

MAURITIUS CANE INDUSTRY AUTHORITY

MAURITIUS SUGARCANE INDUSTRY RESEARCH INSTITUTE

Ref A 1/2020

17 July 2020

SUGAR CANE CROP 2020

Status: End June 2020

1. CLIMATE

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

Rainfall recorded over the sugar cane areas during the month of June 2020 was above the normal with an island average of 193 mm, representing 148% of the long-term mean (LTM) of 130 mm. Above normal rainfall was recorded in sectors East, South and Centre with 210 mm, 278 mm and 340 mm, respectively. In the other two sectors, the recorded 58 mm of rain in the North and 4 mm in the West during June 2020 were below the long-term mean.

Rainfall over the period October 2019 to June 2020 cumulated to 1243 mm in the North, 2337 mm in the East, 2465 mm in the South, 819 mm in the West and 2569 mm in the Centre, and represented 112%, 108%, 105%, 100% and 126% of the respective LTM. The island average of 2024 mm for this period represented 109% of the LTM (1858 mm).

Table 1a. Rainfall (mm) for the month of June for crops 2019, 2020 and the long term mean (LTM)

	North	East	South	West	Centre	Island
2019	96 (152)	248 (153)	251 (144)	21 (84)	299 (209)	200 (154)
2020	58 (92)*	210 (130)	278 (160)	4 (16)	340 (238)	193 (148)
LTM	63	162	174	25	143	130

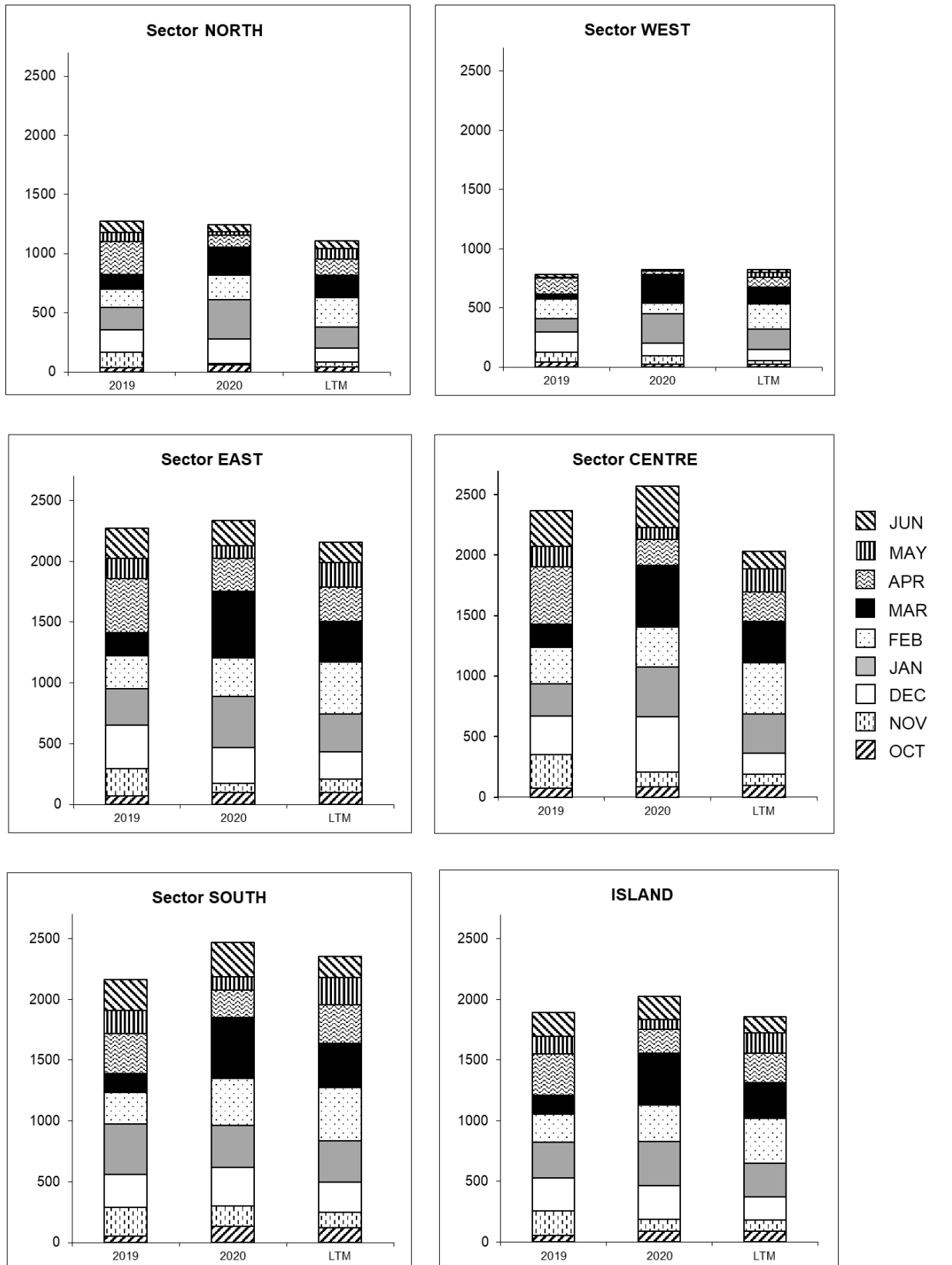
* figures in brackets are % of LTM (1981-10)

