

MAURITIUS CANE INDUSTRY AUTHORITY

MAURITIUS SUGARCANE INDUSTRY RESEARCH INSTITUTE

Ref A 1/2018

14 May 2018

SUGAR CANE CROP 2018

Status: End April 2018

1. CLIMATE

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

Rainfall recorded during April 2018 was well above normal and was associated with instability zones coupled with the passage of tropical storm *Fakir* during the last week of the month. The island's average rainfall of 430 mm during April 2018 represented 205% of the long-term mean (LTM) of 210 mm. Rainfall for the month of April exceeded the LTM in all sectors by 126 mm (92%) in the North, 342 mm (145%) in the East, 228 mm (92%) in the South, 29 mm (31%) in the West and 243 mm (88%) in the Centre.

The cumulative rainfall over period October 2017 to April 2018 reached 1486 mm in the North, 2605 mm in the East, 2201 mm in the South, 1213 mm in the West and 2871 mm in the Centre, and represented 158%, 176%, 134%, 160% and 151% of the respective LTM. The island average of 2128 mm for this period represented 153% of the LTM (1390 mm).

Table 1a. Rainfall (mm) for the month of April for crops 2017, 2018 and the long-term mean (LTM)

	North	East	South	West	Centre	Island
2017	187 (136)	394 (167)	323 (130)	61 (66)	380 (138)	295 (141)
2018	263 (192)*	578 (245)	477 (192)	122 (131)	519 (188)	430 (205)
LTM	137	236	249	93	276	210

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

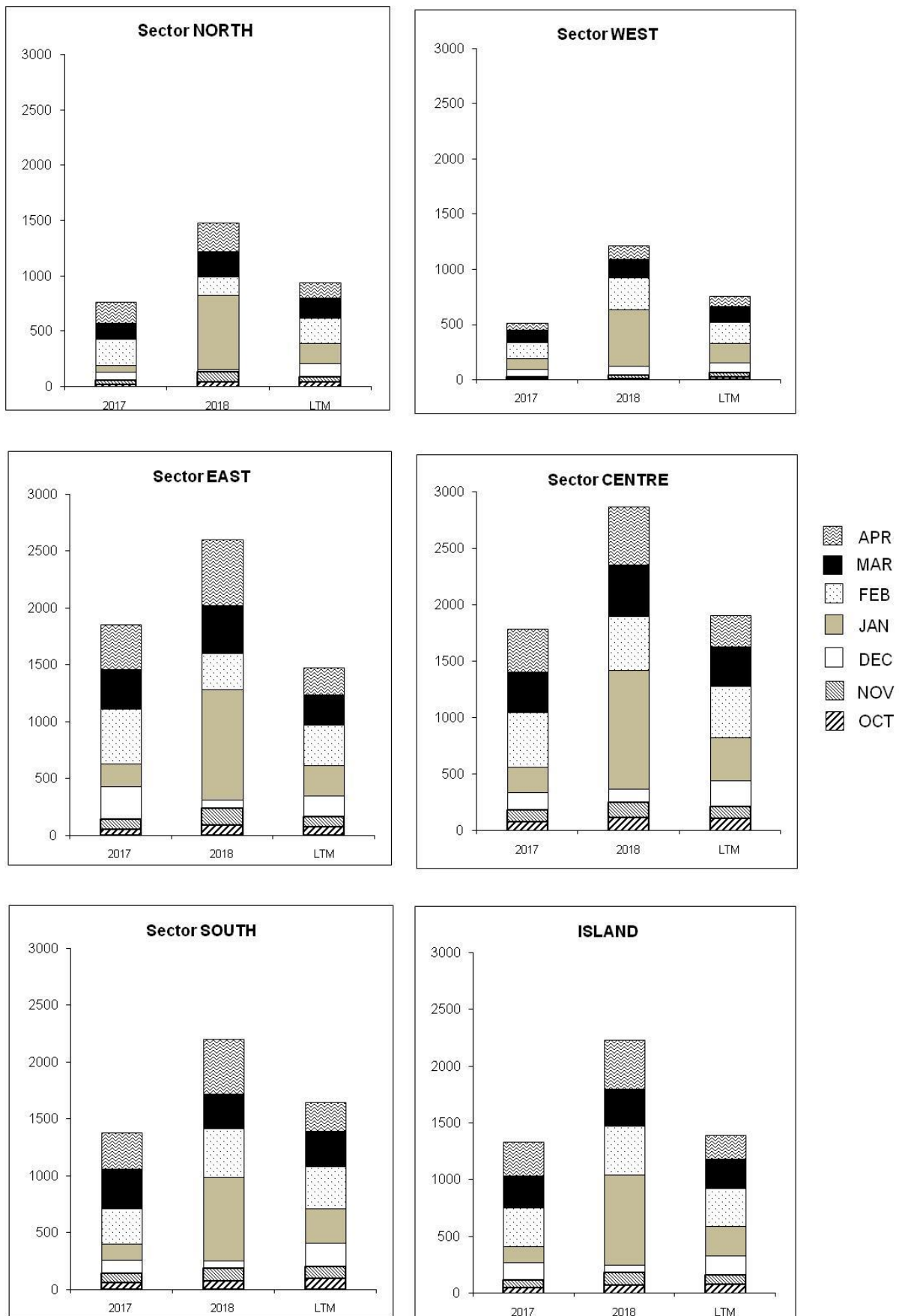
Table 1b. Cumulative rainfall (mm) from October 2017 to April 2018 for crop 2018 compared to that of crop 2017 and the long-term mean (LTM)

