

MAURITIUS CANE INDUSTRY AUTHORITY

MAURITIUS SUGARCANE INDUSTRY RESEARCH INSTITUTE

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SUGAR CANE CROP 2021

Status: End June 2021

1. CLIMATE

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

Rainfall recorded over the sugar cane areas during the month of June 2021 was above the normal with an island average of 208 mm, representing 176% of the long-term mean (LTM). Above normal rainfall was recorded in sectors North, East, South and Centre with 69 mm, 280 mm, 281 mm and 256 mm, respectively. In the West, the recorded 16 mm of rain was below the long-term mean.

Total rainfall over the period October 2020 to June 2021 reached 913 mm in the North, 2111 mm in the East, 2198 mm in the South, 538 mm in the West and 2290 mm in the Centre. These amounts represented 82%, 99%, 106%, 64% and 111% in sectors North, East, South, West and Centre respectively. The average of 1753 mm for the island represented 99% of the long-term mean for the same period.

Table 1a. Rainfall (mm) for the month of June for crops 2020, 2021 and the long term mean (LTM)

	North	East	South	West	Centre	Island
2020	58 (92)	210 (147)	278 (182)	4 (16)	340 (238)	193 (163)
2021	69 (110)*	280 (196)	281 (184)	16 (64)	256 (179)	208 (176)
LTM	63	143	153	25	143	118

* figures in brackets are % of LTM (1981-2010)

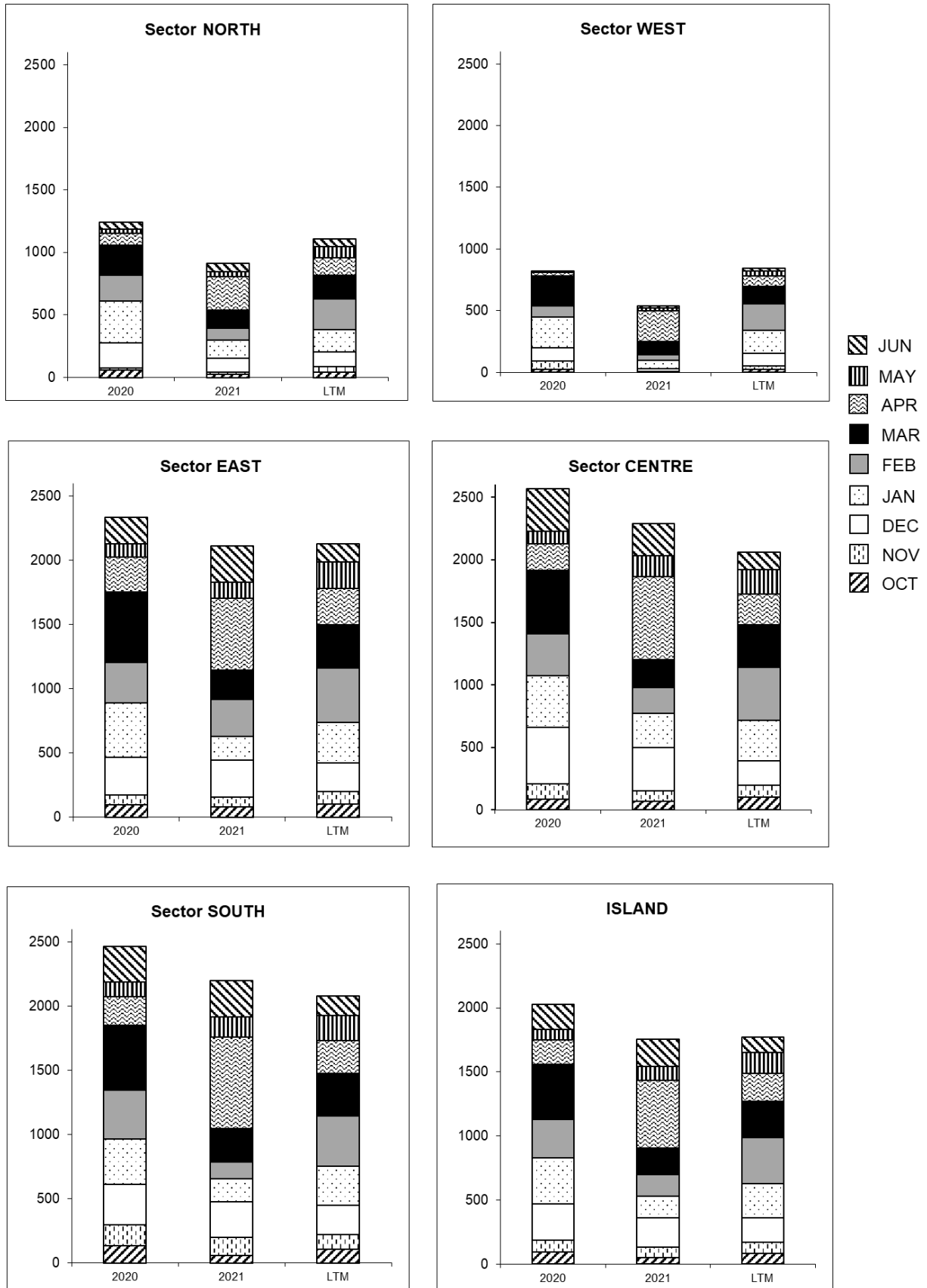
Table 1b. Cumulative rainfall (mm) from October 2020 to June 2021 for crop 2021 compared to that of crop 2020 and the LTM

