

# MAURITIUS CANE INDUSTRY AUTHORITY

## MAURITIUS SUGARCANE INDUSTRY RESEARCH INSTITUTE

Ref A 1/2018

13 April 2018

### SUGAR CANE CROP 2018

Status: End March 2018

#### 1. CLIMATE

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

The month of March 2018 was characterized by short duration heavy localised rainfall associated with convective cloud built-up during the day. The island's average rainfall of 325 mm over the sugar cane areas during March 2018 represented 125% of the long-term mean (LTM) (261 mm). Rainfall for the month of March was comparable to the long-term mean in the South but exceeded the LTM by 52 mm (29%) in the North, 154 mm (57%) in the East, 30 mm (22%) in the West and 99 mm (28%) in the Centre.

Rainfall over the period October 2017 to March 2018 cumulated to 1223 mm in the North, 2027 mm in the East, 1724 mm in the South, 1091 mm in the West and 2352 mm in the Centre, and represented 152%, 163%, 123%, 165% and 144% of the respective LTM. The island average of 1698 mm for this period represented 144% of the LTM (1181 mm).

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

	North	East	South	West	Centre	Island
<b>2017</b>	145 (81)	343 (126)	347 (111)	112 (81)	358 (101)	281 (108)
<b>2018</b>	<b>231</b> (129)*	<b>426</b> (157)	<b>309</b> (99)	<b>169</b> (122)	<b>453</b> (128)	<b>325</b> (125)
<b>LTM</b>	179	272	312	139	354	261

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

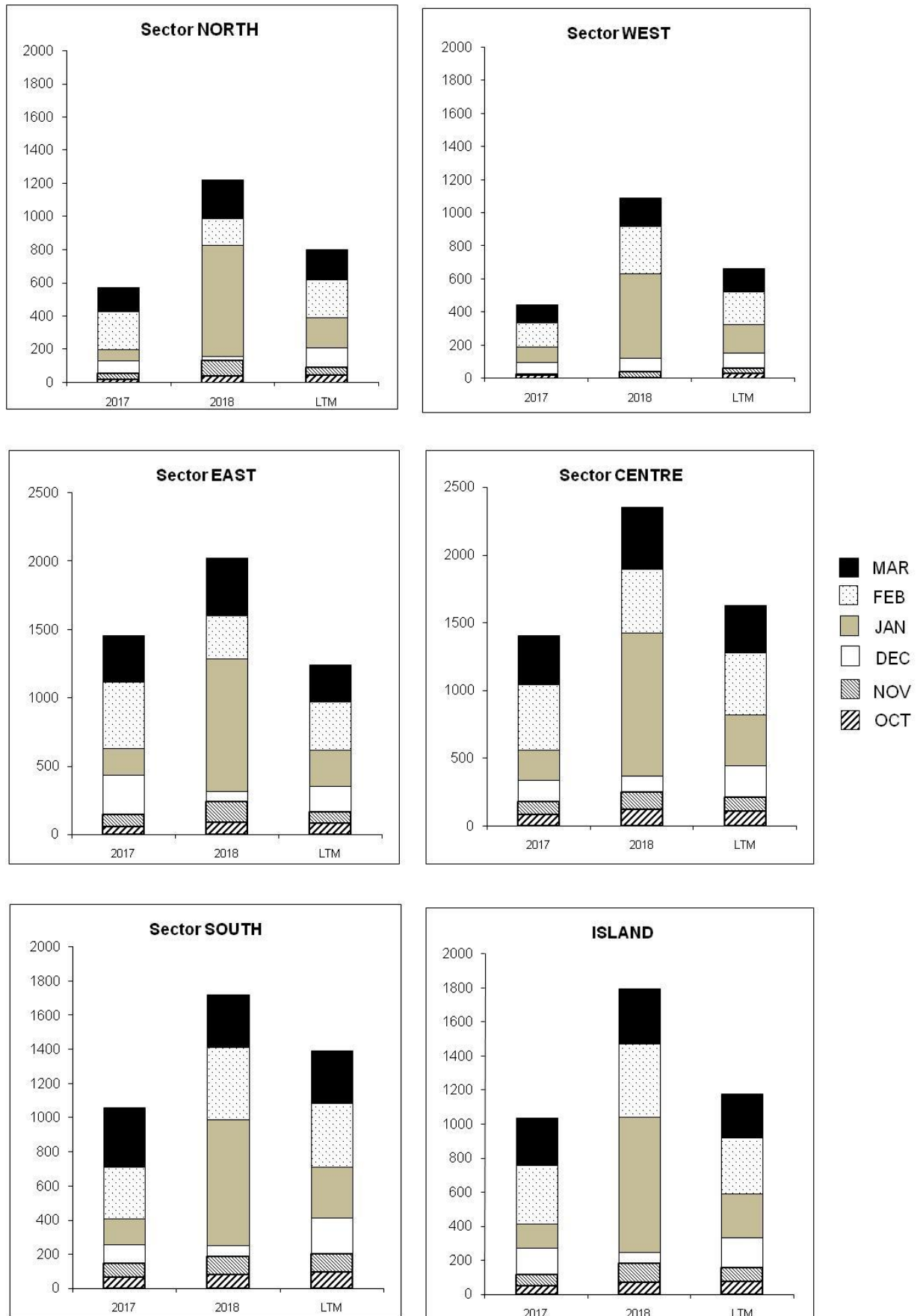
**Table 1b. Cumulative rainfall (mm) from October 2017 to March 2018 for crop 2018 compared to that of crop 2017 and the long-term mean (LTM).**