Table 1b. Cumulative rainfall (mm) from October 2019 to June 2020 for crop 2020 compared to that of crop 2019 and the LTM

	North	East	South	West	Centre	Island
2019	1276 (115)	2272 (105)	2160 (92)	782 (95)	2369 (117)	1895 (102)
2020	1243 (112)*	2337 (108)	2465 (105)	819 (100)	2569 (126)	2024 (109)
LTM	1107	2154	2351	823	2032	1858

* figures in brackets are % of LTM [Source: provisional data from Mauritius Meteorological Services]

Figure 1. Monthly rainfall (mm) for the period October 2019 to June 2020 for the 2020 crop compared to the corresponding period of the 2019 crop and to the long term mean (LTM).



1.2 Air Temperature (Table 2)

Data on maximum and minimum temperatures as well as temperature amplitude, recorded during the month of June 2020 on MSIRI agro-meteorological stations, are given below.

Table 2. Maximum and minimum air temperatures recorded on MSIRI agro-meteorological stations in June 2020

Stations	Maximum (°C)		Minimum (°C)		Amplitude (°C)	
	June 2020	DevN*	June 2020	DevN*	June 2020	DevN*
Ferret	25.0	-1.3	19.0	+2.2	6.0	-3.5
Réduit	22.4	-0.9	16.6	+0.6	5.8	-1.5
Belle Rive	22.0	-1.0	15.4	+0.7	6.6	-1.7
Union Park	22.8	+0.3	17.3	+1.1	5.5	-0.8

* Deviation from the Normal (1981-2010)

Mean maximum temperature during June 2020 was slightly above normal at Union Park but below normal at the other stations by more than 0.9° C. Mean minimum temperature was above normal at all stations with the difference ranging from 0.6° C at Réduit to 2.2° C at Ferret. The resulting mean amplitude lagged behind the normal at all stations. Generally, below normal maximum temperature and temperature amplitude are not conducive to optimum sucrose accumulation.

1.3 Sunshine (Table 3)

Data from the MSIRI agro-meteorological stations showed that sunshine hours during June 2020 were below normal at all stations except at Ferret where it was comparable to the normal. Recorded bright sunshine as a percentage of the normal amounted to 102 at Ferret, 93 at Réduit, 75 at Belle Rive and 64 at Union Park.

Table 3. Sunshine duration (h) recorded on MSIRI agro-meteorological stations in June 2020

Station	June 2020	Normal	% of Normal
Ferret	235	230	102
Réduit	204	219	93
Belle Rive	146	195	75
Union Park	94	146	64

2. STALK HEIGHT

Stalk height was measured during the last week of June 2020 at 48 sites in the five sugar cane sectors of the island. These sites are representative of the various agro-climatic zones, varieties and crop categories. Data collected were compared with those of the corresponding period in June 2019 and to the mean of the five best cane yielding crops for the period 2010 to 2019 in each sector (referred to as normal).

2.1 Stalk elongation (Table 4a)

Stalk elongation during the month of June 2020 was inferior to that for the corresponding period in 2019 in all sectors. Stalk growth during the month of June 2020 was 4.9 cm in the North, 3.4 cm in the East, 13.6 cm in the South, 4.1 cm in the West and 2.2 cm in the Centre. Compared to the normal, growth during June 2020 was higher in the South but was lagging behind in the other sectors by 7.1 cm in the North, 2.9 cm in the East, 3.7 cm in the West and 1.6 cm in the Centre. Island-wise, the stalk growth of 6.7 cm at end June 2020 was lagging behind that of the corresponding period in 2019 by 5.7 cm and to the normal by 2.0 cm.

