



October 20, 2015

Results of the 4th sampling of the first-stubble Maturity Test harvested on October 13, 2015 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 (2011 – 2015); 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 both tests are seven commercially released Louisiana varieties: HoCP 96-540, L 99-226, HoCP 00-950, L 01-283, L 01-299, HoCP 04-838 and Ho 07-613, along with two experimental varieties, HoCP 09-804 and Ho 09-840.

Since the last sampling, the farm has received no measurable rainfall.

Over the two-week sampling period, the crop increased in weight by 0.19 lbs. and grew an average of 8.00 in. The average stalk weight (2.16 lbs.) is 0.46 lbs. better than last year and 0.09 lbs. better than the four-year average. Of the varieties, L 99-226 (2.86 lbs.) and L 01-299 (2.52 lbs.) have the heaviest stalks; Ho 09-840 (1.62 lbs.) and HoCP 09-804 (1.79 lbs.) continue to have the lightest stalks. The longest stalks were produced by L 99-226 (109 in.) and L 01-299 (103 in.); the shortest stalks were produced by HoCP 00-950 (91 in.), HoCP 04-838 (91 in.) and Ho 09-840 (89 in.).

Brix, sucrose, and purities are better than last year for this sampling date and better than the four-year average. Theoretical recoverable sugar (TRS) levels are 16 lbs./ton of cane (TC) better than last year but only 5 lbs./ton better than the four-year average. The average increase in TRS during the two-week period was 25.9 lbs. or 1.85 lbs./day. For this sample date, normal juice numbers and TRS are comparable to 2011 and 2012.

Overall, HoCP 00-950 (292 lbs./TC) and HoCP 09-804 (269 lbs./TC) have the highest TRS levels; HoCP 96-540 (225 lbs./ton) and L 01-299 (228 lbs./ton) had the lowest TRS levels. The varieties with the largest increase in TRS during the sampling period were L 01-299 (39.6 lbs.) and Ho 09-840 (33.8 lbs.). The smallest increase in TRS was produced by L 01-283 (14.1 lbs./ton) and L 99-226 (1.5 lbs./ton).

The fifth sampling for the 1st stubble and 2nd sampling of the plant cane maturity test are scheduled for October 26th.

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) to insure 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 13, 2015¹.

Variety	Year	Stalk ²				Normal juice ³			Sugar yield	Previous sample date ⁴	TRS change from previous sample
		Wt. (lb.)	Lh. (in.)	Dia. (in.)	Density (g/cm3)	Bx. (%)	Su. (%)	Pu. (%)	TRS (lb.)	TRS (lb.)	(lb.)
HoCP09-804	2015	1.79	95	0.73	1.24	17.29	14.54	84.13	269.3	239.1	30.2
	2014	---	---	---	---	---	---	---	---	---	---
	2013	---	---	---	---	---	---	---	---	---	---
	2012	---	---	---	---	---	---	---	---	---	---
	2011	---	---	---	---	---	---	---	---	---	---
Ho 09-840	2015	1.62	89	0.75	1.14	16.36	13.52	82.63	248.3	214.5	33.8
	2014	---	---	---	---	---	---	---	---	---	---
	2013	---	---	---	---	---	---	---	---	---	---
	2012	---	---	---	---	---	---	---	---	---	---
	2011	---	---	---	---	---	---	---	---	---	---
Averages ⁶	2015	2.16	98	0.82	1.16	16.49	13.71	82.31	251.2	225.2	25.9
	2014	1.70	91	0.80	1.10	15.80	12.80	81.00	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

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 28, 2015 .

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

⁶ Averages are based on all varieties in the first-stubble maturity study.