	North	East	South	West	Centre	Island
<b>2017</b>	576 (72)	1459 (117)	1061 (76)	449 (68)	1404 (86)	1039 (88)
<b>2018</b>	<b>1223</b> (152)*	<b>2027</b> (163)	<b>1724</b> (123)	<b>1091</b> (165)	<b>2352</b> (144)	<b>1698</b> (144)
<b>LTM</b>	802	1243	1396	663	1631	1181

\* figures in brackets are % of LTM

[Source : raw provisional data from Meteorological Services]

**Figure 1. Monthly rainfall (mm) for the period October 2017 to March 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 together with sunshine duration recorded during the month of March 2018 on the four MSIRI agro-meteorological stations are summarized in table 2.

**Table 2. Air temperature and sunshine duration recorded on MSIRI agro-meteorological stations in March 2018.**

Stations	Maximum Temp (°C)		Minimum Temp (°C)		Sunshine hour	
	Mar 2018	DevN*	Mar 2018	DevN	Mar 2018	% Normal
<b>Ferret</b>	30.2	-0.4	23.4	+1.4	209	89
<b>Réduit</b>	28.8	+1.0	22.1	+0.8	194	85
<b>Belle Rive</b>	27.3	0.0	20.8	+1.3	135	71
<b>Union Park</b>	28.1	+1.2	21.6	+1.0	172	101

\* Deviation from the Normal (1981-2010)

The mean monthly maximum temperature in March 2018 exceeded the normal at Réduit and Union Park by +1.0°C and +1.2°C respectively. It was equal to the normal at Belle Rive but slightly lower than that of the normal at Ferret by -0.4°C. As for the mean minimum temperature, it exceeded the normal at all stations by more than +0.8°C.

Solar radiation during March 2018 was comparable to the normal at Union Park but was lagging behind the normal in the other three stations. The deficit in solar radiation varied from 11% at Ferret to 29% at Belle Rive. Although the monthly solar radiation at Union Park was comparable to the normal, nearly 14 days of March 2018 had below normal daily sunshine hours. In the other stations the number of days below the daily normal radiation stood at 15 at Ferret, 16 at Réduit and 22 at Belle Rive. Thus nearly half of the month of March 2018 received below normal daily solar radiation at Ferret, Réduit and Union Park whereas at Belle Rive nearly 71% of the month of March 2018 received below normal daily solar radiation. Below normal sunshine duration is usually not conducive to optimum rate of photosynthesis and crop growth.

## 2. STALK HEIGHT

Stalk height was measured during the last week of March 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 March 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 3a)

Stalk elongation during the month of March 2018 was lower than that of the same period in 2017 and the normal. During the month of March 2018, highest stalk growth was observed in the South with 46.0 cm followed by the North (43.4 cm), East (37.5 cm), Centre (33.3 cm) and West (31.8 cm). The elongation rates of March 2018 lagged behind the normal in all sectors by

9.0 cm in the North, 10.2 cm in the East, 4.4 cm in the South, 14.5 cm in the West and 13.3 cm in the Centre.

The island stalk elongation of 40.6 cm in March 2018 was inferior to both that of the corresponding period in 2017 (48.9 cm) by 8.3 cm and the normal (48.8 cm) by 8.2 cm.

