

MAURITIUS CANE INDUSTRY AUTHORITY

MAURITIUS SUGARCANE INDUSTRY RESEARCH INSTITUTE

Ref A 1/2019

9 June 2020

SUGAR CANE CROP 2019

Status: End May 2019

1. CLIMATE

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

Rainfall recorded over the sugar cane areas during the month of May 2019 was below normal with an island average of 142 mm, representing 88% of the long-term mean (LTM) of 162 mm. In all sectors, rainfall recorded was lower than the long-term mean (LTM) with 79 mm in the North, 170 mm in the East, 189 mm in the South, 8 mm in the West and 166 mm in the Centre.

The cumulative rainfall for the period October 2018 to May 2019 amounted to 1694 mm, representing 104% of the LTM for the island. During the same period, 1180 mm were recorded in the North, 2024 mm in the East, 1909 mm in the South, 761 mm in the West and 2070 mm in the Centre. These values represented 114%, 105%, 99%, 93% and 107% of the respective long-term means.

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

	North	East	South	West	Centre	Island
2018	19 (21)	108 (52)	122 (62)	11 (28)	120 (62)	85 (53)
2019	79 (89)*	170 (82)	189 (96)	8 (20)	166 (86)	142 (88)
LTM	89	207	197	40	1941	162

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

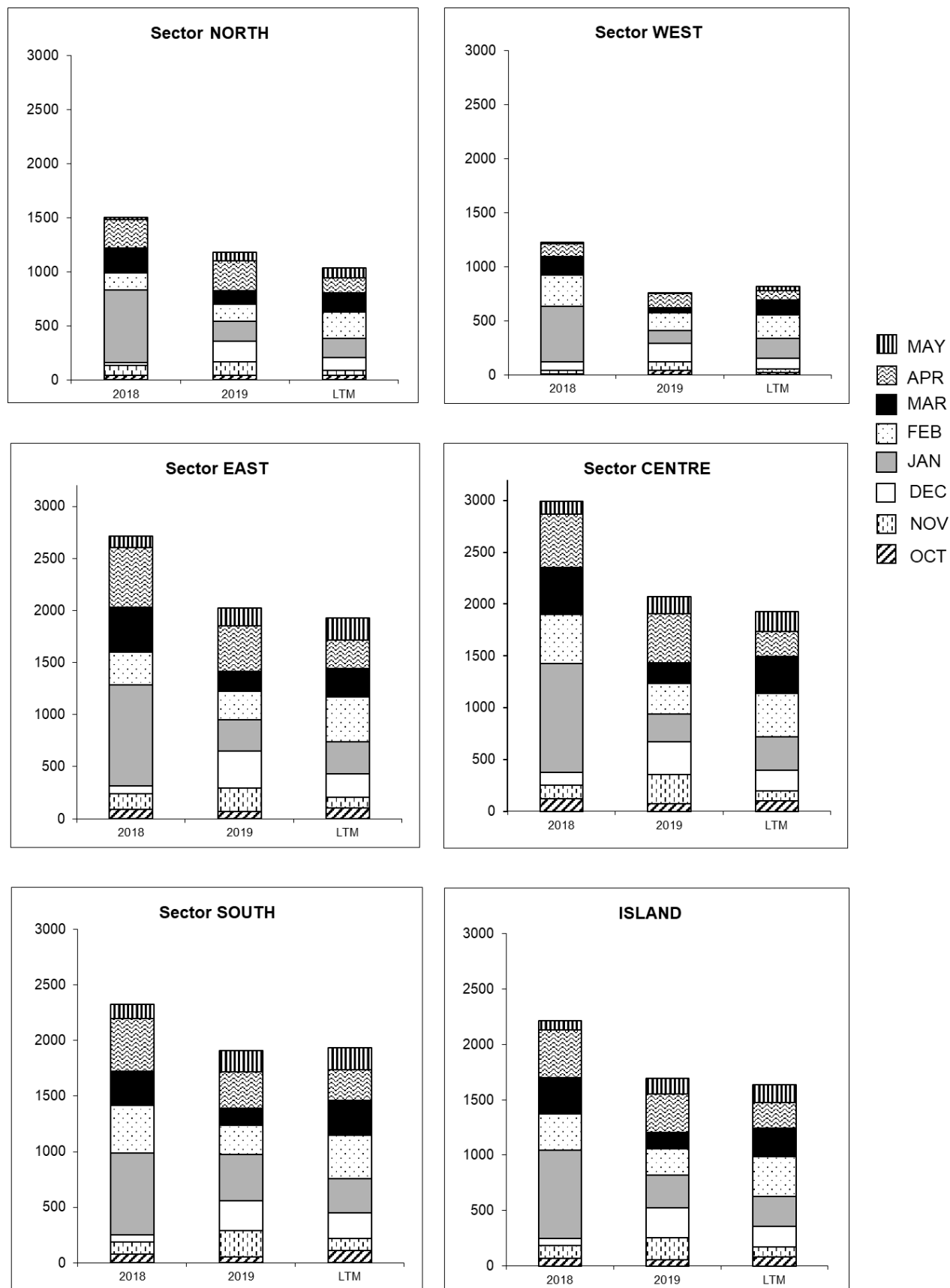
Table 1b. Cumulative rainfall (mm) from October 2018 to May 2019 for crop 2019 compared to that of crop 2018 and the long term mean (LTM)