	North	East	South	West	Centre	Island
2020	1243 (112)	2337 (109)	2465 (119)	819 (97)	2569 (125)	2026 (114)
2021	913 (82)*	2111 (99)	2198 (106)	538 (64)	2290 (111)	1753 (99)
LTM	1108	2136	2079	845	2062	1769

* figures in brackets are % of LTM

[Source: Mauritius Meteorological Services]

Figure 1. Monthly rainfall (mm) for the period October 2020 to June 2021 for the 2021 crop compared to the corresponding period of the 2020 crop and to the long term mean (LTM).



1.2 Air Temperature (Table 2)

Data on air temperatures recorded during the month of June 2021 on MSIRI agro-meteorological stations are given below.

Table 2. Maximum and minimum air temperatures recorded on MSIRI agro-meteorological stations in June 2021

Stations	Maximum (°C)		Minimum (°C)		Amplitude (°C)	
	June 2021	DevN*	June 2021	DevN*	June 2021	DevN*
Ferret	26.3	0.0	20.0	+3.2	6.3	-3.2
Réduit	23.4	+0.1	16.9	+0.9	6.5	-0.8
Belle Rive	21.7	-1.3	16.2	+1.5	5.5	-2.8
Union Park	23.3	+0.8	17.5	+1.3	5.8	-0.5

* Deviation from the Normal (1981-2010)

Mean maximum temperature during June 2021 was comparable to the normal at Ferret and Réduit, exceeded the normal at Union Park by 0.8 °C, but was below normal at Belle Rive by 1.3 °C. Mean minimum temperature was above normal at all stations resulting in a mean temperature amplitude lagging behind the normal at all stations ranging from -0.5 °C at Union Park to -3.2 °C at Ferret. Generally, low temperature amplitude is not conducive to optimum sucrose accumulation.

1.3 Sunshine (Table 3)

Data from the MSIRI agro-meteorological stations showed that sunshine hours during June 2021 were below normal at all four stations. Recorded bright sunshine lagged behind the normal by 4% at Ferret, 16% at Réduit, 26% at Belle Rive and 11% at Union Park.

Table 3. Sunshine duration (h) recorded on MSIRI agro-meteorological stations in June 2021

Station	June 2021	Normal	% of Normal
Ferret	220	230	96
Réduit	185	219	84
Belle Rive	145	195	74
Union Park	129	146	89

2.0 STALK HEIGHT

Cane growth was assessed during the last week of June 2021 in the 48 sites representative of the five sugar cane sectors of the island. These sites cover the various agro-climatic zones, varieties under cultivation and stage of development of the crop. The measurements were compared to those of the corresponding period in June 2020 and to the normal, referred to as the mean of the five best cane yielding crops during the period 2011 to 2020.

2.1 Stalk elongation (Table 4a)

Stalk elongation during June 2021 was 8.4 cm in the North, 5.2 cm in the East, 8.0 cm in the South, 10.4 cm in the West and 3.9 cm in the Centre. These figures were higher than those recorded during the corresponding period in 2020 in all sectors except the South. For the same period, growth exceeded the normal in the West and Centre. In the other sectors, it lagged behind the normal by 2.4 cm in the North, 1.1 cm in the East and 1.5 cm in the South. The island stalk elongation of 7.3 cm in June 2021 was higher than the 6.7 cm recorded in June 2020 but lagged behind the normal by 1.5 cm (8.1%).

