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Results of the November 5, 2012 sampling of the First-Stubble (sixth sampling), 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 (2008 – 2012); consequently, a glyphosate-containing ripener is not applied. Samples consist of 15 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, L 99-233, HoCP 00-950, L 01-283, L 01-299, L 03-371 and HoCP 04-838. Harvestable sugarcane stalks in all plots were counted in early July. Stalk counts, stalk weights, and TRS levels are used to provide an estimation of cane (tons/A) and sugar (lbs/A) yields. Since the last sample date Ardoyne Farm has received 0.21 in. of rainfall.

During the 2-week interval, the core varieties (HoCP 96-540, L 99-226, L 99-233, HoCP 00-950, L 01-283 and L 03-371) grew an average of 4.0 in. with no increase in stalk weight. Sugarcane stalks of the core varieties weigh only 0.2 lbs more than average, but are 9 in. longer for this sampling date when compared to the previous four years,. L 99-226 and HoCP 96-540 continue to have the heaviest stalks (3.1 lbs and 2.6 lbs, respectively), with no variety producing stalks less than 2.0 lbs. L 99-226 and L 99-233 produced the longest stalks at 123 in. each, while L 03-371 (105 in.), HoCP 00-950 (106 in.) and HoCP 04-838 (105 in.) had the shortest stalks.

Brix and sucrose levels continue to be lower than those attained in 2011, while purities remain higher. However; for this sample date, brix, sucrose and purity levels continue to exceed the 4-year average. TRS levels for the core varieties increased by 16.6 lbs/tons of cane (TC) since the last sampling. The 289 lbs/TC produced are only 2.5 lbs/TC less than last year, but 15.5 lbs/TC better than the 4-yr average. Of the varieties with major plantings for harvest in 2012, L 01-283 (309 lbs/TC) and L 03-371 (303 lbs/TC) have the highest TRS levels, while L 99-233 (264 lbs/TC) and HoCP 96-540 (272 lbs/TC) produced the lowest. L 01-299 and L 99-226 had the largest increases in TRS levels both increasing by 23 lbs/TC over the 2-week sampling interval.

Estimated yields of cane and sugar per acre for the major varieties are now slightly better than last year for this sampling date. The average cane yield of the core varieties was 52.7 tons/A which is only 0.6 tons/A less than last year, but 6.3 tons/A higher than the 4-yr average. The sugar yield of the core varieties was 45 lbs/A less than those recorded in 2011 yet 2528 lbs/A better than the 4-yr average. The highest cane yields were produced by L 99-233 (57.1 tons/A) and L 03-371 (54.6 tons/A), the lowest cane yields were produced by HoCP 04-838 (48.1 tons/A) and L 01-283 (46.5 tons/A). L 03-371 had the highest sugar yields producing 16522 lbs/A followed by HoCP 00-950 which produced 15548 lbs/A. The lowest sugar yields were produced by L01-283 (14371 lbs/A) and HoCP 04-838 (13934 lbs/A).



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The seventh sampling for the maturity test is 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. Ashley DeHart by email (Ashley.DeHart@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, 2012¹.

| Variety | Year | Stalk ² | | | | Normal juice ³ | | | Sugar yield | Previous sample date ⁴ | TRS change from previous sample | Estimated yield ⁶ | |
|-----------------------|------|--------------------|-------|-------|---------|---------------------------|-------|-------|-------------|-----------------------------------|---------------------------------|------------------------------|---------|
| | | Wt. | Lh. | Dia. | Density | Bx. | Su. | Pu. | | | | TRs | TRs |
| | | (lb.) | (in.) | (in.) | (g/cm3) | (%) | (%) | (%) | (lb.) | (lb.) | (lb.) | (tons/A) | (lbs/A) |
| Averages ⁵ | 2012 | 2.4 | 113 | --- | --- | 18.06 | 15.33 | 84.85 | 288.8 | 272.2 | 16.6 | 52.7 | 15185 |
| | 2011 | 2.3 | 100 | --- | --- | 18.35 | 15.52 | 84.56 | 291.3 | 278.1 | 13.2 | 52.5 | 15313 |
| | 2010 | 2.2 | 106 | --- | --- | 17.98 | 15.19 | 84.44 | 283.6 | 270.7 | 12.9 | 40.4 | 11414 |
| | 2009 | 2.4 | 112 | --- | --- | 16.31 | 13.57 | 83.15 | 250.5 | 243.6 | 6.9 | 52.3 | 13092 |
| | 2008 | 2.0 | 98 | --- | --- | 17.54 | 14.56 | 82.98 | 267.8 | 242.9 | 24.9 | 40.4 | 10809 |

¹ Data for each parameter represents the average of four replications of 15 stalks each.

² Stalk diameter and density based on a subsample consisting of 8 randomly selected stalks from the 15-stalksample of each rep, 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, 2012.

⁵ Averages are based only on varieties included in previous year's first-stubble maturity study (HoCP 96-540, L99-226, L99-233, HoCP 00-950, L01-283 and L03-371).

⁶ Estimated cane yield is the product of stalk weight and millable stalk counts, estimated sugar yield is the product of TRS and estimated cane yield.