period the crop showed no increase in weight and a slight decrease in height, however by the 8th sample date most differences in these measurements are associated with sample variability as opposed to actual increases and decreases. Overall, this year's crop is heavier (0.51 lbs.) and taller (7 in.) than last year, and heavier (0.61 lbs.) and taller (9 in.) than the 4-year average.

Of the varieties, L 12-201 (3.28 lbs.) and Ho 12-630 (3.04 lbs.) had the heaviest stalks; the lightest stalks were produced by HoCP 09-804 (1.89 lbs.) and Ho 12-615 (2.27 lbs.). The longest stalks were produced by L 01-299 (122 in.) and Ho 12-630 (119 in.). The shortest stalks were produced by HoCP 96-540, HoCP 09-804 and L 11-183 which were 107 in. each.

Brix, sucrose, and purities remain less than both last year and the 4-year average for this sampling date. Theoretical recoverable sugar (TRS) levels are 18.2 lbs. /ton of cane (TC) less than last year and 13.8 lbs. /TC less than the 4-year average. The average increase in TRS was 5.5 lbs. better than the 4-year average and last year.

With all the varieties at or near full maturity, the difference in TRS between the varieties is only 22 lbs. All the varieties have TRS levels above 280 lbs. except HoCP 96-540 and L 01-299. The varieties with the highest TRS were HoCP 09-804 (298 lbs. /TC) and L 01-283 (294 lbs. /TC); the lowest TRS levels were produced by HoCP 96-540 (276 lbs. /TC) and L 01-299 (278 lbs. /TC).

As mentioned above this is the final sampling of the maturity test for 2018.

Have a Merry Christmas and Happy New Year!!

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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, Nov.30,2018¹.

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. (%)	TRS (lb.)	TRS (lb.)	(lb.)
HoCP 96-540	2018	2.64	107	---	---	17.66	14.80	83.78	276.28	268.90	7.4
	2017	2.17	102	---	---	18.28	15.91	87.04	302.16	288.60	13.6
	2016	2.19	102	---	---	18.77	16.34	87.06	310.29	306.50	3.8
	2015	2.52	111	0.85	1.12	17.86	15.15	84.83	284.46	282.90	1.6
	2014	1.71	95	0.75	1.13	17.42	14.75	84.64	276.49	279.70	-3.2
L 01-283	2018	2.35	108	---	---	18.02	15.44	85.70	293.99	288.80	5.2
	2017	2.00	107	---	---	18.90	16.44	86.99	315.14	318.50	-3.4
	2016	1.79	104	---	---	19.24	16.78	87.22	321.93	320.40	1.5
	2015	2.06	107	0.77	1.16	18.37	15.85	86.28	302.67	294.90	7.8
	2014	1.75	103	0.73	1.12	18.62	16.17	86.85	309.65	311.20	-1.6
L 01-299	2018	2.35	122	---	---	17.40	14.87	85.44	277.30	271.70	5.6
	2017	2.17	112	---	---	18.48	16.15	87.36	304.13	299.60	4.5
	2016	1.82	101	---	---	19.21	16.79	87.41	316.34	309.30	7.0
	2015	2.19	110	0.79	1.13	17.69	15.19	85.89	283.97	280.30	3.7
	2014	1.78	110	0.71	1.12	17.20	14.62	85.02	272.09	276.80	-4.7
HoCP 04-838	2018	2.70	111	---	---	17.86	15.47	86.58	287.30	282.60	4.7
	2017	2.12	102	---	---	18.15	15.85	87.30	295.40	296.80	-1.4
	2016	1.92	95	---	---	19.15	16.79	87.70	313.69	316.30	-2.6
	2015	2.02	104	0.76	1.18	17.64	15.22	86.27	282.22	272.50	9.7
	2014	1.72	94	0.77	1.10	18.04	15.59	86.40	289.23	284.80	4.4
HoCP 09-804	2018	1.89	107	---	---	18.46	16.03	86.81	298.09	291.80	6.3
	2017	1.80	107	---	---	18.75	16.40	87.46	305.89	309.60	-3.7
	2016	1.66	102	---	---	19.01	16.61	87.35	312.79	311.50	1.3
	2015	1.89	108	0.73	1.16	18.55	16.10	86.78	302.21	304.50	-2.3
	2014	---	---	---	---	---	---	---	---	---	---
L 11-183	2018	2.57	107	---	---	17.95	15.40	85.78	284.81	272.40	12.4
	2017	2.07	99	---	---	18.31	15.90	86.87	298.77	297.40	1.4
	2016	---	---	---	---	---	---	---	---	---	---
	2015	---	---	---	---	---	---	---	---	---	---
	2014	---	---	---	---	---	---	---	---	---	---
L 12-201	2018	3.28	113	---	---	17.69	14.96	84.56	280.34	270.80	9.5
	2017	---	---	---	---	---	---	---	---	---	---
	2016	---	---	---	---	---	---	---	---	---	---
	2015	---	---	---	---	---	---	---	---	---	---
	2014	---	---	---	---	---	---	---	---	---	---
Ho 12-615	2018	2.27	119	---	---	18.28	15.64	85.51	288.86	277.10	11.8
	2017	---	---	---	---	---	---	---	---	---	---
	2016	---	---	---	---	---	---	---	---	---	---
	2015	---	---	---	---	---	---	---	---	---	---
	2014	---	---	---	---	---	---	---	---	---	---
Ho 12-630	2018	3.04	115	---	---	17.93	15.07	84.02	281.47	278.00	3.5
	2017	---	---	---	---	---	---	---	---	---	---
	2016	---	---	---	---	---	---	---	---	---	---
	2015	---	---	---	---	---	---	---	---	---	---
	2014	---	---	---	---	---	---	---	---	---	---
Averages ⁵	2018	2.57	112	---	---	17.92	15.30	85.35	285.38	278.01	7.4
	2017	2.06	105	---	---	18.48	16.11	87.17	303.58	301.75	1.8
	2016	1.88	101	---	---	19.08	16.66	87.35	315.01	312.80	2.2
	2015	2.14	108	0.78	1.15	18.02	15.50	86.01	291.11	287.02	4.1
	2014	1.74	101	0.74	1.12	17.82	15.28	85.73	286.87	288.13	-1.3

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

² Stalk diameter and density will be taken only on the 1st maturity study sampling date.

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

⁴ Previous scheduled sample date was November 19, 2018 .

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