

MAURITIUS CANE INDUSTRY AUTHORITY

MAURITIUS SUGARCANE INDUSTRY RESEARCH INSTITUTE

Ref A 1/2019

15 July 2019

SUGAR CANE CROP 2019

Status: End June 2019

1. CLIMATE

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

Rainfall recorded over the sugar cane areas during the month of June 2019 was above normal with an island average of 200 mm, representing 169% of the long-term mean (LTM) of 118 mm. Above normal rainfall was recorded in all sectors with 96 mm in the North, 248 mm in the East, 251 mm in the South, 21 mm in the West and 299 mm in the Centre. These figures represented 152%, 173%, 164%, 84% and 209% of their respective LTM.

Rainfall for the period October 2018 to June 2019 cumulated to 1895 mm representing 108% of the long-term mean for the island. During the same period, 1276 mm were recorded in the North, 2272 mm in the East, 2160 mm in the South, 782 mm in the West and 2369 mm in the Centre. These values represented 116%, 110%, 103%, 93% and 114% of the respective long-term means.

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

	North	East	South	West	Centre	Island
2018	63 (100)	122 (85)	165 (108)	14 (56)	136 (95)	115 (97)
2019	96 (152)*	248 (173)	251 (164)	21 (84)	299 (209)	200 (169)
LTM	63	143	153	25	143	118

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

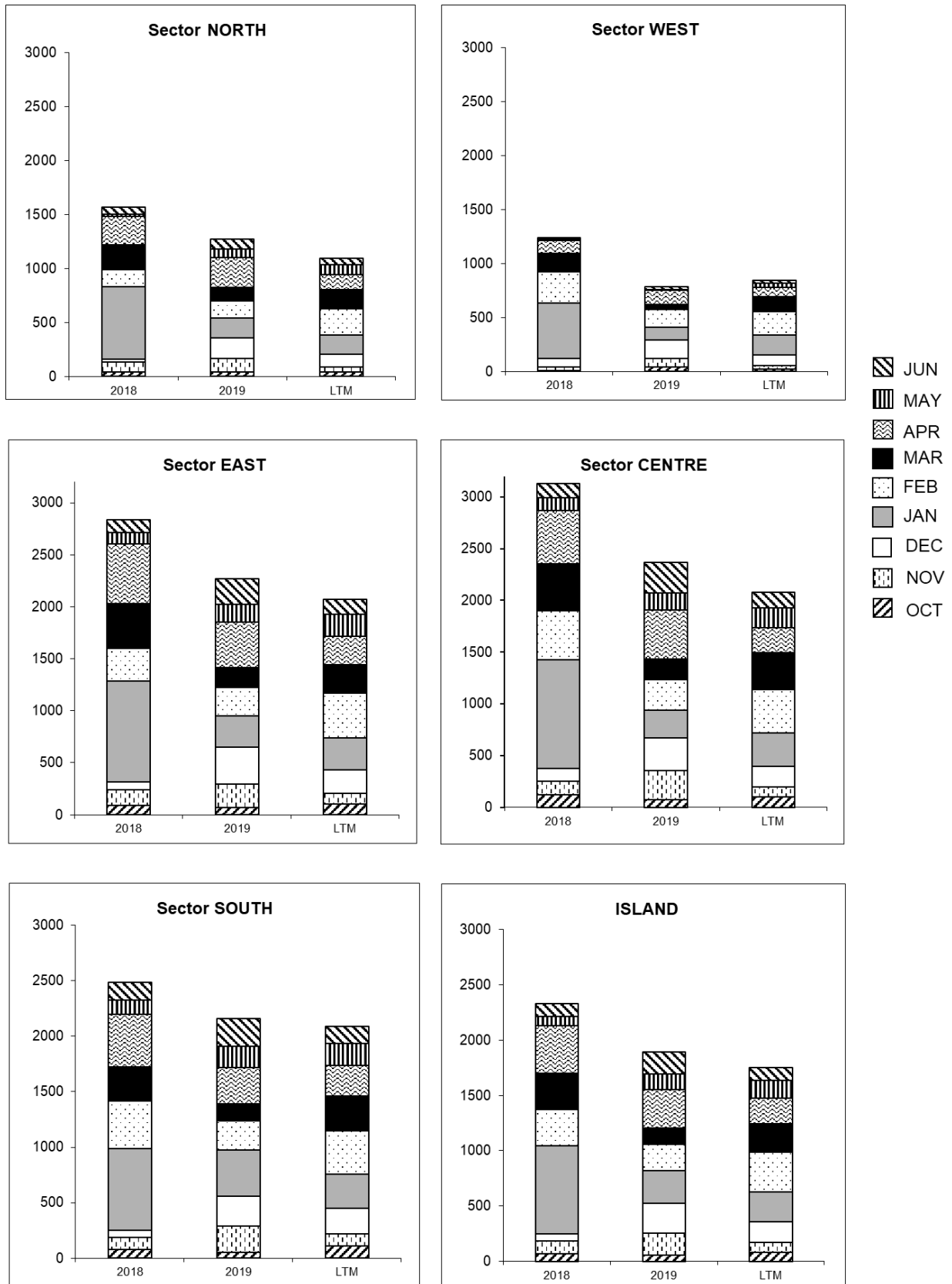
Table 1b. Cumulative rainfall (mm) from October 2018 to June 2019 for crop 2019 compared to that of crop 2018 and the long term mean (LTM)