	North	East	South	West	Centre	Island
2018	1505 (146)	2713 (141)	2323 (120)	1224 (149)	2991 (155)	2214 (135)
2019	1180 (114)*	2024 (105)	1909 (99)	761 (93)	2070 (107)	1694 (104)
LTM	1033	1926	1935	819	1930	1634

* figures in brackets are % of LTM

[Source: raw provisional data from Meteorological Services]

Figure 1. Monthly rainfall (mm) for the period October 2018 to May 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 May 2019 on MSIRI agro-meteorological stations are given below.

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

Stations	Maximum (°C)		Minimum (°C)		Amplitude (°C)	
	May 2019	DevN*	May 2019	DevN*	May 2019	DevN*
Ferret	27.9	-0.2	20.3	+1.5	7.6	-1.7
Réduit	25.1	0.0	18.1	+0.1	7.0	-0.1
Belle Rive	25.0	+0.2	17.3	+0.7	7.7	-0.5
Union Park	25.2	+0.9	18.6	+0.7	6.6	+0.2

* Deviation from the Normal (1981-2010)

Mean maximum temperature during May 2019 was above normal at Union Park but comparable to the normal at the other stations. Mean minimum temperature was comparable to the normal at Réduit but higher than the normal at the other stations ranging from 0.7° at Belle Rive and Union Part to 1.5° at Ferret. The resulting mean amplitude was comparable to the normal at Réduit and Union Park but lagged behind the normal by 1.7 ° at Ferret and 0.5° at Belle Rive. Lower temperature amplitude is usually not conducive to sucrose accumulation.

1.3 Sunshine (Table 3)

Data from the MSIRI agro-meteorological stations showed that sunshine hours during the month of May 2019 were below normal at all four stations. Recorded bright sunshine, as a percentage of the normal, amounted to 92% at Ferret, 91% at Réduit and Union Park, and 88% at Belle Rive and 91 at Union Park.

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

Station	May 2019	Normal	% of Normal
Ferret	218	238	92
Réduit	198	217	91
Belle Rive	180	204	88
Union Park	148	162	91

2. STALK HEIGHT

During the last week of May 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 May 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 May 2019 was generally higher than that recorded during the corresponding period in 2018 in all sectors. Stalk elongation amounted to 16.9 cm in the North, 19.3 cm in the East, 28.2 cm in the South, 20.4 cm in the West and 15.1 cm in the Centre. Elongation rates in May 2019 exceeded the normal by 4.0 cm in the East, 13.8 cm in the South, 2.2 cm in the West and 6.6 cm in the Centre. It lagged behind the normal in the North by 4.7 cm. The 21.3 cm average elongation for the island was higher than that of May 2018 (14.4 cm) and the normal (17.0 cm).

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

Sectors	Stalk elongation (cm) during May			May 2019 as % of	
	2019	2018	Normal	2018	Normal
North	16.9	14.8	21.6	114.2	78.4
East	19.3	10.8	15.3	178.7	126.1
South	28.2	20.4	14.4	138.2	195.3
West	20.4	11.5	18.2	177.4	112.2
Centre	15.1	4.8	8.5	314.6	176.8
Island	21.3	14.4	17.0	148.5	125.6

2.2 Cumulative Elongation (Table 4b)

Stalk growth from end-December 2018 to end-May 2019 cumulated to 191.5 cm in the North, 193.5 cm in the East, 199.6 cm in the South, 181.8 cm in the West and 150.7 cm in the Centre. These cumulative growths compared to the same period last year were higher in all sectors. For the same period, cumulative growth was higher than normal in the North (+6.3 cm), East (+14.9 cm) and South (+13.7 cm), but lagged behind in the West (-4.2 cm) and Centre (-2.3 cm). Island-wise the cumulative elongation of 190.8 cm in May 2019 was higher than those of the 2018 crop (175.4 cm) by 8.8% and the normal (179.6 cm) by 6.2%.

Table 4b. Cumulative elongation at end-May.

