



October 18, 2018

Results of the 4<sup>th</sup> sampling of the first-stubble Maturity Test harvested on October 05, 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 6.39 in. of rain. At the time of this sampling all the varieties in the test remain erect.

Over the 2-week sampling period the crop increased in weight by only 0.03 lbs. and grew an average of 5.0 in. The crop remains slightly taller than last year (1.8 in.) and taller than the 4-year average (3.5 in). Stalk weights are also heavier (0.23 lbs.) than last year and the 4-year average (0.34 lbs.).

L 12-201 (2.89 lbs.) and HoCP 04-838 (2.31 lbs.) had the heaviest stalks; the lightest stalks were produced by HoCP 09-804 (1.76 lbs.) and L 01-283 (1.98 lbs.). L 01-299 (106 in.) and L 12-201 (103 in.) produced the longest stalks. The shortest stalks were produced by HoCP 96-540, L 01-283 and L 11-183 which all produced average stalk lengths of 95 in.

Brix, sucrose, and purities are less than both last year and the 4-year average for this sampling date. Theoretical recoverable sugar (TRS) levels are 34.6 lbs. /ton of cane (TC) less than last year and 22.1 lbs. /TC less than the 4-year average. The average increase in TRS since the last sampling date was 12.5 lbs.; half of the 4-year average of 24.4 lbs.

L 01-283 (265 lbs. /TC) and HoCP 09-804 (256 lbs. /TC) continue to produce the highest early TRS levels. Likewise, HoCP 96-540 (212 lbs. /TC) and L 01-299 (213 lbs. /TC) continue to have the lowest TRS levels. The varieties with the largest increases in TRS during the sampling period were L 11-183 (22.0 lbs.) and HoCP 09-804 (17.6 lbs.), while L 12-201 (4.3 lbs.) and L 01-299 (4.7 lbs.) had the smallest increases.

The fifth sampling for the 1<sup>st</sup> stubble maturity test and the second sampling of the plant-cane maturity test are scheduled for October 22<sup>th</sup>.

**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](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.

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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., October 05, 2018.<sup>1</sup>

Variety	Year	Stalk <sup>2</sup>				Normal juice <sup>3</sup>			Sugar yield	Previous sample date <sup>4</sup>	TRS change from previous sample
		Wt. (lb.)	Lh. (in.)	Dia. (in.)	Density (g/cm <sup>3</sup> )	Bx. (%)	Su. (%)	Pu. (%)	TR S (lb.)	TR S (lb.)	(lb.)
HoCP 96-540	2018	2.05	95	--	--	15.01	11.74	78.21	211.80	197.91	13.9
	2017	2.16	93	0.82	1.23	16.07	13.22	82.25	244.57	218.80	25.8
	2016	1.94	99	0.77	1.17	16.00	13.07	81.76	239.50	206.40	33.1
	2015	2.26	100	0.84	1.13	15.63	12.39	79.22	225.10	199.40	25.7
	2014	1.72	86	0.79	1.12	14.83	11.55	77.89	208.00	203.50	4.5
L 01-283	2018	1.98	95	--	--	17.00	14.11	83.00	264.67	252.31	12.4
	2017	1.8	103	0.72	1.19	17.71	15.12	85.36	287.30	272.10	15.2
	2016	1.93	98	0.76	1.17	17.53	14.78	84.29	279.20	252.50	26.7
	2015	1.99	102	0.76	1.21	16.71	13.80	82.54	258.20	244.10	14.1
	2014	1.54	93	0.72	1.13	17.29	14.53	84.02	274.20	243.80	30.4
L 01-299	2018	2.27	106	--	--	14.97	11.84	79.06	212.80	208.07	4.7
	2017	1.79	102	0.69	1.29	16.42	13.67	83.25	251.96	214.00	38.0
	2016	1.87	107	0.72	1.20	16.36	13.37	81.74	244.30	204.10	40.2
	2015	2.52	103	0.86	1.17	15.76	12.61	79.95	227.90	188.30	39.6
	2014	1.51	95	0.68	1.18	15.36	12.35	80.38	223.90	208.00	15.9
HoCP 04-838	2018	2.31	98	--	--	15.23	12.53	82.28	227.46	215.66	11.8
	2017	2.06	92	0.79	1.25	16.91	14.35	84.84	264.10	254.20	9.9
	2016	1.73	89	0.76	1.20	17.22	14.67	85.17	270.40	241.00	29.4
	2015	1.84	91	0.77	1.19	16.09	13.45	83.57	245.80	213.80	32.0
	2014	1.27	82	0.74	1.13	15.38	12.58	81.75	227.60	217.20	10.4
HoCP 09-804	2018	1.76	98	--	--	16.93	14.05	82.96	255.90	238.30	17.6
	2017	1.63	96	0.71	1.16	18.02	15.52	86.15	287.74	265.70	22.0
	2016	1.48	91	0.70	1.17	17.89	15.37	85.93	287.30	265.40	21.9
	2015	1.79	95	0.73	1.24	17.29	14.54	84.13	269.30	239.10	30.2
	2014	---	---	---	---	---	---	---	---	---	---
L 11-183	2018	2.11	95	--	--	15.54	12.48	80.31	223.87	201.83	22.0
	2017	2.19	95	0.83	1.18	16.45	13.59	82.63	249.64	218.80	30.8
	2016	---	---	---	---	---	---	---	---	---	---
	2015	---	---	---	---	---	---	---	---	---	---
	2014	---	---	---	---	---	---	---	---	---	---
L 12-201	2018	2.89	103	--	--	14.92	11.77	78.89	213.37	209.05	4.3
	2017	---	---	---	---	---	---	---	---	---	---
	2016	---	---	---	---	---	---	---	---	---	---
	2015	---	---	---	---	---	---	---	---	---	---
	2014	---	---	---	---	---	---	---	---	---	---
Ho 12-615	2018	1.9	101	--	--	15.34	12.62	82.25	228.88	216.91	12.0
	2017	---	---	---	---	---	---	---	---	---	---
	2016	---	---	---	---	---	---	---	---	---	---
	2015	---	---	---	---	---	---	---	---	---	---
	2014	---	---	---	---	---	---	---	---	---	---
Ho 12-630	2018	2.24	97	--	--	15.83	12.54	79.21	227.79	213.89	13.9
	2017	---	---	---	---	---	---	---	---	---	---
	2016	---	---	---	---	---	---	---	---	---	---
	2015	---	---	---	---	---	---	---	---	---	---
	2014	---	---	---	---	---	---	---	---	---	---
Averages <sup>5</sup>	2018	2.17	99	--	--	15.64	12.63	80.69	229.62	217.10	12.5
	2017	1.94	97	0.76	1.22	16.93	14.25	84.08	264.22	240.60	23.6
	2016	1.79	97	0.74	1.18	17.00	14.25	83.78	264.14	233.88	30.3
	2015	2.08	98	0.79	1.19	16.30	13.36	81.88	245.26	216.94	28.3
	2014	1.51	89	0.73	1.14	15.72	12.75	81.01	233.43	218.13	15.3

<sup>1</sup> Data for each parameter represents the average of four replications of 10 stalks each.

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

<sup>3</sup> Brix factor = .8854; Sucrose factor = .8105.

<sup>4</sup> Previous scheduled sample date was September 24, 2018.

<sup>5</sup> Averages are based on all varieties in the first-stubble maturity study.