

MAURITIUS CANE INDUSTRY AUTHORITY

MAURITIUS SUGARCANE INDUSTRY RESEARCH INSTITUTE

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9 May 2019

SUGAR CANE CROP 2019

Status: End April 2019

1. CLIMATE

1.1 Rainfall (Tables 1a, 1b, Figure 1)

The island's average rainfall for the month of April 2019 was 345 mm over the sugar cane areas representing 152% of the normal (227 mm). In all sectors, rainfall recorded exceeded the long-term mean (LTM) by 140 mm (102%) in the North, 161 mm (58%) in the East, 51 mm (18%) in the South, 51 mm (61%) in the West and 229 mm (94%) in the Centre.

The cumulative rainfall for the period October 2018 to April 2019 amounted to 1553 mm, representing 105% of the long-term mean for the island. During the same period, 1101 mm were recorded in the North, 1854 mm in the East, 1720 mm in the South, 753 mm in the West and 1904 mm in the Centre. These values represented 117%, 108%, 99%, 97% and 110% of the respective long-term means.

Table 1a. Rainfall (mm) for the month of April for crops 2018, 2019 and the long term mean (LTM)

	North	East	South	West	Centre	Island
2018	263 (192)	578 (207)	477 (171)	122 (145)	519 (213)	430 (189)
2019	277 (202)*	440 (158)	330 (118)	135 (161)	473 (194)	345 (152)
LTM	137	279	279	84	244	227

* figures in brackets are % of LTM (1981-10)

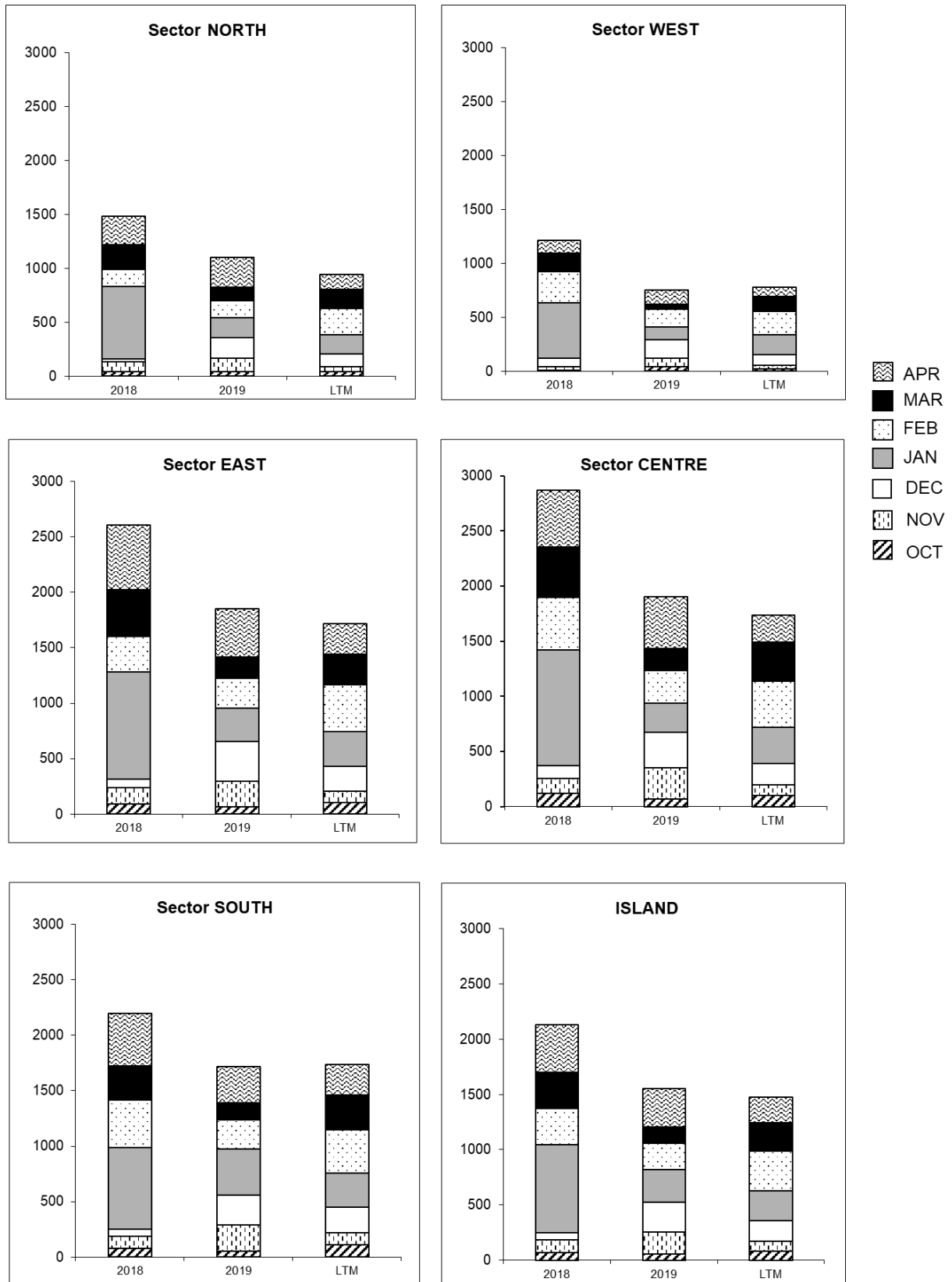
Table 1b. Cumulative rainfall (mm) from October 2018 to April 2019 for crop 2019 compared to that of crop 2018 and the long term mean (LTM)

