United States Department of Agriculture

Research, Education, and Economics
Agricultural Research Service

September 23, 2019

Results of the 2nd sampling of the first-stubble Maturity Test harvested on September 9, 2019 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 (2015 – 2019); 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 seven commercial varieties: HoCP 96-540, L 01-283, L 01-299, HoCP 04-838, HoCP 09-804, L 11-183, L 12-201 and Ho 12-615 along with one experimental variety Ho 13-739.

Since the last sampling Ardoyne Farm has received 2.28 in. of rain. At the time of this sampling all the varieties in the test were erect.

Over the 2-week sampling period the crop increased in weight by only 0.06 lbs. and grew an average of 5.78 in. The crop is currently 16.7 in. shorter last year and 14.6 in. shorter than the 4-year average. Stalks weigh less the last year (-0.48 lbs.) and less than the 4-year average (-0.27 lbs.).

L 12-201 (1.74 lbs.) and HoCP 96-540 (1.62 lbs.) had the heaviest stalks; the lightest stalks were produced by HoCP 09-804 (1.25 lbs.) and Ho 12-615 (1.33 lbs.). The longest stalks were produced by L 01-299 (76 in.) and Ho 12-615 (74 in.). The shortest stalks were produced by HoCP 04-838 (66 in.) and candidate variety Ho 13-739 (68 in.).

Brix, sucrose, and purities are better than last year and the 4-year average for this sampling date. Theoretical recoverable sugar (TRS) levels are 26.8 lbs./ton of cane (TC) more than last year and 22.2 lbs./TC better than the 4-year average. The average increase in TRS during the 2-week period was 32 lbs. which is about equal to the 4-year average of 31 lbs.

The varieties with the highest early TRS levels were Ho 13-739 (282 lbs./TC) and L 01-283 (267 lbs./TC), while L 11-183 (187 lbs./TC) and HoCP 96-540 (188 lbs./TC) had the lowest TRS levels. The varieties with the largest increases in TRS during the sampling period were L 01-283 (40.2 lbs.) and L 11-183 (40.5 lbs.), while L 01-299 (21.8 lbs.) had the smallest increase followed by L 12-201 (23.2 lbs.).

The third sampling for the 1st stubble maturity test and the first sampling of the plant-cane are scheduled for September 23rd.

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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September 13, 2019

Results of the 1st sampling of the first-stubble Maturity Test harvested on August 26, 2019 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 (2015 – 2019); 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, L 12-201 and Ho 12-615 along with one experimental variety Ho 13-739.

With no freezing temperatures at Ardoyne Farm this winter and warmer temperatures in January and February the crop was off to a good start. This early season growth was subdued as cooler nighttime temperatures prevailed for most of March, April and May leaving the crop at a standstill. As the growing season progressed growth measurements taken within the maturity test indicated the plant-cane crop was average or slightly above average, while the stubble crop was much shorter than usual. The results of this sampling verify a slightly shorter than normal stubble crop, however, diameter and density are above average. A little late season growth would go a long way in improving the potential of this crop.

At the time of this sampling all the varieties in the test were erect.

Stalk weight is 0.37 lbs. less than last year but equal to the 4-year average. Stalk measurements indicate that the crop is 13.79 in. shorter than last year and 4.44 in. less than the 4-year average. However, stalk diameters are equal to last year and 0.13 in. larger than the 4-year average. Stalk densities are also equal to last year but 0.09 g/cm^3 better than last year.

At this sample date brix, sucrose and purity levels are higher than last year and the 4-year average. Theoretical recoverable sugar (TRS) levels for this sample date are 25.4 lbs./ton of cane (TC) better than last year and 41.8 lbs./TC better than the 4-year average.

Of the varieties, the experimental variety Ho 13-739 (251 lbs./TC) had the highest early TRS levels; the lowest TRS levels were produced by L 11-183 (147 lbs./TC). For the two leading varieties, L 01-299 is 24 lbs. better than last year, while HoCP 96-540 is 9 lbs. better than last year

When looking at the expected maturity curve for each variety based previous year's data; L 01-283 and HoCP 09-804 would be considered early maturing; HoCP 04-838 would be mid-maturing; HoCP 96-540, L 01-299 and L 11-183 would be late maturing. Based on the limited data we have, it seems like Ho 12-615 will be earlier maturating than previously thought, while L 12-201 would be considered mid-maturing.

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The 2nd sampling for the 1st stubble maturity test is scheduled for September 9th.

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