Table 4a. Stalk elongation during the month of June 2021

Sectors	Stalk elongation (cm) during June			June 2021 as % of	
	2021	2020	Normal	2020	Normal
North	8.4	4.9	10.8	171.4	78.1
East	5.2	3.4	6.3	152.9	82.3
South	8.0	13.6	9.5	58.8	84.0
West	10.4	4.1	8.8	253.7	117.6
Centre	3.9	2.2	3.3	177.3	118.9
Island	7.3	6.7	8.8	108.2	82.1

2.2 Cumulative Elongation (Table 4b)

Cumulative elongation over the period end-December 2020 to end-June 2021 amounted to 170.1 cm in the North, 184.2 cm in the East, 195.5 cm in the South, 167.9 cm in the West and 156.0 cm in the Centre. These cumulative growths were below those of 2020 in sectors North, South and Centre, but higher in the other two sectors. For the same period, growth was higher than the normal in the South and Centre but lower than the normal in the other sectors. Island-wise, the cumulative elongation of 180.7 cm lagged behind those of the 2020 crop (182.3 cm) and the normal (191.2 cm).

Table 4b. Cumulative elongation at end-June 2021.

Sectors	Cumulative elongation (cm) at end- June			End-June 2021 as % of	
	2021	2020	Normal	2020	Normal
North	170.1	176.5	200.5	96.4	84.9
East	184.2	183.3	188.2	100.5	97.9
South	195.5	198.1	193.8	98.7	100.9
West	167.9	163.8	190.5	102.5	88.1
Centre	156.0	157.8	153.4	98.9	101.7
Island	180.7	182.3	191.2	99.1	94.5

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

At end-June 2021, total stalk height stood at 189.1 cm in the North, 237.3 cm in the East, 237.4 cm in the South, 196.4 cm in the West and 197.2 cm in the Centre, giving an island average of 219.8 cm. These values, compared to the corresponding period in 2020, were lower by 27.2 cm in the North, 7.3 cm in the West and 4.4 cm in the Centre but was higher in the East and South by 13.6 and 6.0 cm, respectively. Compared to the normal, total stalk height in June 2021 was still lagging by 36.2 cm in the North and 28.7 cm in the West. In the other sectors, it exceeded the normal by 1.7 cm in the East, 5.9 cm in the South and 0.7 cm in the Centre.

At island level, the total stalk height of 219.8 cm at end of June 2021 was slightly lower than that of the corresponding period in 2020 and lagging behind the normal by 8.4 cm (3.7%).

Table 4c. Total stalk height at end-June 2021.

Sectors	Stalk height (cm) at end-June			End-June 2021 as % of	
	2021	2020	Normal	2020	Normal
North	189.1	216.3	225.3	87.4	83.9
East	237.3	223.7	235.6	106.1	100.7
South	237.4	231.4	231.5	102.6	102.6
West	196.4	203.7	225.1	96.4	87.3
Centre	197.2	201.6	196.5	97.8	100.4
Island	219.8	220.7	228.2	99.6	96.3

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

Assessment of sucrose content during the last week of June 2021 was carried out in cane samples taken 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.

The sucrose content at the end of June 2021 was 9.9% in the North, 10.3% in the East, 10.4% in the South, 10.0% in the West and 9.8% in the Centre. Compared to the corresponding period in 2020, *richesse* at end-June 2021 was comparable in sector East but lagged behind in the other sectors by 1.9° in the North, 0.4° in the South, 1.1° in the West and 0.2° in the Centre. Sucrose content at the end of June 2021 was lower than that of the corresponding period in 2019 in all sectors except in the South.

Sucrose content has improved in all sectors from end-May 2021 to end-June 2021. The highest increment of 3.6° was observed in the North followed by 3.1° in the West, 1.9° in the South, 1.8° in the East and 0.6° in the Centre. On average for the island, the increase in *richesse* was 2.3° in 2021 compared to 1.2° for the corresponding period in 2020 and 2019.

Island-wise, the *richesse* of 10.2% recorded at end of June 2021 was lagging behind those of 2020 by 0.6° and 2019 by 0.4°.

Table 5a. Average Pol % cane (richesse) in different varieties at end-June 2021.

