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Results of the initial sampling of the 2014, First-Stubble, Sugarcane Maturity Test 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 (2010 – 2014); 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. The study includes eight released Louisiana varieties: HoCP 96-540, L 99-226, HoCP 00-950, L 01-283, L 01-299, HoCP 04-838 and the newly released variety Ho 07-613.

The Ardoyne Farm has received a good mix of rainfall, ample sunshine and adequate nighttime temperatures during the growing season, which has allowed the varieties in the test to put on a fair amount of growth particularly during the last 2 months. At the time of this sampling all the varieties in the test remain erect. Stalk measurements indicate that although the crop is 9.7 in. shorter than the 4-year average; it is only 5 in. shorter than last year's average for this sample period. Stalk weight (1.4 lbs.) and density (1.10 g/cm³) are equal to last year's averages, but diameter is slightly larger (0.82 vs. 0.79) yet equal to the 4-year average. Ho 07-613 (1.7 lbs.) and L 99-226 (1.6 lbs.) had the heaviest stalks; HoCP 04-838 (1.2 lbs.) had the lightest. L 01-283 (76 in.) produced the longest stalks, while HoCP 00-950 (59 in.) had the shortest. The largest diameter stalks were produced by L 99-226 (0.88 in.), L 01-299 had the smallest diameter at 0.73 in. The varieties with the greatest densities were HoCP 96-540 (1.14 g/cm³) and L 01-299 and HoCP 04-838 with 1.13 g/cm³ each.

Brix, sucrose, and purities are equal to the 4-year average for this sampling date. However, when compared to last year's data, theoretically recoverable sugar (TRS) levels for this sample date are 21.6 lbs./ton of cane (TC) better. In general, juice percentages and TRS levels from this year are similar to those obtained in 2011.

Of the recommended varieties in 2014, HoCP 00-950 (191 lbs./TC) and L 01-283 (163 lbs./TC) have the highest early TRS levels. Followed by the new variety Ho 07-613 (151 lbs./TC) and HoCP 04-838 (140 lbs./TC). HoCP 96-540 produced 129 lbs./TC which is 32.6 lbs. better than last year's initial sampling and L 01-299 produced 132 lbs./TC which is 21.5 lbs./TC better.

It should be noted that data from 2003-2013 indicate that one can expect about a 60 lb. increase in TRS levels from the last week in August through the last week in September, followed by increases of approximately 2.00 lbs./day until the end of October. However, this is average, increases have ranged from as little as 6 lbs./week to as much as 24 lbs./week depending on environmental conditions during that time span.

The second sampling for the 1st stubble maturity test is scheduled for September 8th.

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.

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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, August 25, 2014¹.

Variety	Year	Stalk ²				Normal juice ³			Sugar yield
		Wt. (lb.)	Lh. (in.)	Dia. (in.)	Density (g/cm ³)	Bx. (%)	Su. (%)	Pu. (%)	TRS (lbs/ton)
Averages ⁵	2014 (08)	1.4	68	0.82	1.10	12.4	8.7	69.8	147.1
	2013 (08/26)	1.4	73	0.79	1.10	11.4	7.6	66.6	125.5
	2012 (08/27) ⁵	---	---	---	---	---	---	---	---
	2011 (08/29)	1.9	82	0.89	1.01	12.4	8.7	70.0	147.9
	2010 (08/30)	1.6	78	0.78	1.23	13.3	9.7	72.7	168.8

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 = 0.8854; Sucrose factor = 0.8105.

⁴ No data taken during this year due to hurricane Isaac.

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