

MAURITIUS CANE INDUSTRY AUTHORITY

MAURITIUS SUGARCANE INDUSTRY RESEARCH INSTITUTE

Ref A 1/2023

13 June 2023

SUGAR CANE CROP 2023

Status: May 2023

1. CLIMATE

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

The island's average rainfall for the month of May 2023 amounted to 290 mm represented 178% of the long-term mean (LTM). Sector-wise, rainfall received in May 2023 was 148 mm in the North, 353 mm in the East, 349 mm in the South, 138 mm in the West and 380 mm in the Centre. These represented 164%, 171%, 179%, 329% and 186% of their respective LTM of the month.

Cumulative rainfall from October 2022 to May 2023 amounted to 1575 mm for the island, i.e. 94% of the LTM. During that period, 851 mm were recorded in the North, 1935 mm in the East, 1720 mm in the South, 1138 mm in the West and 2182 mm in the Centre. These figures were lower than their respective LTM in the North, East and South sectors but higher than the LTM in the other two sectors.

Table 1a. Rainfall (mm) for the month of May for crop 2022, 2023 and the long term mean (LTM)

	North	East	South	West	Centre	Island
2022	76 (84)	174 (84)	189 (97)	17 (40)	207 (101)	147 (90)
2023	148 (164)	353 (171)	349 (179)	138 (329)	380 (186)	290 (178)
LTM	90	207	195	42	204	163

figures in brackets are % of LTM (1991-2020)

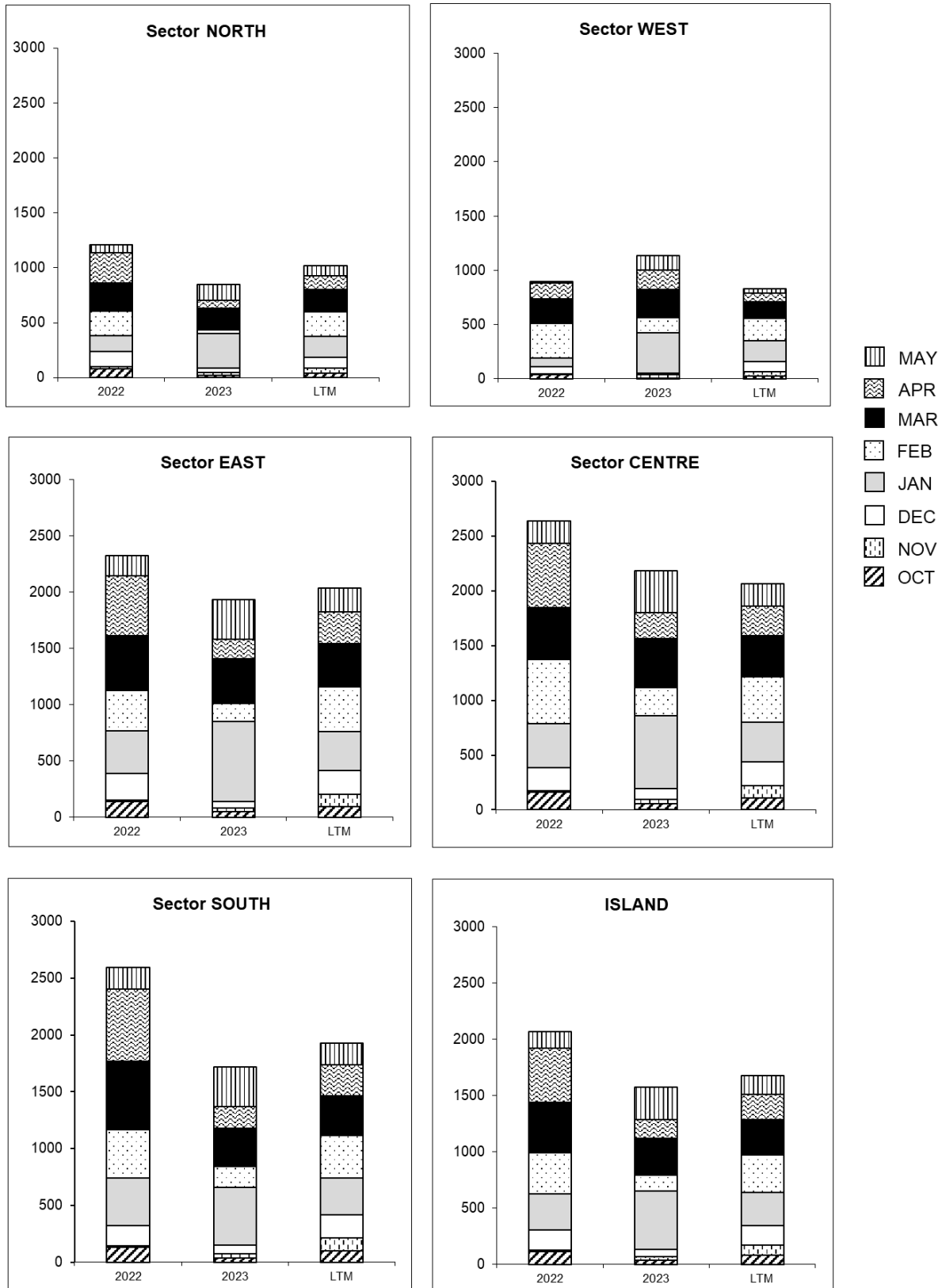
Table 1b. Cumulative rainfall (mm) from October 2022 to May 2023 for crop 2023 compared to that of crop 2022 and the LTM