Variety	North	East	South	West	Centre
M 52/78			13.0		13.0
M 703/89		10.8			
R573	11.9		11.7	9.9	
M 2256/88	11.7				
R575			11.5	10.6	
M 387/85		12.1	11.0		10.5
M 1246/84	9.5	10.6			
M 1989/99	9.0		9.5		
M 2283/98			10.9		
M 1176/77	11.2	11.7	10.5	11.1	10.1
M 1861/89			10.7		
M 2593/92	10.1	11.2	10.8	9.9	
M 1400/86	9.5	10.2	9.7	9.1	9.8
M 2502/99		9.9			
R579	9.7	9.5	9.7	10.0	9.6
M 1672/90	9.1	8.8	10.0		
R570	8.7	9.5	9.3	9.6	
M 915/05			10.4	10.3	10.7
M 683/99				10.2	
M 216/02			11.5		
M 1561/01			11.7		
M 1256/04			9.3		
M 1002/02				11.1	

Table 5b. Comparison of Pol % cane (richesse) at the end of May and June 2019, 2020 and 2021.

Sectors	MAY			JUNE		
	2019	2020	2021	2019	2020	2021
North	9.2	10.0	6.3	10.7	11.8	9.9
East	9.2	9.2	8.5	10.7	10.3	10.3
South	9.8	9.5	8.5	10.4	10.8	10.4
West	9.7	9.7	6.9	11.1	11.1	10.0
Centre	9.0	9.8	9.2	10.0	10.0	9.8
Island	9.4	9.6	7.9	10.6	10.8	10.2

4. CROP PRODUCTIVITY 2021 (Table 6)

As at 3 July 2021, 957 ha representing about 3.4% of miller-planters' land were harvested compared to 1014 ha (3.4%) at the same period last year. Sector-wise and for miller-planters only, harvested area reached 8.2% in the East and 14.6 % in the Centre. Harvest has started in sector North (3.4 ha) and West (9.0 ha) but not in the South. An analysis of cane productivity based on the harvest statistics for miller-planters in sectors East and Centre follows.

4.1 Crop productivity 2021 (Table 6)

Cane productivity for the island (based on sectors East and Centre) as at end June 2021 amounted to 72.4 TCH and was lower than that recorded in 2020 (79.4 TCH) by 7.0 TCH (9 %). The cane productivity to-date recorded in the East was 76.8 TCH and the Centre was 62.4 TCH. Compared to the same period last year, cane productivity recorded to-date was lagging behind in these sectors by 3.1 TCH in the East and 6.7 TCH in the Centre.

The recorded island extraction rate of 8.35% was lower than that of the corresponding period in 2020 (9.14%) by 0.79°. The extraction rate recorded was 8.46% in the East and 8.12% in the Centre. These figures were lower than those of the corresponding period in 2020 by 0.65° in the East and 1.12° in the Centre.

Island-wise, the recorded sugar productivity of 6.05 TSH lagged behind that of the corresponding period in 2020 (7.26 TSH) by 1.21 tonne (17%). The sugar productivity in the East and Centre was 6.50 TSH and 5.07 TSH, respectively. Sugar productivity at end-June 2021 was lagging behind those of the corresponding period in 2020 by 0.78 TSH in the East and 1.31 TSH in the Centre.

Table 6. Crop productivity as at end-June for the 2020 and 2021 crops in sectors East and Centre, and over the island.

Sector	Cane Productivity (TCH)		Extraction (%)		Sugar Productivity (TSH)	
	2020	2021	2020	2021	2020	2021
East	79.9	76.8	9.11	8.46	7.28	6.50
Centre	69.1	62.4	9.24	8.12	6.38	5.07
Island	79.4	72.4	9.14	8.35	7.26	6.05

5. CROP 2021

Climatic conditions that prevailed during the month of June 2021 were characterised by abundant rainfall in sectors East, South and Centre coupled with reduced solar radiation and below normal temperature amplitude. These conditions are considered neither favourable for optimum stalk growth nor for optimum sucrose accumulation. This is reflected in the stalk elongation recorded at island level at the end of June 2021 which was 82% of the normal and also *richesse* recorded over the island which was lower than that obtained during the corresponding period in 2020 and 2019. At end June 2021, only about 3.4% of miller planters' land has been harvested. The overall tendency observed, compared to 2020, was a lower cane productivity, extraction rate and sugar productivity in sectors East and Centre, and islandwise. However, this situation may change, depending on climatic factors in terms of dry and cold conditions in the coming months with improvement in sucrose accumulation and sugar productivity for the 2021 crop. More precise information would be available as harvest progresses in all sectors.

Figure 2. Stalk height at end- June 2021

