



November 8, 2018

Results of the 6th sampling of the first-stubble Maturity Test harvested on November 5, 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 5.09 in. of rain. At the time of this sampling most of the varieties are still semi-erect.

Over the 2-week sampling period the crop increased in weight by only 0.06 lbs. and grew just 1 in., an indication that this crop may finally be slowing down. Overall, this year's crop is heavier (0.48 lbs.) and taller (9 in.) than last year, and heavier (0.65 lbs.) and taller (10 in.) than the 4-year average.

Of the varieties, L 12-201 (3.31 lbs.) and Ho 12-630 (2.86 lbs.) had the heaviest stalks; the lightest stalks were produced by Ho 12-615 (2.03 lbs.) and HoCP 09-804 (2.08 lbs.). The longest stalks were produced by L 01-299 (125 in.) and L 12-201 (114 in.). The shortest stalks were produced by HoCP 04-838 and L 11-183 which were 108 in. each.

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 12.2 lbs. /ton of cane (TC) less than last year and 19.8 lbs. /TC less than the 4-year average. After a minuscule increase in TRS on the previous sample date, there was a 32.8 lbs. increase for the date. That's 19.2 lbs. better than the 4-year average and 25.8 lbs. more than last year.

The highest TRS levels continue to be produced by the early maturing varieties, HoCP 09-804 (283 lbs. /TC) and L 01-283 (280 lbs. /TC). The lowest TRS levels were produced by L 01-299 (236 lbs. /TC) and L 12-201 (248 lbs. /TC). The varieties with the largest increases in TRS during the sampling period were Ho 12-615 (44.3 lbs.) and HoCP 96-540 (41.9 lbs.), while L 01-283 (15.6 lbs.) and L 01-299 (23.0 lbs.) had the smallest increases.

The seventh sampling for the 1st stubble maturity test and the third and final sampling of the plant-cane maturity test are scheduled for November 19th.

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.

Maturity studies on first-stubble cane grown on mixed land at the Ardoyne Farm, USDA-ARS, Sugarcane Research Unit, Houma, LA, November 5, 2018. ¹

Variety	Year	Stalk ²				Normal juice ³			Sugar yield TRS (lb.)	Previous sample date ⁴ TRS (lb.)	TRS change from previous sample (lb.)
		Wt. (lb.)	Lh. (in.)	Dia. (in.)	Density (g/cm ³)	Bx. (%)	Su. (%)	Pu. (%)			
HoCP 96-540	2018	2.71	110	---	---	16.71	13.73	82.12	253.73	211.80	41.9
	2017	2.45	107	---	---	16.80	14.06	83.64	262.15	257.60	4.5
	2016	2.07	106	---	---	17.93	15.17	84.63	284.53	265.40	19.1
	2015	2.05	103	---	---	17.15	14.39	83.83	268.70	249.46	19.2
	2014	1.68	92	---	---	17.29	14.48	83.75	270.33	237.90	32.4
L 01-283	2018	2.42	110	---	---	17.53	14.82	84.51	280.30	264.67	15.6
	2017	1.75	103	---	---	18.13	15.59	86.01	297.40	298.50	-1.1
	2016	1.62	98	---	---	19.19	16.63	86.63	318.06	297.78	20.3
	2015	2.02	103	---	---	17.82	15.27	85.68	290.73	270.86	19.9
	2014	1.85	104	---	---	18.42	15.78	85.67	300.38	297.70	2.7
L 01-299	2018	2.49	125	---	---	15.85	12.92	81.53	235.76	212.80	23.0
	2017	2.12	109	---	---	16.96	14.41	84.99	268.05	262.10	5.9
	2016	2.00	113	---	---	18.28	15.55	85.03	289.36	266.70	22.7
	2015	2.13	108	---	---	16.93	14.20	83.87	262.68	245.88	16.8
	2014	1.93	112	---	---	17.04	14.19	83.23	261.30	250.30	11.0
HoCP 04-838	2018	2.68	108	---	---	16.93	14.36	84.76	264.16	227.46	36.7
	2017	2.22	102	---	---	17.07	14.58	85.43	269.16	273.30	-4.1
	2016	1.78	94	---	---	18.73	16.25	86.75	302.06	294.80	7.3
	2015	2.15	100	---	---	17.18	14.66	85.32	270.41	250.58	19.8
	2014	1.75	91	---	---	17.60	14.98	85.11	276.07	266.70	9.4
HoCP 09-804	2018	2.08	110	---	---	17.80	15.30	85.96	283.32	255.90	27.4
	2017	1.83	101	---	---	18.37	15.95	86.84	296.81	288.90	7.9
	2016	1.45	95	---	---	18.86	16.45	87.23	309.62	301.40	8.2
	2015	1.71	104	---	---	17.97	15.50	86.25	290.33	275.26	15.1
	2014	---	---	---	---	---	---	---	---	---	---
L 11-183	2018	2.55	108	---	---	17.02	14.30	83.98	262.06	223.87	38.2
	2017	2.10	102	---	---	17.15	14.51	84.61	269.45	257.00	12.5
	2016	---	---	---	---	---	---	---	---	---	---
	2015	---	---	---	---	---	---	---	---	---	---
	2014	---	---	---	---	---	---	---	---	---	---
L 12-201	2018	3.31	114	---	---	16.47	13.45	81.65	247.99	213.37	34.6
	2017	2.10	102	---	---	17.15	14.51	84.61	269.45	257.00	12.5
	2016	---	---	---	---	---	---	---	---	---	---
	2015	---	---	---	---	---	---	---	---	---	---
	2014	---	---	---	---	---	---	---	---	---	---
Ho 12-615	2018	2.03	111	---	---	17.58	14.86	84.54	273.13	228.88	44.3
	2017	2.10	102	---	---	17.15	14.51	84.61	269.45	257.00	12.5
	2016	---	---	---	---	---	---	---	---	---	---
	2015	---	---	---	---	---	---	---	---	---	---
	2014	---	---	---	---	---	---	---	---	---	---
Ho 12-630	2018	2.86	111	---	---	17.44	14.10	82.42	261.26	227.80	33.5
	2017	2.10	102	---	---	17.15	14.51	84.61	269.45	257.00	12.5
	2016	---	---	---	---	---	---	---	---	---	---
	2015	---	---	---	---	---	---	---	---	---	---
	2014	---	---	---	---	---	---	---	---	---	---
Averages ⁵	2018	2.57	112	---	---	17.04	14.20	83.50	262.41	229.62	32.8
	2017	2.09	103	---	---	17.33	14.74	85.04	274.60	267.60	7.0
	2016	1.78	101	---	---	18.60	16.01	86.05	300.73	285.22	15.5
	2015	2.01	104	---	---	17.41	14.80	84.99	276.57	258.41	18.2
	2014	1.80	100	---	---	17.59	14.86	84.44	277.02	263.15	13.9

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 22, 2018 .

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