	North	East	South	West	Centre	Island
2018	1568 (143)	2835 (137)	2488 (119)	1238 (147)	3127 (151)	2329 (133)
2019	1276 (116)*	2272 (110)	2160 (103)	782 (93)	2369 (114)	1895 (108)
LTM	1096	2069	2088	844	2073	1752

* figures in brackets are % of LTM

[Source: raw provisional data from Meteorological Services]

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

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

Stations	Maximum (°C)		Minimum (°C)		Amplitude (°C)	
	June 2019	DevN*	June 2019	DevN*	June 2019	DevN*
Ferret	25.7	-0.6	18.8	+2.0	6.9	-2.6
Réduit	23.0	-0.3	17.3	+1.3	5.7	-1.6
Belle Rive	23.0	0.0	16.6	+1.9	6.4	-1.9
Union Park	23.4	+0.9	17.6	+1.4	5.8	-0.5

* Deviation from the Normal (1981-2010)

Mean maximum temperature during June 2019 was below normal at Ferret and Réduit, equal to normal at Belle Rive and above normal at Union Park. Mean minimum temperature exceeded the normal at all stations, the difference ranging from 1.3° at Réduit to 2.0° at Ferret. The resulting mean amplitude was lagging behind the normal at all stations and, as such, was not conducive to sucrose accumulation.

1.3 Sunshine (Table 3)

Data from the MSIRI agro-meteorological stations showed that sunshine hours during June 2019 were below normal at all four stations. Recorded bright sunshine as a percentage of the normal amounted to 96% at Ferret, 88% at Réduit, 94% at Belle Rive and 83% at Union Park.

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

Station	June 2019	Normal	% of Normal
Ferret	220	230	96
Réduit	192	219	88
Belle Rive	183	195	94
Union Park	121	146	83

2. STALK HEIGHT

Stalk height was assessed during the last week of June 2019 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 June 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 June 2019 was higher than that recorded during the corresponding period in 2018 in all sectors. Stalk elongation amounted to 14.9 cm in the North, 8.4 cm in the East, 18.2 cm in the South, 8.8 cm in the West and 3.3 cm in the Centre. Compared to the normal, elongation rates in June 2019 were higher by 3.2 cm in the North, 1.9 cm in the East, 11.0 cm in the South and 1.0 cm in the West while in the Centre it lagged behind by 0.6 cm. The 12.4 cm average elongation for the island was higher than that of June 2018 (9.6 cm) and the normal (8.0 cm).