Sectors	Cumulative elongation (cm) at end- May			End-May 2019 as % of	
	2019	2018	Normal	2018	Normal
North	191.5	180.0	185.2	106.4	103.4
East	193.5	167.1	178.6	115.8	108.3
South	199.6	186.7	185.9	106.9	107.4
West	181.8	176.9	186.0	102.8	97.7
Centre	150.7	141.6	153.0	106.4	98.5
Island	190.8	175.4	179.6	108.8	106.2

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

Total stalk height at end May 2019 was 227.1 cm in the North, 233.9 cm in the East, 228.5 cm in the South, 223.9 cm in the West and 186.3 cm in the Centre giving an island average of 226.6 cm. Total stalk height exceeded that of the corresponding period in 2018 in all sectors with the highest margin of 28.1 cm in the North and the lowest margin of 1.1 cm in the Centre. Compared to the normal, total stalk height at end-May 2019 exceeded the normal by 17.2 cm in the North and 6.7 cm in the East. In the other sectors it was comparable in the West but lagged behind the normal by 1.7 cm in the South and 10.2 cm in the Centre.

At island level, the total stalk height of 226.6 cm at end of May 2019 was higher than both the corresponding period in 2018 by 16.3 cm (7.8 %) and the normal by 4.6 cm (2.1 %).

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

Sectors	Stalk height (cm) at end-May			End-May 2019 as % of	
	2019	2018	Normal	2018	Normal
North	227.1	199.0	209.9	114.1	108.2
East	233.9	220.8	227.2	105.9	102.9
South	228.5	209.7	230.2	109.0	99.3
West	223.9	218.9	223.3	102.3	100.3
Centre	186.3	185.2	196.5	100.6	94.8
Island	226.6	210.3	222.0	107.8	102.1

3 SUCROSE ACCUMULATION (Tables 5a and 5b)

Analysis for sucrose content during the last week of May 2019 was carried out in cane samples from miller-planters' land in all factory areas and covering the main cultivated varieties. 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-May 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			11.9	11.8			9.0		9.9		9.1	10.3		9.3	8.5	7.0
East		10.0	11.1	11.8		10.6			9.8		9.3	10.7		7.9		8.0
South	11.7	11.5	10.6			10.8		8.7	10.5	8.4	9.3	11.3	10.4	8.8	9.2	8.5
West			11.2	12.0	11.5				9.6		8.8	10.4		9.4		8.7
Centre	12.5	10.7				10.0					9.5	9.8		6.7		

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

Sectors	APRIL			MAY		
	2017	2018	2019	2017	2018	2019
North	6.2	6.0	5.8	7.2	9.8	9.2
East	6.8	7.3	7.1	9.0	10.6	9.2
South	7.4	7.2	7.4	8.5	10.5	9.8
West	6.0	7.7	6.3	8.4	11.4	9.7
Centre	6.2	7.4	7.0	9.5	10.8	9.0
Island	6.7	7.0	6.9	8.4	10.5	9.4

The *richesse* at the end of May 2019 reached 9.2% in both the North and the East, 9.8% in the South, 9.7% in the West and 9.0% in the Centre. Compared to the corresponding period in 2018, sucrose content at end-May 2018 was lagging behind in all sectors by 0.6° in the North, 1.4° in the East, 0.7° in the South, 1.7° in the West and 1.8° in the Centre. Sucrose content at the end of May, for the present crop, was higher than that of the corresponding period in 2017 in the North, South and West, comparable in the East but lower in the Centre sector.

Sucrose content has improved in all sectors from end-April 2019 up to end-May 2019. The highest increment of 3.4° was observed in both the North and West followed by 2.4° in the South, 2.1° in the East and 2.0° in Centre. On average for the island, the increase in *richesse* was 2.5° in 2019 which was below the increment of 3.5° in 2018 but above the increment of 1.7° in 2017.

Island-wise, the *richesse* of 9.4% recorded at end of May 2019 was lagging behind that of the corresponding period in 2018 by 1.1° but was higher than that of 2017 by 1.0°.

4. CROP 2019

The climatic conditions that prevailed during May 2019 was characterised by ample rainfall in most sectors, above normal maximum and minimum temperature, below normal temperature amplitude and solar radiation. These have been favourable to crop growth rather than sucrose accumulation. At island level higher elongation rate was obtained which exceeded both the normal and that of May 2018. Total stalk height over the island at the end of May 2019 was higher than that of the normal by 2.1% and that of May 2018 by 7.8%. However, with the prevailing climatic conditions, i.e. lower temperature amplitude, sucrose accumulation has not been optimal with an island average of 9.4% which is well below that recorded in May 2018. However, with the onset of winter, the potential for rapid sucrose increase exists if favourable weather conditions are experienced till the end of the ripening phase.

Figure 2. Stalk height at end- May 2019