	North	East	South	West	Centre	Island
2017	763 (81)	1853 (125)	1384 (84)	510 (67)	1784 (94)	1334 (96)
2018	1486 (158)*	2605 (176)	2201 (134)	1213 (160)	2871 (151)	2128 (153)
LTM	939	1479	1645	756	1907	1390

* figures in brackets are % of LTM

[Source : raw provisional data from Meteorological Services]

Figure 1. Monthly rainfall (mm) for the period October 2017 to April 2018 for the 2018 crop compared to the corresponding period of the 2017 crop and to the long-term mean (LTM).



1.2 Air Temperature and Sunshine duration (Table 2)

Data on maximum and minimum temperatures recorded during the month of April 2018 on MSIRI agro-meteorological stations are given below.

Table 2. Maximum and minimum air temperatures recorded on MSIRI agro-meteorological stations in April 2018

Stations	Maximum (°C)		Minimum (°C)		Amplitude (°C)	
	April 2018	DevN*	April 2018	DevN*	April 2018	DevN*
Ferret	29.3	-0.4	21.8	+0.8	7.5	-1.2
Réduit	27.5	+0.7	20.5	+0.2	7.0	+0.5
Belle Rive	26.6	+0.2	19.6	+1.0	7.0	-0.8
Union Park	27.0	+1.1	20.5	+0.8	6.5	+0.3

* Deviation from the Normal (1981-2010)

Mean maximum temperature during April 2018 was above normal at all stations except at Ferret. Mean minimum temperature, compared to the normal, was higher at all stations ranging from 0.2° at Réduit to 1.0° at Belle Rive. The resulting mean amplitude exceeded the normal by 0.5° at Réduit and 0.3° at Union Park but lagged behind the normal by 1.2 ° at Ferret and 0.8° at Belle Rive. Above normal maximum temperature favours sucrose production through photosynthesis while higher temperature amplitudes are conducive to sucrose accumulation.

1.3 Sunshine (Table 3)

Data from the MSIRI agro-meteorological stations showed that sunshine hours during April 2018 were comparable at Ferret, below normal at Réduit and Belle Rive but above normal at Union Park. Recorded bright sunshine as a percentage of the normal amounted to 100 at Ferret, 98 at Réduit, 97 at Belle Rive and 105 at Union Park.

Table 3. Sunshine duration (h) recorded on MSIRI agro-meteorological stations in April 2018

Station	April 2018	Normal	% of Normal
Ferret	233	232	100
Réduit	206	211	98
Belle Rive	186	192	97
Union Park	160	152	105

2. STALK HEIGHT

Stalk height was measured during the last week of April 2018 at 48 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 April 2017 and to the mean of the five best cane yielding crops of the period 2008 to 2017 in each sector (referred to as normal).

2.1 Stalk elongation (Table 4a)

Stalk elongation during the month of April 2018 was lower than that of the same period in 2017 in all sectors. During the month of April 2018, highest stalk growth was observed in the South with 35.3 cm followed by the North (34.8 cm), West (34.6 cm), East (29.3 cm) and Centre (27.9 cm). The elongation rates of April 2018 lagged behind the normal in the North by 1.9 cm, the East by 3.9 cm and the Centre by 2.0 cm. It was comparable to the normal in the South but exceeded the normal by 1.4 cm in the West.

The island stalk elongation of 32.8 cm in April 2018 lagged behind that of the corresponding period in 2017 (40.2 cm) by 7.4 cm and was comparable to the normal.

Table 4a. Stalk elongation during the month of April

Sectors	Stalk elongation (cm) during April			April 2018 as % of	
	2018	2017	Normal	2017	Normal
North	34.8	45.9	36.7	75.8	94.8
East	29.3	36.5	33.2	80.3	88.3
South	35.3	42.4	35.2	83.3	100.2
West	34.6	39.5	33.2	87.6	104.1
Centre	27.9	29.9	29.9	93.3	93.2
Island	32.8	40.2	33.1	81.5	99.0

2.2 Cumulative Elongation (Table 4b)

The cumulative stalk growth from end-December 2017 to end-April 2018 amounted to 165.2 cm in the North, 156.3 cm in the East, 166.3 cm in the South, 165.4 cm in the West and 136.8 cm in the Centre. Compared to the corresponding period in 2017, these cumulative growths were higher in the South by 4.4 cm and West by 20.3. It was comparable in the North whereas in the East and Centre it lagged behind by 18.7 cm and 11.5 cm, respectively. For the same period, cumulative growth was higher than the normal in the North by 1.6 cm but lower than the normal in the other sectors ranging from 1.2 cm in the West to 7.5 cm in the East. Island-wise the cumulative elongation of 161.0 cm in April 2018 was lower than that of the 2017 crop (164.1 cm) by 1.9 % and the normal (162.7 cm) by 1.0 % .