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

Sectors	Stalk elongation (cm) during June			June 2019 as % of	
	2019	2018	Normal	2018	Normal
North	14.9	9.7	11.7	153.6	127.4
East	8.4	6.8	6.5	123.5	128.4
South	18.2	14.2	7.2	128.2	252.8
West	8.8	7.4	7.8	118.9	113.1
Centre	3.3	3.0	3.9	110.0	84.2
Island	12.4	9.6	8.0	130.0	156.2

2.2 Cumulative Elongation (Table 4b)

The cumulative elongation from end-December 2018 to end-June 2019 amounted to 206.4 cm in the North, 201.9 cm in the East, 217.8 cm in the South, 190.6 cm in the West and 154.0 cm in the Centre. Compared to the same period last year, these cumulative growths were higher in all sectors. For the same period, cumulative growth was higher than normal in the North (+9.5 cm), East (+16.7 cm) and South (+24.7 cm), but lagged behind in the West (-3.2 cm) and Centre (-2.9 cm). Island-wise the cumulative elongation of 197.6 cm in June 2019 was higher than those of the 2018 crop (180.7 cm) by 9.3% and the normal (184.4 cm) by 7.2%.

Table 4b. Cumulative elongation at end-June.

Sectors	Cumulative elongation (cm) at end-June			End-June 2019 as % of	
	2019	2018	Normal	2018	Normal
North	206.4	189.7	196.9	108.8	104.8
East	201.9	173.9	185.2	116.1	109.0
South	217.8	200.9	193.1	108.4	112.8
West	190.6	184.3	193.8	103.4	98.4
Centre	154.0	144.6	156.9	106.5	98.1
Island	197.6	180.7	184.4	109.3	107.2

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

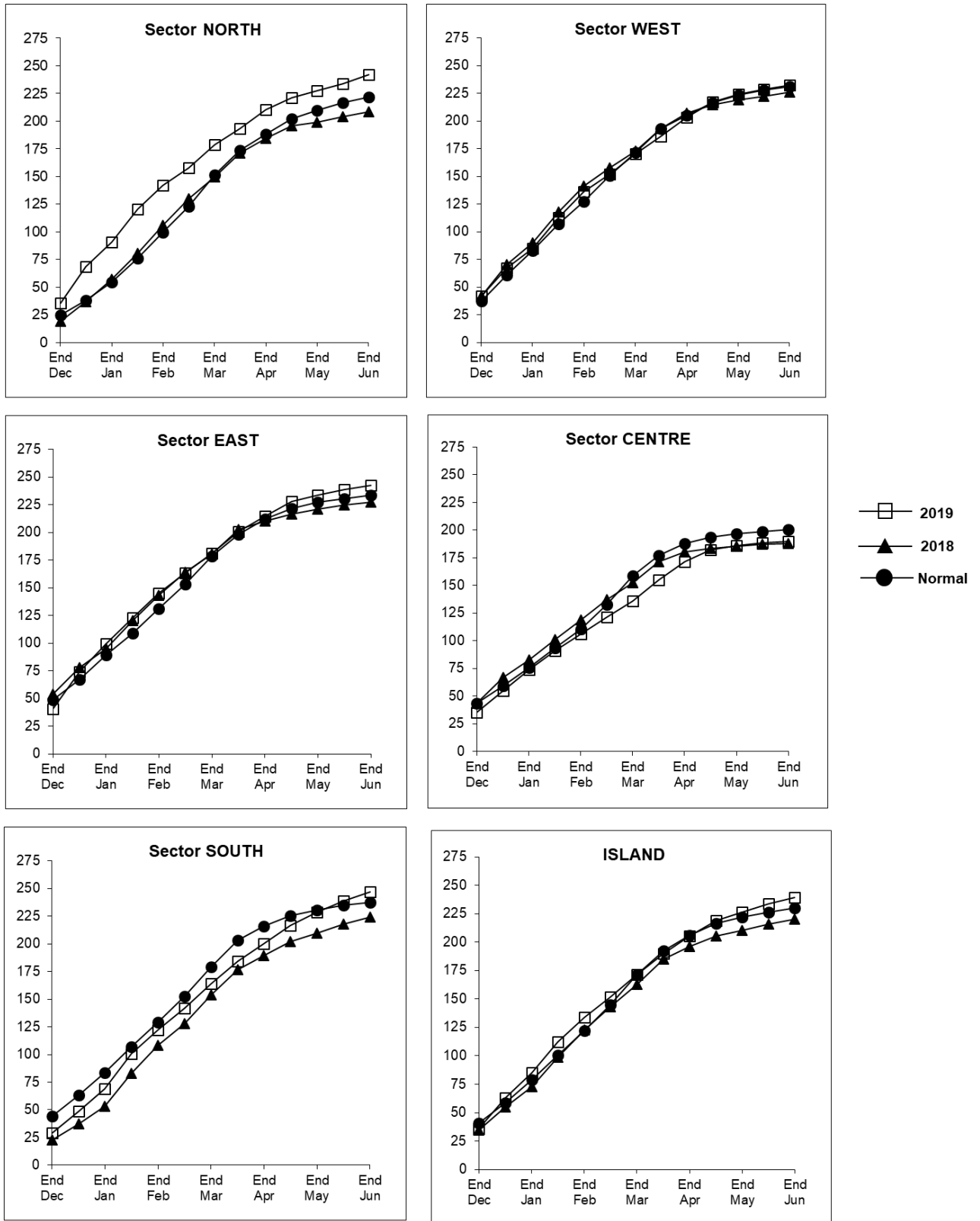
Total stalk height at end June 2019 was 242.0 cm in the North, 242.3 cm in the East, 246.7 cm in the South, 232.7 cm in the West and 189.6 cm in the Centre giving an island average of 239.0 cm. Total stalk height exceeded that of the corresponding period in 2018 in all sectors with differences ranging from 1.4 cm in the Centre to 33.3 cm in the North. Compared to the normal, total stalk height at end-June 2019 was higher by 20.4 cm in the North, 8.5 cm in the East, 9.3 cm in the South and 1.6 cm in the West while in the Centre it lagged behind the normal by 10.8 cm.

