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Results of the fourth sampling (October 6, 2014) of the 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 five-year 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.

Since the last sampling the farm has received 0.68 in. of rain and at the time of this sampling most varieties in the test remain erect; however, both L 99-226 and Ho 07-613 were shaken up by the recent thunderstorms

Since the last sample date, the crop increased in weight by 0.13 lbs. and grew an average of 7.00 in. When compared to the four-year average, stalks weights are 0.45 lbs. less, but only slightly smaller in diameter and equal in density. Of the varieties, both Ho 07-613 (2.23 lbs.) and L 99-226 (2.20 lbs.) had the heaviest stalks, while HoCP 04-838 (1.27 lbs.) had the lightest stalks. Ho 07-613 (100 in.) and L 99-226 (97 in.) produced the longest stalks. HoCP 00-950 (81 in.) and HoCP 04-838 (82 in.) produced the shortest stalks.

Brix, sucrose, and purities have dropped below the four-year average for this sampling date. Theoretically recoverable sugar (TRS) levels are now 15.6 lbs./ton of cane (TC) less than the four-year average. The average increase in TRS during the two-week period was only 14.8 lbs. or 1.05 lbs./day. This is almost half the average over the last 10 years of 1.91 lbs./day.

Of the recommended varieties in 2014, HoCP 00-950 (276 lbs./TC) and L 01-283 (274 lbs./TC) continue to have the highest early TRS levels, followed by Ho 07-613 (233 lbs./TC). L 99-226 (206 lbs./TC) and HoCP 96-540 (208 lbs./TC) had the lowest TRS levels. The varieties with the largest increase in TRS during the sampling period were L 01-283 (30.4 lbs.) and Ho 07-613 (20.8 lbs.). The smallest increase in TRS occurred in HoCP 96-540 (4.4 lbs.).

The fifth sampling for the first stubble maturity test and the second sampling of the plant-cane maturity test are scheduled for October 20th.

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, October 06, 2014¹.

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/cm3)	Bx. (%)	Su. (%)	Pu. (%)			
Averages ⁶	2014	1.75	91	0.78	1.11	15.75	12.79	81.03	235.3	220.5	14.8
	2013 ⁵	---	---	---	---	---	---	---	---	---	---
	2012	2.30	106	0.86	1.06	16.48	13.49	81.82	250.1	220.1	30.0
	2011	2.20	98	0.86	1.05	16.74	13.73	81.97	254.0	219.6	34.4
	2010	2.10	103	0.80	1.20	16.70	13.60	81.20	248.8	218.9	29.9

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 September 22, 2014 .

⁵ No data taken during this year due to Federal Furlough.