**Table 3a. Stalk elongation during the month of March.**

Sectors	Stalk elongation (cm) during March			March 2018 as % of	
	2018	2017	Normal	2017	Normal
North	43.4	51.2	52.4	84.8	82.9
East	37.5	49.9	47.7	75.2	78.7
South	46.0	48.1	50.4	95.6	91.2
West	31.8	47.2	46.3	67.4	68.7
Centre	33.3	43.2	46.6	77.1	71.5
<b>Island</b>	<b>40.6</b>	<b>48.9</b>	<b>48.8</b>	<b>83.0</b>	<b>83.1</b>

## 2.2 Cumulative Elongation (Table 3b)

The cumulative stalk growth from end-December 2017 to end-March 2018 was 130.4 cm in the North, 127.0 cm in the East, 131.0 cm in the South, 130.8 cm in the West and 108.9 cm in the Centre. Compared to those in 2017, these cumulative growths were higher in the North by 10.7 cm, 11.5 cm in the South and 25.2 cm in the West whereas in the East and Centre it lagged behind by 11.5 cm and 9.5 cm respectively. For the same period, cumulative growth was higher than the normal in the North but lower than the normal in the other sectors ranging from 2.5 cm in the West to 4.7 cm in the Centre. Island-wise the cumulative elongation of 128.2 cm in March 2018 was higher than that of the 2017 crop (123.8 cm) by 3.5% and was comparable to the normal.

**Table 3b. Cumulative elongation at end-March 2018.**

Sectors	Cumulative elongation (cm) at end- March			End-March 2018 as % of	
	2018	2017	Normal	2017	Normal
North	130.4	119.7	126.9	108.9	102.7
East	127.0	138.5	129.8	91.7	97.9
South	131.0	119.5	135.1	109.6	97.0
West	130.8	105.6	133.3	123.9	98.1
Centre	108.9	118.4	113.6	92.0	95.8
<b>Island</b>	<b>128.2</b>	<b>123.8</b>	<b>129.6</b>	103.5	99.0

### 2.3 Total stalk height (Table 3c and Figure 2)

At the end of March 2018, total stalk height reached 149.4 cm in the North, 180.7 cm in the East, 154.0 cm in the South, 172.8 cm in the West and 152.5 cm in the Centre giving an island average of 163.1 cm. Compared to the corresponding period last year, stalk height was higher by 10.3 cm in the North and 38.3 cm in the West whereas in the other sectors it was lower by 3.4 cm in the East, 5.9 cm in the South and 8.8 cm in the Centre. Total stalk height at end-March 2018 was slightly above normal by 1.1 cm in the West and 2.0 cm in the East whereas in the other sectors, it lagged behind the normal by 2.2 cm in the North, 4.1 cm in the Centre and 26.3 cm in the South.

At island level, total stalk height of 163.1 cm at end of March 2018 was higher than that of the corresponding period in 2017 by 2.6 cm (1.6 %) but lower than the normal by 8.4 cm (4.9 %).

**Table 3c. Total stalk height at end-March.**

Sectors	Stalk height (cm) at end-March			End-March 2018 as % of	
	2018	2017	Normal	2017	Normal
North	149.4	139.1	151.6	107.4	98.5
East	180.7	184.1	178.7	98.2	101.1
South	154.0	159.9	180.3	96.3	85.4
West	172.8	134.5	171.7	128.5	100.7
Centre	152.5	161.3	156.6	94.5	97.4
<b>Island</b>	<b>163.1</b>	<b>160.5</b>	<b>171.5</b>	101.6	95.1

### 3. CROP 2018

The weather during March 2018 was characterized by heavy rainfall over short period with above normal rainfall in all sectors except the South. Although air temperature was generally above normal, solar radiation was below normal at most stations. The distribution pattern of solar radiation was such that more than half of the month of March 2018 received below normal daily solar radiation. This led to reduced rate of photosynthesis and sub optimal crop growth. This is reflected in stalk elongation of March 2018 being inferior to both that of March 2017 and the normal in all sectors of the island. Total stalk height for the island which was comparable to the normal in February 2018 is now nearly 5% below normal in March 2018. So long as favourable climatic conditions prevail, especially above normal solar radiation, during the remaining period of the growth phase, vigorous growth may be anticipated which may well enable full recovery in terms of total stalk height compared to the normal.

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