	North	East	South	West	Centre	Island
2022	1211 (119)	2322 (114)	2591 (134)	897 (108)	2637 (128)	2068 (124)
2023	851 (83)	1935 (95)	1720 (89)	1138 (137)	2182 (106)	1575 (94)
LTM	1020	2034	1930	830	2066	1672

figures in brackets are % of LTM

[Source: Mauritius Meteorological Services]

Figure 1. Monthly rainfall (mm) for the period October 2022 to May 2023 for the 2023 crop compared to the corresponding period of the 2022 crop and to the long term mean (LTM).



1.2 Air Temperature (Table 2)

Air temperature data recorded during the month of May 2023 on the four MSIRI agro-meteorological stations are given in Table 2.

Table 2. Air temperature recorded on MSIRI agro-meteorological stations in May 2023

Stations	Maximum (°C)		Minimum (°C)		Amplitude (°C)	
	May 2023	+ / -	May 2023	+ / -	May 2023	+ / -
Ferret	28.6	+0.6	20.3	+1.3	8.3	-0.7
Réduit	27.2	+1.8	18.4	+0.5	8.8	+1.3
Union Park	26.6	+1.9	19.6	+1.5	7.0	+0.4
Belle Rive	25.7	+0.7	18.6	+1.6	7.1	-0.9

+ / - Deviation from the Normal (1991-2020)

The mean maximum temperature was above normal at all stations, the difference ranging from 0.6°C at Ferret to 1.9°C at Union Park. Similarly, the mean minimum temperature exceeded the normal at all stations. The resulting mean temperature amplitude lagged behind the normal at Ferret and Belle Rive but was higher than the normal at Réduit and Union Park. Generally, above normal temperature amplitude is 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 2023 were below normal at Réduit and Belle Rive, close to normal at Ferret and above normal Ferret. Recorded bright sunshine compared to the normal amounted to 100% at Ferret, 92% at Réduit, 104% at Union Park and 73% at Belle Rive.

Table 3. Sunshine duration (h) recorded on MSIRI agro-meteorological stations in May 2023.

Station	May 2023	Normal	% of Normal
Ferret	235	234	100
Réduit	203	220	92
Union Park	169	162	104
Belle Rive	143	196	73

2. STALK HEIGHT (*Table 4a, 4b and Figure 2*)

During the last week of May 2023, stalk height was assessed at the 55 sites earmarked in the five sugar cane growing areas of the island. These selected sites are representative of the various agro-climatic zones, varieties and crop categories. Data collected were compared with those of the corresponding period in May 2022 and to the normal, referred to as the mean of the five best cane yielding crops during the period 2013 to 2022.

2.1 *Stalk elongation (Table 4a)*

Stalk elongation during the month of May 2023 was superior to that of the same period in 2022 in all sectors.

Table 4a. Stalk elongation during the month of May 2023

Sectors	Stalk elongation (cm)			May 2023 as % of	
	May 2023	May 2022	Normal	2022	Normal
North	29.3	20.9	21.4	140.2	136.9
East	22.6	16.6	14.2	136.1	159.2
South	27.1	18.2	19.8	148.9	137.1
West	28.5	13.7	21.1	208.0	135.2
Centre	16.4	8.7	8.5	188.5	193.9
Island	25.8	17.1	18.0	150.9	143.3

During the month of May 2023, the North sector recorded the highest stalk growth of 29.3 cm followed by the West (28.5 cm), the South (27.1 cm), the East (22.6 cm) and the Centre (16.4 cm). These figures exceeded the normal by 7.9 cm in the North, 8.4 cm in the East, 7.3 cm in the South, 7.4 cm in the West and 7.9 cm in the Centre. The island stalk elongation of 25.8 cm in May 2023 was higher than those of May 2022 and the normal by 8.7 cm and 7.8 cm, respectively.

