



September 16, 2022

Results of the 1st sampling of the first-stubble Maturity Test harvested on August 29, 2022 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 (2018 – 2022); 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 this test are eight commercial varieties: L 01-299, HoCP 09-804, L 12-201, Ho 12-615, Ho 13-739, L 14-267, HoCP 14-885 and L 15-306.

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

Stalk measurements indicate that the crop is 0.29 lbs. heavier than average and approximately 7 in. taller (measured at the last hard joint), while stalk diameters and densities are equal to the average. The heaviest stalks were produced by L 12-201 (2.43 lbs.); while HoCP 09-804 (1.44 lbs.) had the lightest stalks. L 01-299 (88 in.) had the tallest stalks; the shortest stalks were produced by Ho 13-739 (73 in.).

Theoretical recoverable sugar (TRS) levels for this sample date are 10.4 lbs./ton of cane (TC) better than the average. Of the varieties, Ho 13-739 (236 lbs./TC) had the highest TRS levels; the lowest TRS levels were produced by L 01-299 (169 lbs./TC).

When looking at the expected maturity curve for each variety based this and previous year's data; HoCP 09-804, Ho 13-739 and L 14-267 would be considered early maturing; L 12-201, HoCP 12-615 and HoCP 14-885 would be mid-maturing; L 01-299 would be late maturing. Based on the limited data, it seems likely that L 15-306 would fall into the mid-maturing category.

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

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)
L 01-299	2022	1.74	88	0.77	1.17	12.99	9.71	74.75	169.4
	2021 ⁶	---	---	---	---	---	---	---	---
	2020 ⁵	---	---	---	---	---	---	---	---
	2019 (08/26) ⁴	1.40	69	0.78	1.16	13.41	10.22	76.19	180.2
	2018 (08/27)	1.68	80	0.77	1.24	13.21	9.28	70.22	156.3
HoCP 09-804	2022	1.44	78	0.78	1.06	15.45	12.26	79.32	218.42
	2021	---	---	---	---	---	---	---	---
	2020	---	---	---	---	---	---	---	---
	2019 (08/26)	1.29	67	0.78	1.11	14.68	11.69	79.68	208.8
	2018 (08/27)	1.58	79	0.80	1.17	14.48	10.81	74.66	186.6
L 12-201	2022	2.43	83	0.97	1.09	13.97	10.57	75.65	189.17
	2021	---	---	---	---	---	---	---	---
	2020	---	---	---	---	---	---	---	---
	2019 (08/26)	1.75	66	0.95	1.05	13.15	10.05	76.43	179.3
	2018 (08/27)	2.31	81	0.99	1.04	13.77	9.96	72.33	172.3
Ho 12-615	2022	1.78	84	0.79	1.19	13.68	10.92	79.84	197.21
	2021	---	---	---	---	---	---	---	---
	2020	---	---	---	---	---	---	---	---
	2019 (08/26)	1.17	68	0.73	1.16	14.12	11.51	81.45	207.8
	2018 (08/27)	1.60	81	0.79	1.12	13.26	9.94	74.89	171.9
Ho 13-739	2022	1.99	73	0.90	1.19	15.96	12.89	80.74	236.27
	2021	---	---	---	---	---	---	---	---
	2020	---	---	---	---	---	---	---	---
	2019 (08/26)	1.63	63	0.95	1.02	16.03	13.37	83.40	251.4
	2018 (08/27)	---	---	---	---	---	---	---	---
L14-267	2022	2.08	78	0.93	1.10	14.19	11.34	79.95	209.01
	2021	---	---	---	---	---	---	---	---
	2020	---	---	---	---	---	---	---	---
	2019 (08/26)	---	---	---	---	---	---	---	---
	2018 (08/27)	---	---	---	---	---	---	---	---
HoCP 14-885	2022	2.04	81	0.91	1.06	13.08	9.90	75.66	180.62
	2021	---	---	---	---	---	---	---	---
	2020	---	---	---	---	---	---	---	---
	2019 (08/26)	---	---	---	---	---	---	---	---
	2018 (08/27)	---	---	---	---	---	---	---	---
L15-306	2022	1.82	79	0.87	1.07	14.10	10.79	76.52	192.47
	2021	---	---	---	---	---	---	---	---
	2020	---	---	---	---	---	---	---	---
	2019 (08/26)	---	---	---	---	---	---	---	---
	2018 (08/27)	---	---	---	---	---	---	---	---
Averages	2022	1.92	81	0.87	1.12	14.18	11.05	77.80	199.08
	2021	---	---	---	---	---	---	---	---
	2020	---	---	---	---	---	---	---	---
	2019 (08/26)	1.45	67	0.84	1.10	14.28	11.37	79.43	205.49
	2018 (08/27)	1.79	80	0.84	1.14	13.68	10.00	73.03	171.77
	4-yr Average	1.62	73	0.84	1.12	13.98	10.68	76.23	188.63

¹ Data for each parameter represents the average of four replications of 10 stalks each. *

² Stalk diameter and density will only be taken on the 1st maturity sampling date.

³ Brix factor = .8854; Sucrose factor = .8105.

⁴ Previous scheduled sample date was

⁵ Sample #1 2020 was not harvested due to equipment failure, remaining samples were processed using the prebreaker/press method.

⁶ Sample #1 2021 was not harvested due to Hurricane Ida.