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Results of the 2nd sampling of the first-stubble Maturity Test harvested on September 10, 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 3.12 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 0.14 lbs. and grew an average of 8.4 in. The crop is currently 3 in. taller last year and 5 in. taller than the 4-year average. Stalk weights are heavier than last year (0.20 lbs.) and the 4-year average (0.36 lbs.).

L 12-201 (2.58 lbs.), HoCP 96-540 (2.11 lbs.) and Ho 12-630 (2.11 lbs.) had the heaviest stalks; the lightest stalks were produced by HoCP 09-804 (1.54 lbs.). The longest stalks were produced by L 01-299 (91 in.) and candidate variety Ho 12-615 (91 in.); HoCP 04-838 (85 in.) produced the shortest stalks.

Brix, sucrose, and purities are less than last year but equal to the 4-year average for this sampling date. Theoretical recoverable sugar (TRS) levels are 23.1 lbs./ton of cane (TC) less than last year, but equal to the 4-year average of 199 lbs./TC. The average increase in TRS during the 2-week period was 30.8 lbs. which is about equal to the 4-year average of 33.8 lbs.

The varieties with the highest early TRS levels were L 01-283 (218 lbs./TC) and HoCP 09-804 (217 lbs./TC). HoCP 96-540 (173 lbs./TC) and L 01-299 (182 lbs./TC) had the lowest TRS levels. The varieties with the largest increases in TRS during the sampling period were HoCP 04-838 (37.6 lbs.) and L 01-283 (32.5 lbs.), while L 01-299 (26.2 lbs.) had the smallest increase followed by HoCP 96-540 (27.3 lbs.).

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The third sampling for the 1st stubble maturity test and the first sampling of the plant-cane maturity test are scheduled for September 24th.

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, September 10, 2018¹

Variety	Year								Sugar yield	sample date ⁴	TRS change from previous samples
		Wt. (lb.)	Lh. (in.)	Dia. (in.)	Density (g/cm ³)	Bx. (%)	Su. (%)	Pu. (%)	TRS (lb.)	TRS (lb.)	(lb.)
HoCP 96-540	2018	2.11	86	---	---	13.52	9.93	73.44	173.26	145.96	27.3
	2017	2.12	86	---	---	14.54	11.44	78.63	206.93	148.40	58.5
	2016	1.66	88	---	---	13.77	10.64	77.20	190.81	160.60	30.2
	2015	1.95	86	---	---	12.68	9.14	71.92	157.69	155.50	2.2
	2014	1.28	70	---	---	13.21	9.57	72.36	165.53	129.30	36.2
L 01-283	2018	1.91	88	---	---	15.25	11.95	78.37	218.11	185.60	32.5
	2017	1.56	87	---	---	16.14	13.32	82.51	249.19	192.70	56.5
	2016	1.58	87	---	---	15.05	12.05	80.00	222.04	197.30	24.7
	2015	1.79	89	---	---	14.94	11.69	78.22	212.94	187.80	25.1
	2014	1.47	82	---	---	15.12	11.88	78.57	216.97	163.00	54.0
L01-299	2018	2.03	91	---	---	13.81	10.41	75.33	182.45	156.26	26.2
	2017	1.76	92	---	---	14.61	11.57	79.20	208.10	155.10	53.0
	2016	1.7	92	---	---	13.44	10.18	75.73	178.90	143.90	35.0
	2015	1.98	88	---	---	12.82	9.24	71.93	158.00	149.50	8.5
	2014	1.45	84	---	---	13.04	9.56	73.30	164.89	132.30	32.6
HoCP 04-838	2018	1.92	85	---	---	14.06	11.23	79.92	200.95	163.35	37.6
	2017	1.93	80	---	---	15.14	12.49	82.48	226.92	169.70	57.2
	2016	1.52	77	---	---	14.08	11.43	81.10	205.98	183.00	23.0
	2015	1.78	82	---	---	13.37	10.4	77.72	183.54	158.50	25.0
	2014	1.33	69	---	---	13.41	10.4	77.47	183.18	139.70	43.5
HoCP 09-804	2018	1.54	88	---	---	15.34	12.2	79.50	217.66	186.62	31.0
	2017	1.67	84	---	---	16.07	13.37	83.15	243.75	208.10	35.7
	2016	1.21	80	---	---	15.98	13.1	81.94	239.74	202.60	37.1
	2015	1.42	80	---	---	14.76	11.3	76.51	199.53	190.80	8.7
	2014	---	---	---	---	---	---	---	---	---	---
L 11-183	2018	1.96	86	---	---	13.92	10.57	75.86	184.21	154.36	29.9
	2017	1.67	82	---	---	13.86	10.87	78.42	194.57	157.20	37.4
	2016	---	---	---	---	---	---	---	---	---	---
	2015	---	---	---	---	---	---	---	---	---	---
	2014	---	---	---	---	---	---	---	---	---	---
L 12-201	2018	2.58	88	---	---	14.59	11.22	76.88	200.71	172.27	28.4
	2017	---	---	---	---	---	---	---	---	---	---
	2016	---	---	---	---	---	---	---	---	---	---
	2015	---	---	---	---	---	---	---	---	---	---
	2014	---	---	---	---	---	---	---	---	---	---
Ho 12-615	2018	1.71	91	---	---	14.12	11.36	80.40	203.82	171.93	31.9
	2017	---	---	---	---	---	---	---	---	---	---
	2016	---	---	---	---	---	---	---	---	---	---
	2015	---	---	---	---	---	---	---	---	---	---
	2014	---	---	---	---	---	---	---	---	---	---
Ho 12-630	2018	2.11	87	---	---	14.83	11.45	77.23	205.38	173.10	32.3
	2017	---	---	---	---	---	---	---	---	---	---
	2016	---	---	---	---	---	---	---	---	---	---
	2015	---	---	---	---	---	---	---	---	---	---
	2014	---	---	---	---	---	---	---	---	---	---
Averages ⁵	2018	1.99	88	---	---	14.38	11.15	77.44	198.51	167.72	30.8
	2017	1.79	85	---	---	15.06	12.18	80.73	221.58	171.87	49.7
	2016	1.53	85	---	---	14.46	11.48	79.19	207.49	177.48	30.0
	2015	1.78	85	---	---	13.71	10.35	75.26	182.34	168.42	13.9
	2014	1.38	76	---	---	13.70	10.35	75.43	182.64	141.08	41.6

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 August 27, 2018.

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