	North	East	South	West	Centre	Island
2018	1486 (157)	2605 (152)	2201 (127)	1213 (156)	2871 (165)	2128 (145)
2019	1101 (117)*	1854 (108)	1720 (99)	753 (97)	1904 (110)	1553 (105)
LTM	944	1719	1738	779	1736	1472

* figures in brackets are % of LTM

[Source: raw provisional data from Meteorological Services]

Figure 1. Monthly rainfall (mm) for the period October 2018 to April 2019 for the 2019 crop compared to the same period of the 2018 crop and to the long-term mean (LTM).



1.2 Air Temperature (Table 2)

Data on air temperature recorded during the month of April 2019 on MSIRI agro-meteorological stations are given below.

Table 2. Maximum and minimum air temperatures recorded on MSIRI agro-meteorological stations in April 2019

Stations	Maximum (°C)		Minimum (°C)		Amplitude (°C)	
	April 2019	DevN*	April 2019	DevN*	April 2019	DevN*
Ferret	30.3	+0.6	22.8	+1.8	7.5	-1.2
Réduit	27.4	+0.6	20.9	+0.6	6.5	0.0
Belle Rive	27.4	+1.0	20.3	+1.7	7.1	-0.7
Union Park	27.5	+1.6	21.2	+1.5	6.3	+0.1

* Deviation from the Normal (1981-2010)

Mean maximum temperature during April 2018 was above normal at all stations. Similarly, mean minimum temperature, compared to the normal, was higher at all stations ranging from 0.6° at Réduit to 1.8° at Ferret. The resulting mean amplitude was comparable to the normal at Réduit and Union Park but lagged behind the normal by 1.2° at Ferret and 0.7° at Belle Rive. Above normal maximum temperature favours sucrose production through photosynthesis whilst lower temperature amplitudes are not conducive to sucrose accumulation.

1.3 Sunshine (Table 3)

Data from the MSIRI agro-meteorological stations showed that sunshine hours during April 2019 were below normal at all four stations. Recorded bright sunshine as a percentage of the normal amounted to 91 at Ferret, 92 at Réduit, 90 at Belle Rive and 98 at Union Park.

Table 3. Sunshine duration (h) recorded on MSIRI agro-meteorological stations in April 2019

Station	April 2019	Normal	% of Normal
Ferret	212	232	91
Réduit	194	211	92
Belle Rive	173	192	90
Union Park	149	152	98

2. STALK HEIGHT

During the last week of April 2019, stalk height was assessed at 46 sites in the five sugar cane sectors of the island. These selected sites are representative of the various agro-climatic zones, varieties and crop categories. Data collected are compared with those of the corresponding period in April 2018 and to the mean of the five best cane yielding crops of the period 2009 to 2018 in each sector (referred to as normal).

2.1 Stalk elongation (Table 4a)

Stalk growth during the month of April 2019 was higher than that recorded during the corresponding period in 2018 in all sectors except in the North and West. Elongation amounted to 31.7 cm in the North, 33.6 cm in the East, 36.1 cm in the South, 33.3 cm in the West and 34.9 cm in the Centre. The elongation rates of April 2019 were close to the normal in sectors East, South and West, above normal in the Centre by 5.6 cm, but lagged behind the normal in the North by 5.0 cm. The 34.0 cm average elongation for the island slightly exceeded that recorded in April 2018 (32.8 cm) and the normal (33.1 cm).

Table 4a. Stalk elongation during the month of April.

Sectors	Stalk elongation (cm) during April			April 2019 as % of	
	2019	2018	Normal	2018	Normal
North	31.7	34.8	36.7	91.1	86.3
East	33.6	29.3	33.2	114.7	101.2
South	36.1	35.3	36.5	102.3	99.0
West	33.3	34.6	32.5	96.2	102.5
Centre	34.9	27.9	29.3	125.1	119.0
Island	34.0	32.8	33.1	103.7	102.7

2.2 Cumulative elongation (Table 4b)

Stalk growth from end-December 2018 to end-April 2019 cumulated to 174.6 cm in the North, 174.2 cm in the East, 171.4 cm in the South, 161.4 cm in the West and 135.6 cm in the Centre. These cumulative growths compared to the same period last year were higher in sectors North, East and South but lower in the West and Centre. For the same period, cumulative growth was comparable to the normal in the South, higher than normal in the North (+11.0 cm) and East (+10.9 cm), but lagged behind in the West (-6.4 cm) and Centre (-8.9 cm). Island-wise the cumulative elongation of 169.5 cm in April 2019 was higher than those of the 2018 crop (161.0 cm) by 5.3% and the normal (162.7 cm) by 4.2%.