At island level, the total stalk height of 239.0 cm at end of June 2019 was higher than those of both the corresponding period in 2018 by 19.1 cm (8.7 %) and the normal by 9.2 cm (4.0 %).

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

Sectors	Stalk height (cm) at end-June			End-June 2019 as % of	
	2019	2018	Normal	2018	Normal
North	242.0	208.7	221.6	116.0	109.2
East	242.3	227.6	233.8	106.5	103.7
South	246.7	223.9	237.4	110.2	103.9
West	232.7	226.3	231.1	102.8	100.7
Centre	189.6	188.2	200.4	100.7	94.6
Island	239.0	219.9	229.8	108.7	104.0

Figure 2. Stalk height at end- June 2019



3. SUCROSE ACCUMULATION (Tables 5a and 5b)

Analysis for sucrose content during the last week of June 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-June 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			11.8	12.1			10.0		11.2		10.5	10.8		10.4	9.7	9.7
East		11.2	12.1	13.0		12.3			10.6		11.3	11.2		9.4		10.6
South	12.3	12.4	11.8			11.9		9.1	10.8	9.7	10.4	12.1	10.6	9.3	10.3	9.5
West			11.6	11.7	13.0				10.6		10.0	11.8		11.1		10.1
Centre	12.2	11.8				10.7			10.6		10.0	10.2		8.5		

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

Sectors	MAY			JUNE		
	2017	2018	2019	2017	2018	2019
North	7.2	9.8	9.2	9.4	11.4	10.7
East	9.0	10.6	9.2	11.3	11.1	10.7
South	8.5	10.5	9.8	10.7	12.0	10.4
West	8.4	11.4	9.7	11.1	12.8	11.1
Centre	9.5	10.8	9.0	11.6	11.7	10.0
Island	8.4	10.5	9.4	10.7	11.7	10.6

The *richesse* at the end of June 2019 reached 10.7% in both the North and the East, 10.4% in the South, 11.1% in the West and 10.0% in the Centre. Compared to the corresponding period in 2018, sucrose content at end-June 2019 was lagging behind in all sectors by 0.7° in the North, 0.4° in the East, 1.6° in the South and 1.7° in both the West and the Centre. Sucrose content at the end of June, for the present crop, was lower than those of the corresponding period in 2017 in the East, South and Centre, comparable in the West and higher in the North.