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

Sectors	Stalk elongation (cm) during June			June 2020 as % of	
	2020	2019	Normal	2019	Normal
North	4.9	14.9	12.0	32.9	41.0
East	3.4	8.4	6.3	40.5	53.8
South	13.6	18.2	9.6	74.7	141.4
West	4.1	8.8	7.8	46.6	52.8
Centre	2.2	3.3	3.8	66.7	57.3
Island	6.7	12.4	8.7	54.0	77.4

2.2 Cumulative elongation (Table 4b)

The cumulative stalk growth over period end-December 2019 to end-June 2020 amounted to 176.5 cm in the North, 183.3 cm in the East, 198.1 cm in the South, 163.8 cm in the West and 157.8 cm in the Centre.

Table 4b. Cumulative elongation at end-June.

Sectors	Cumulative elongation (cm) at End-June			End-June 2020 as % of	
	2020	2019	Normal	2019	Normal
North	176.5	206.4	197.9	85.5	89.2
East	183.3	201.9	188.2	90.8	97.4
South	198.1	217.8	197.3	91.0	100.4
West	163.8	190.6	192.7	85.9	85.0
Centre	157.8	154.0	156.3	102.5	101.0
Island	179.3	197.6	186.6	90.7	96.1

These cumulative growths, compared to the same period last year, were lower by 29.9 cm in the North, 18.6 cm in the East, 19.7 cm in the South and 26.8 cm in the West whereas in the Centre it was higher by 3.8 cm. Compared to the normal, cumulative growth for the same period was comparable in sectors South and Centre but was inferior to the normal in the other sectors. Island-wise the cumulative elongation of 179.3 cm in June 2020 was lagging behind that of the 2019 crop (197.6 cm) by 9.3% and the normal (186.6 cm) by 3.9%.

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

Total stalk height at end-June 2020 amounted to 216.3 cm in the North, 223.7 cm in the East, 231.4 cm in the South, 203.7 cm in the West and 201.6 cm in the Centre. Compared to the corresponding period in 2019, stalk height to-date was higher in the Centre, but was lagging behind in the other sectors by 25.7 cm in the North, 18.6 cm in the East, 15.3 cm in the South and 29.0 cm in the West. Total stalk height at end-June 2020 was higher in the Centre by 2.6 cm, but lagged behind the normal in the North by 6.6 cm, the East by 11.9 cm, the South by 3.8 cm and the West by 26.4 cm.

At island level, the total stalk height of 220.7 cm at end-June 2020 was lower than that of the corresponding period in 2019 and the normal by 18.3 cm (7.7%) and 9.1 cm (4.0%), respectively.

Table 4c. Total stalk height at end-June 2020.

Sectors	Stalk height (cm) at end-June			End-June 2020 as % of	
	2020	2019	Normal	2019	Normal
North	216.3	242.0	222.9	89.4	97.0
East	223.7	242.3	235.6	92.3	94.9
South	231.4	246.7	235.2	93.8	98.4
West	203.7	232.7	230.1	87.5	88.5
Centre	201.6	189.6	199.0	106.3	101.3
Island	220.7	239.0	229.8	92.3	96.0

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

Cane samples were analysed for sucrose content during the last week of June 2020 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.