Table 4b. Cumulative elongation at end-April 2019.

Sectors	Cumulative elongation (cm) at end- April			End-April 2019 as % of	
	2019	2018	Normal	2018	Normal
North	174.6	165.2	163.6	105.7	106.7
East	174.2	156.3	163.3	111.5	106.7
South	171.4	166.3	171.4	103.1	100.0
West	161.4	165.4	167.8	97.6	96.2
Centre	135.6	136.8	144.5	99.1	93.9
Island	169.5	161.0	162.7	105.3	104.2

2.3 Total stalk height (Table 4c and Figure 2)

Total stalk height at end April 2019 stood at 210.2 cm in the North, 214.6 cm in the East, 200.3 cm in the South, 203.5 cm in the West and 171.2 cm in the Centre giving an island average of 205.3 cm. Compared to the corresponding period in 2018, stalk height to-date was higher in the North by 26.0 cm, in the East by 4.6 cm and in the South by 11.0 cm, but lagged behind in sectors West and Centre by 3.9 cm and 9.2 cm, respectively. Total stalk height at end-April 2019 exceeded the normal by 21.9 cm in the North and 2.7 cm in the East. In the other sectors it lagged behind the normal by 15.5 cm in the South, 1.6 cm in the West and 16.8 cm in the Centre.

At island level, the total stalk height of 205.3 cm at end of April 2019 was comparable to the normal but higher than the corresponding period in 2018 by 9.4 cm (4.8 %).

Table 4c. Total stalk height at end-April.

Sectors	Stalk height (cm) at end-April			End-April 2019 as % of	
	2019	2018	Normal	2018	Normal
North	210.2	184.2	188.3	114.1	111.6
East	214.6	210.0	211.9	102.2	101.3
South	200.3	189.3	215.8	105.8	92.8
West	203.5	207.4	205.1	98.1	99.2
Centre	171.2	180.4	187.9	94.9	91.1
Island	205.3	195.9	205.8	104.8	99.7

3.0 SUCROSE ACCUMULATION (Tables 5a and 5b)

Cane samples from miller-planters' land in all factory areas and covering the main cultivated varieties were analysed for sucrose content during the last week of April 2019. The average Pol % cane (*richesse*) was calculated on the basis of area under cultivation of each variety in the different factory areas of each sector. The results were compared with those of the last two years.

Table 5a. Average Pol % cane (richesse) at end-April 2019.

Sectors	M 52/78	M 703/89	R 573	M 2256/88	R 575	M 387/85	M 1246/84	M 1989/99	M 2593/92	M 2283/98	M 1400/86	M 1176/77	M 1861/89	R 579	M 1672/90	R 570
North			8.6	8.2			5.1		5.8		5.4	6.8		6.1	4.8	4.6
East		9.0	9.4	11.5		8.8			7.3		7.2	8.9		5.6		5.2
South	8.9	8.6	9.1			8.5		7.4	7.2	6.8	6.5	8.9	8.3	6.7	7.2	5.7
West			8.4	9.4	7.6				6.0		5.6	7.9		6.0		3.8
Centre	8.4	8.4				7.2					7.8	7.8		5.2		

Table 5b. Comparison of Pol % cane (richesse) at the end of April 2017, 2018 and 2019.

Sectors	APRIL		
	2017	2018	2019
North	6.2	6.0	5.8
East	6.8	7.3	7.1
South	7.4	7.2	7.4
West	6.0	7.7	6.3
Centre	6.2	7.4	7.0
Island	6.7	7.0	6.9

At the end of April 2019, the *richesse* reached 5.8% in the North, 7.1% in the East, 7.4% in the South, 6.3% in the West and 7.0% in the Centre. Compared to the corresponding period in 2018, sucrose content at end-April 2019 was lagging behind by 0.2° in both the North and the East, 1.4° in the West and 0.4° in the Centre whereas in the South, it was higher by 0.2°. Sucrose content at the end of April, for the present crop, was higher than that of the corresponding period in 2017 in sectors East, West and Centre, comparable in the South, and lower in the North

Island-wise, the *richesse* of 6.9% recorded at end of April 2019 was comparable to that of the corresponding period in 2018 and slightly higher than that of 2017 by 0.2°.

4. CROP 2019

Weather conditions that prevailed during April 2019 was characterised by above normal rainfall in all sectors of the island with higher maximum temperature, that is conducive for growth, resulting in an overall good elongation rate across all sectors. Thus, stalk elongation during 2019 over the island exceeded the normal by nearly 3% and that at the corresponding period in 2018 by 4%. Total stalk height over the island at the end of April 2019 was close to normal.

However, with a below normal temperature amplitude and solar radiation, sucrose accumulation has not been optimal at the end of April with an island average *richesse* of 6.9% which is comparable to the corresponding period 2018 but slightly higher than that of 2017. As winter conditions start to set in, sucrose accumulation rate is expected to increase in the coming weeks.

Figure 2. Stalk height at end- April 2019