2.2 *Cumulative Elongation (Table 4b)*

Cumulative stalk growth from end-December 2022 to end-May 2023 was 169.5 cm in the North, 193.7 cm in the East, 207.2 cm in the South, 176.5 cm in the West and 149.7 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 the normal in the East by 11.8 cm and the South by 23.8 cm, comparable in the Centre but lagged behind the normal in the North by 19.7 cm and the West by 5.2 cm. Island-wise the cumulative elongation of 186.8 cm in May 2023 was higher than that of the 2022 crop by 17.1 cm (10.1 %) and the normal by 5.4 cm (3 %).

Table 4b. Cumulative elongation at end-May 2023.

Sectors	Cumulative elongation (cm) at end- May			End-May 2023 as % of	
	2023	2022	Normal	2022	Normal
North	169.5	166.7	189.2	101.7	89.6
East	193.7	179.4	181.9	108.0	106.5
South	207.2	177.5	183.4	116.7	113.0
West	176.5	159.5	181.7	110.7	97.2
Centre	149.7	123.7	148.5	121.0	100.8
Island	186.8	169.7	181.4	110.1	103.0

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

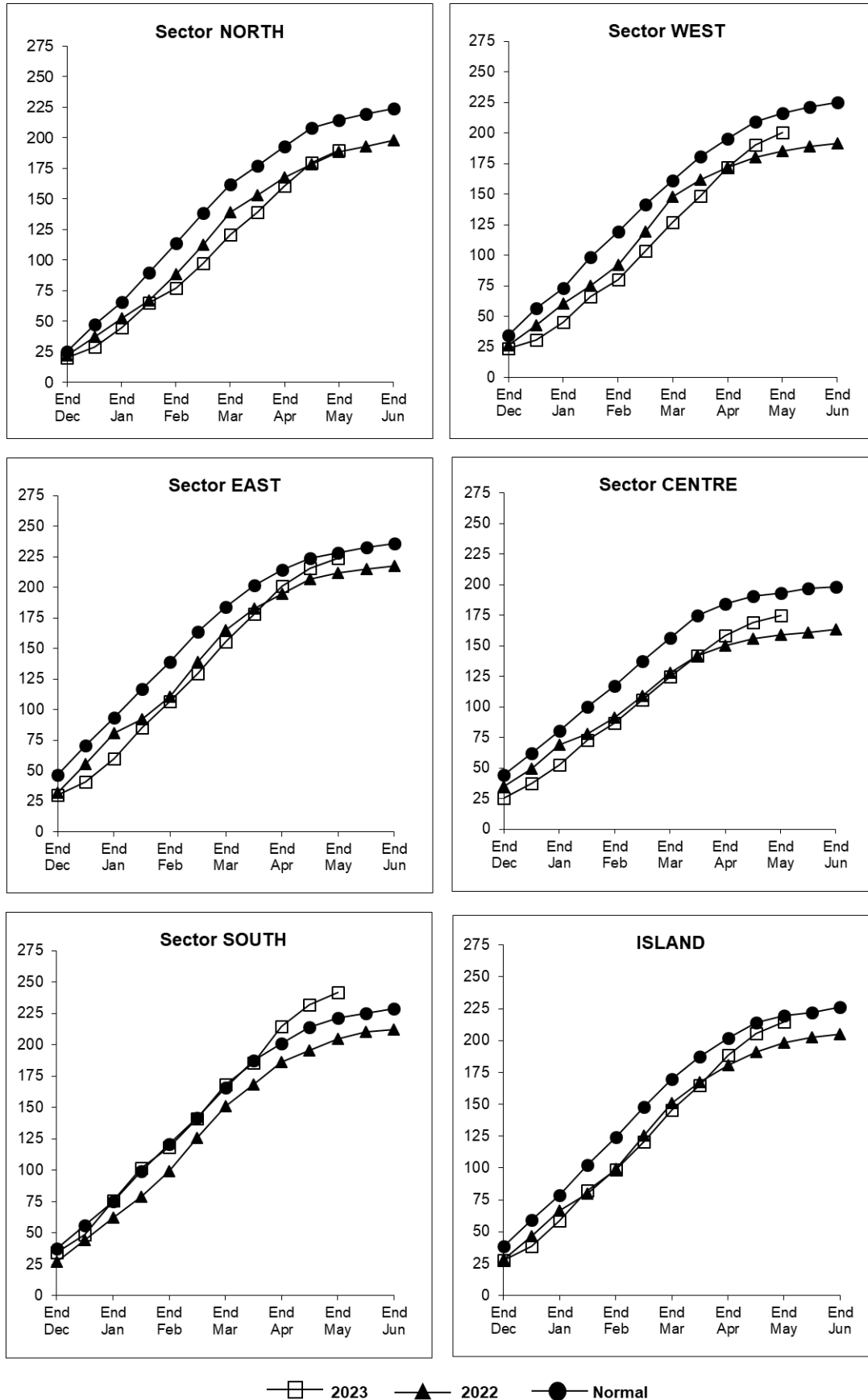
Total stalk height recorded at end-May 2023 was 189.9 cm in the North, 223.5 cm in the East, 241.6 cm in the South, 200.5 cm in the West and 174.9 cm in the Centre giving an island average of 214.7 cm. When compared to corresponding period of last year, stalk height to-date was higher in all sectors. Total stalk height at end-May 2023 as compared to the normal was higher only in the South by 20.4 cm. In the other sectors it lagged behind the normal, the difference ranging from 4.9 cm in the East to 24.8 cm in the North.