Figure 2. Stalk height at end-June 2020

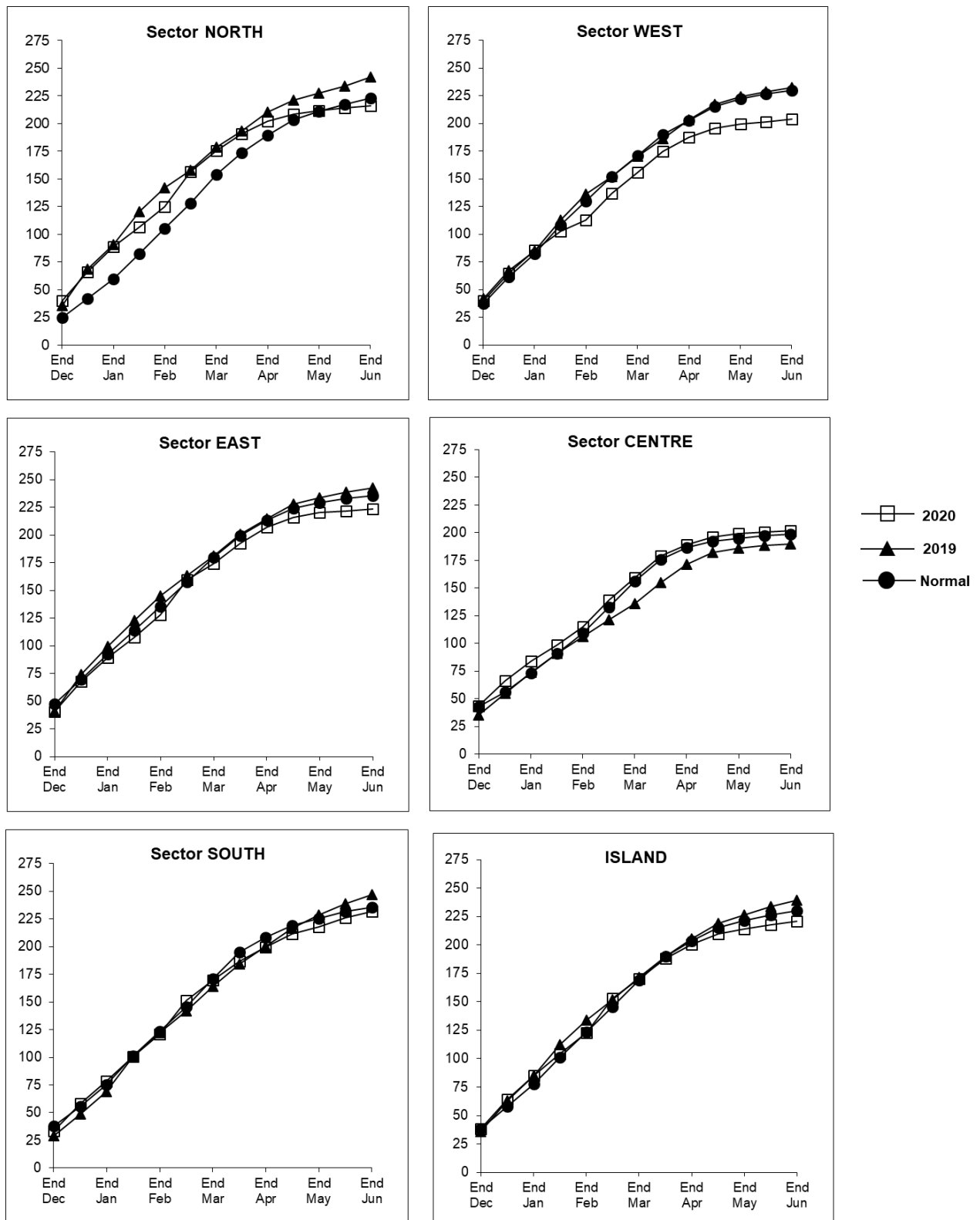


Table 5a. Average Pol % cane (richesse) in different varieties at end-June 2020.

Variety	North	East	South	West	Centre
M 52/78			12.6		12.3
M 703/89		11.0	12.2		10.9
R 573	13.6	12.4	12.4	12.0	
M 2256/88	13.2	11.8		12.4	
R 575			12.2	11.9	
M 387/85		11.4	12.8		10.8
M 1246/84	11.4				
M 1989/99			9.9		
M 2593/92	12.4	11.4	12.1	9.3	10.2
M 2283/98			11.0		
M 1400/86	12.1	9.7	10.1	11.0	10.2
M 1176/77	12.8	11.6	12.0	11.7	10.9
M 1861/89			11.6		
M 2502/99		10.2			
R 579	10.2	9.2	9.2	9.9	8.9
M 1672/90	11.4		10.4		
R 570	10.7	9.4	10.4	12.0	
M 1392/00	13.4			12.6	
M 683/99	10.9			10.1	
M 216/02	14.2			12.2	
M 1561/01		11.7			
M 1256/04	12.6				
M 1698/02	12.2				
M 915/05	11.6			10.1	9.0
M 1002/02	11.7			12.0	

Table 5b. Comparison of Pol % cane (richesse) at the end of May and June 2018, 2019 and 2020.