Table 4b. Cumulative elongation at end-April 2018.

Sectors	Cumulative elongation (cm) at end- April			End-April 2018 as % of	
	2018	2017	Normal	2017	Normal

North	165.2	165.6	163.6	99.8	101.0
East	156.3	175.0	163.8	89.3	95.4
South	166.3	161.9	170.3	102.7	97.6
West	165.4	145.1	166.6	114.0	99.3
Centre	136.8	148.3	143.6	92.2	95.3
Island	161.0	164.1	162.7	98.1	99.0

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

Total stalk height at the end of April 2018 stood at 184.2 cm in the North, 210.0 cm in the East, 189.3 cm in the South, 207.4 cm in the West and 180.4 cm in the Centre giving an island average of 195.9 cm. Compared to the corresponding period last year, stalk height was higher by 33.4 cm in the West, comparable in the North but was lagging behind in the other sectors by 10.6 cm in the East, 13.0 cm in the South and 10.8 cm in the Centre. Total stalk height at end-April 2018 was above normal by 2.5 cm in the West but was inferior to the normal in the remaining sectors ranging from 1.9 cm in the East to 26.2 cm in the South.

At island level, total stalk height of 195.9 cm at end of April 2018 was lower than those of the corresponding period in 2017 by 4.8 cm (2.4 %) and the normal by 9.9 cm (4.8 %).

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

Sectors	Stalk height (cm) at end-April			End-April 2018 as % of	
	2018	2017	Normal	2017	Normal
North	184.2	185.0	188.3	99.6	97.8
East	210.0	220.6	211.9	95.2	99.1
South	189.3	202.3	215.5	93.6	87.8
West	207.4	174.0	204.9	119.2	101.2
Centre	180.4	191.2	186.5	94.4	96.7
Island	195.9	200.7	205.8	97.6	95.2

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 analyzed for sucrose content during the last week of April 2018. 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-April 2018.

Sectors	M 52/78	M 703/89	R 573	M 695/69	R 575	M 387/85	M 1246/84	M 2256/88	M 2593/92	M 2283/98	M 1400/86	M 1176/77	M 1861/89	R 579	M 1672/90	R 570
North			8.1				7.0	9.2	6.7		4.2	6.0		6.7	5.7	5.0
East		8.3	10.0			9.1			7.8		6.2	8.7		6.4		5.3
South	9.5		8.7	7.2	8.1	8.2			7.1	5.9	6.0	7.7	6.8	6.7	7.2	4.9
West			9.5		8.6				7.3		6.8	8.9		7.4		4.6
Centre	8.7	8.6				7.7					6.4	6.7		6.1		

Table 5b. Comparison of Pol % cane (richesse) at the end of April 2016, 2017 and 2018.

Sectors	APRIL		
	2016	2017	2018
North	8.5	6.2	6.0
East	8.8	6.8	7.3
South	8.9	7.4	7.2
West	6.9	6.0	7.7
Centre	8.8	6.2	7.4
Island	8.6	6.7	7.0

At the end of April 2018, the derived *richesse* reached 6.0% in the North, 7.3% in the East, 7.2% in the South, 7.7% in the West and 7.4% in the Centre. Compared to the corresponding period in 2017, sucrose content at end-April 2018 was higher by 0.5° in the East, 1.7° in the West and 1.2° in the Centre whereas in the other two sectors, it was slightly below by 0.2°. Sucrose content at the end of April, for the present crop, was also lower than that of the corresponding period in 2016 in all sectors except in the West.

Island-wise, the *richesse* of 7.0% recorded at end of April 2018 was slightly higher than that of the corresponding period in 2017 by 0.3° but lagged behind that of 2016 by 1.6°.

4.0 CROP 2018

The weather during April 2018 was characterized by heavy rainfall in all sectors over short period associated with instability zones and with the passage of tropical storm *Fakir* during the last week of the month. Although air temperature was generally above normal, solar radiation was close to normal at most stations. The climatic conditions were conducive to crop growth and this is reflected in the stalk elongation of April 2018 being comparable to the normal. As observed in March 2018, total stalk height for the island in April 2018 remain 5% below normal. With winter conditions setting in, no major improvement in stalk elongation is expected.

Sucrose accumulation is at a level which is slightly better than that of last year but remained below that of 2016. Sucrose accumulation rate is expected to increase in the coming weeks as winter conditions start to set in.

Figure 2. Stalk height (cm) at end-April 2018