At island level, the total stalk height at end of May 2023 exceeded that of last year by 16.6 cm (8.4 %) but lagged behind the normal by 5.2 cm (2.4 %).

Table 4c. Total stalk height at end-May 2023

Sectors	Stalk height (cm) at end-May			End-May 2023 as % of	
	2023	2022	Normal	2022	Normal
North	189.9	188.6	214.7	100.7	88.4
East	223.5	211.5	228.4	105.7	97.9
South	241.6	204.8	221.2	118.0	109.2
West	200.5	185.5	216.2	108.1	92.7
Centre	174.9	158.8	193.0	110.1	90.6
Island	214.7	198.1	219.9	108.4	97.6

Figure 2. Stalk height at end-May 2023



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 May 2023. 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 past two years.

Table 5a. Average Pol % cane (richesse) at end-May 2023.

Variety	North	East	South	West	Centre
M 52/78			10.3		10.2
R573	9.3	11.0	8.8	8.4	9.7
M 2256/88	8.5	9.8			
R575			9.3	8.7	
M 387/85			10.8		9.1
M 1989/99	7.7		8.5		
M 2283/98			9.1		
M 1176/77	7.8	11.7	8.8	8.1	9.4
M 1861/89			8.8		
M 2593/92	7.8	7.6	8.4	6.9	
M 1400/86	6.5	8.0		5.8	8.2
M 2502/99		8.4			
R579	6.6	8.4	8.9	8.0	8.5
M 1672/90	6.4		8.8		
R570	6.4	8.4	7.4	4.7	
M 915/05	6.9			7.7	6.7
M 683/99	5.7			6.4	
M 216/02	8.6		9.6		
M 1392/00		6.6	9.1		
M 1002/02	6.7				
M 3779/06			9.7		

Table 5b. Comparison of Pol % cane (richesse) at the end of April and May 2021, 2022 and 2023.

Sectors	April			May		
	2021*	2022	2023	2021	2022	2023
North	-	4.8	5.4	6.3	7.1	6.9
East	-	6.1	6.2	8.5	8.4	8.9
South	-	6.7	6.1	8.5	8.1	8.9
West	-	5.4	4.7	6.9	9.0	7.0
Centre	-	6.7	6.8	9.2	8.6	8.8
Island	-	6.0	5.9	7.9	8.1	8.2

* No sampling done due to Covid19 lockdown imposed

At the end of May 2023, the *richesse* was 6.9% in the North, 8.9% in both the East and South, 7.0% in the West and 8.8% in the Centre. Compared to the corresponding period in 2022, sucrose content at end-May 2023 was higher in the East by 0.5°, the South by 0.8° and Centre by 0.2° but lagged behind by 0.2° in the North and 2.0° in the West. Sucrose content at the end of May, for the present crop, was higher than that of the corresponding period in 2021 in all sectors except in the Centre.

Sucrose content has improved in all sectors from end-April 2023 up to end-May 2022. The highest increment of 2.8° was observed in the South followed by 2.7° in the East, 2.3° in the West, 2.0° in the Centre and 1.5° in the North. On average for the island, the increase in *richesse* was 2.3° in 2023 and was higher than the 2.1° for the corresponding period in 2022.

Island-wise, the *richesse* of 8.2% recorded at end of May 2023 was higher than that of the corresponding period in 2022 and 2021.

4.0 CROP 2023

The weather conditions that prevailed during the month of May 2023 were characterised by abundant rainfall over the island, above normal air temperature and ample sunshine duration at most stations. The overall weather conditions were conducive to the process of photosynthesis and growth of the crop. This is reflected in stalk elongation recorded for the month which was superior to the normal in all sectors and over the island. The deficit in total stalk height for the island which was 6% in April 2023 has reached 2.4% of the normal.

Sucrose accumulation in May 2023 over the whole island is considered satisfactory. As the crop possesses a high capacity for rapid sucrose accumulation under favourable agroclimatic conditions and with the onset of winter, sucrose accumulation is expected to increase in the coming weeks.