Sectors	MAY			JUNE		
	2018	2019	2020	2018	2019	2020
North	9.8	9.2	10.0	11.4	10.7	11.8
East	10.6	9.2	9.2	11.1	10.7	10.3
South	10.5	9.8	9.5	12.0	10.4	10.8
West	11.4	9.7	9.7	12.8	11.1	11.1
Centre	10.8	9.0	9.8	11.7	10.0	10.0
Island	10.5	9.4	9.6	11.7	10.6	10.8

The sucrose content at the end of June 2020 was 11.8% in the North, 10.3% in the East, 10.8% in the South, 11.1% in the West and 10.0% in the Centre. Compared to the corresponding period in 2019, *richesse* at end-June 2020 was similar in sectors West and Centre, lagged behind in the East by 0.4°, but exceeded those of the North and South by 1.1° and 0.4°, respectively. Sucrose content at the end of June, for the present crop, was lower than that of the corresponding period in 2018 in all sectors except in the North.

Island-wise, the *richesse* of 10.8% recorded at end of June 2020 was slightly higher than that of the corresponding period in 2019 by 0.2° but lagged behind that of 2018 by 0.9°.

4. CROP PRODUCTIVITY 2020

As at 4 July 2020, 962 ha representing 3.3% of miller-planters' land had been harvested compared to 2166 ha (7%) at the same period last year. Sector-wise and for miller-planters only, harvested area reached 6.5% in the East, 2.2% in the South and 8.4% in the Centre. Some fields have also been harvested in the North and West. An analysis of cane productivity based on the harvest statistics for miller-planters in sectors East, South and Centre follows.

4.1 Cane productivity (Table 6a)

Cane productivity for the island as at 4 July 2020 amounted to 79.4 TCH and was slightly higher than the 78.8 TCH recorded in 2019. Sector-wise, cane productivity to-date recorded was 79.9 TCH in the East, 85.7 TCH in the South and 69.1 TCH in the Centre. Compared to the same period in 2019, cane productivity recorded to-date was higher in the East by 1.9 TCH and the South by 7.2 TCH but was lower in the Centre by 10.1 TCH.

Table 6a. Cane productivity (TCH) as at end June for the 2019 and 2020 crops

	East	South	Centre	Island
2019	78.0	78.5	79.2	78.8
2020	79.9	85.7	69.1	79.4

4.2 Extraction (Table 6b)

The recorded island extraction rate of 8.75% was slightly higher than that at the corresponding period in 2019 (8.68%). Sector-wise, the extraction rate recorded was 8.71% in the East-Centre and 8.95% in the South. Compared to the corresponding period last year, extraction rate to-date was higher by 0.09% in sector East-Centre but was lagging behind by 0.25% in the South.

Table 6b. Extraction rate (%) as at end June for the 2019 and 2020 crops

	East-Centre	South	Island
2019	8.62	9.20	8.68
2020	8.71	8.95	8.75

4.3 Sugar productivity (Table 6c)

Island-wise, the recorded sugar productivity of 6.95 TSH was higher than that at the corresponding period in 2018 (6.84 TSH) by 0.11 tonne (2%). Sector-wise, sugar productivity was 6.74 TSH in the East-Centre and 7.67 TSH in the South. Sugar productivity at end-June 2020 was similar to that at the corresponding period in 2019 in the East-Centre but was higher than that at the corresponding period in 2019 by 0.45 TSH in sector South.

Table 6c. Sugar productivity (TSH) as at end June for the 2019 and 2020 crops

	East-Centre	South	Island
2019	6.74	7.22	6.84
2020	6.74	7.67	6.95

5. CROP 2020

Climatic conditions prevailing during the month of June 2020 were characterised by abundant rainfall in sectors East, South and Centre coupled with reduced solar radiation and below normal temperature amplitude. These conditions have not been favourable to optimum sucrose accumulation. This is reflected in the *richesse* recorded over the island, which was just slightly higher than that in 2019, but well below that obtained during the same corresponding period in 2018. In addition, the harvest statistics at factory level at the start of the harvest season indicated no significant advantage in extraction rate over the island, in 2020, compared to that recorded in 2019.

The climatic conditions in June 2020 have not favoured normal stalk growth in most sectors resulting in a deficit of 4% in total stalk height over the island when compared to the normal. Since only about 3% of area have been harvested over the island, it is still too early to draw conclusion on crop productivity, which is likely to evolve with respect to extraction rate and sugar productivity, depending on the weather conditions in the coming months.