Sucrose content has improved in all sectors from end-May 2019 up to end-June 2019. The highest increment of 1.5° was observed in both the North and East followed by 1.4° in the West, 0.6° in the South and 1.0° in Centre. On average for the island, the increase in *richesse* was 1.2° in 2019 which was similar to the increment obtained in 2018 but below the increment of 2.3° in 2017.

Island-wise, the *richesse* of 10.6% recorded at end of June 2019 was lagging behind that of the corresponding period in 2018 by 1.1° but was comparable to that of 2017.

4. CROP 2019

As at 29 June 2019, 1228 ha representing about 4% of miller-planters' land had been harvested compared to 1658 ha (5%) at the same period last year. Sector-wise and for miller-planters only, harvested area reached 2% in the North, 9% in the East and 7% in the Centre. Harvest has not yet started in the South and West. An analysis of cane productivity based on the harvest statistics for miller-planters in sectors North, East and Centre follows.

4.1 Cane productivity (Table 6a)

Cane productivity for the island as at 29 June 2019 amounted to 78.8 TCH and was higher than the 70.2 TCH recorded in 2018 by 8.6 TCH (12%). Sector-wise, cane productivity to-date recorded was 83.6 TCH in the North, 77.5 TCH in the East and 82.4 TCH in the Centre. Compared to the same period in 2018, cane productivity recorded to-date was higher in the North by 3.4 TCH, the East by 6.0 TCH and the Centre by 16.9 TCH.

Table 6a. Cane productivity (TCH) as at end June for the 2018 and 2019 crops

	North	East	Centre	Island
2018	80.2	71.5	65.5	70.2
2019	83.6	77.5	82.4	78.8

4.2 Extraction (Table 6b)

The recorded island extraction rate of 8.48% was lower than that at the corresponding period in 2018 (8.89%) by 0.41%. Sector-wise, the extraction rate recorded was 8.09% in the North and 8.52% in the East-Centre. Compared to the corresponding period last year, extraction rate to-date was lower by 0.37% in sector East-Centre.

Table 6b. Extraction rate (%) as at end June for the 2018 and 2019 crops

	North	East-Centre	Island
2018	-	8.89	8.89
2019	8.09	8.52	8.48

4.3 Sugar productivity (Table 6c)

Island-wise, the recorded sugar productivity of 6.68 TSH was higher than that at the corresponding period in 2018 (6.24 TSH) by 0.44 tonne (7%). Sector-wise, sugar productivity was 6.76 TSH in the North and 6.66 TSH in the East-Centre. Sugar productivity at end-June 2019 was higher than that at the corresponding period in 2018 by 0.42 TSH in sector East-Centre.

Table 6c. Sugar productivity (TSH) as at end June for the 2018 and 2019 crops

	North	East-Centre	Island
2018	-	6.24	6.24
2019	6.76	6.66	6.68

5. CROP 2019

Climatic conditions in terms of above normal rainfall, reduced solar radiation and below normal temperature amplitude during the month of June 2019 have not been conducive to sucrose accumulation but has favoured crop growth. This is reflected in the *richesse* recorded over the island which was below those obtained during the same corresponding period in 2018. Even from the harvest statistics at factory level, extraction rate in sector East-Centre for June 2019 was lagging behind that of June 2018.

It is worth to note that stalk growth over the island during the month of June 2019 exceeded the normal by 56% and total stalk height at the end of June 2019 was 4% above normal. Moreover, cane productivity recorded over sectors North, East and Centre was higher in June 2019 as compared to the corresponding period last year.

With an area harvested over the island being only 4% it is still too early to draw a firm conclusion on crop productivity. Moreover, weather conditions in the coming months will determine the final yield particularly with respect to extraction rate and sugar productivity.