

# MAURITIUS CANE INDUSTRY AUTHORITY

## MAURITIUS SUGARCANE INDUSTRY RESEARCH INSTITUTE

Ref A 1/2015

26 June 2015

### SUGAR CANE CROP 2015

Status: End May 2015

#### 1. CLIMATE

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

Rainfall recorded over the sugar cane areas during the month of May 2015 was above normal with an island average of 183 mm, representing 122% of the long-term mean of 150 mm. Above normal rainfall was recorded in sectors North, East and South with 132 mm, 232 mm and 211 mm, which represented 146%, 136% and 111% of the long-term mean respectively. In the West, the recorded 34 mm of rain during May 2015 was below the long-term mean while 200 mm recorded in the Centre was comparable to the long-term mean.

Rainfall for the period October 2014 to May 2015 cumulated to 1986 mm, which is higher by 28% than the island long-term mean of 1554 mm for this period. During the same period, a total of 1203 mm was recorded in the North, 2443 mm in the East, 2254 mm in the South, 1070 mm in the West and 2535 mm in the Centre. Compared to the respective long-term mean of these sectors, cumulative rainfall represented 115% in the North, 147% in the East, 121% in the South, 132% in the West and 120% in the Centre.

**Table 1a. Rainfall (mm) for the month of May for crops 2014, 2015 and the long term mean (LTM)**

	North	East	South	West	Centre	Island
<b>2014</b>	103 (112)	150 (88)	146 (77)	26 (53)	192 (96)	132 (88)
<b>2015</b>	<b>132</b> (146)*	<b>232</b> (136)	<b>211</b> (111)	<b>34</b> (69)	<b>200</b> (99)	<b>183</b> (122)
<b>LTM</b>	92	171	190	49	201	150

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

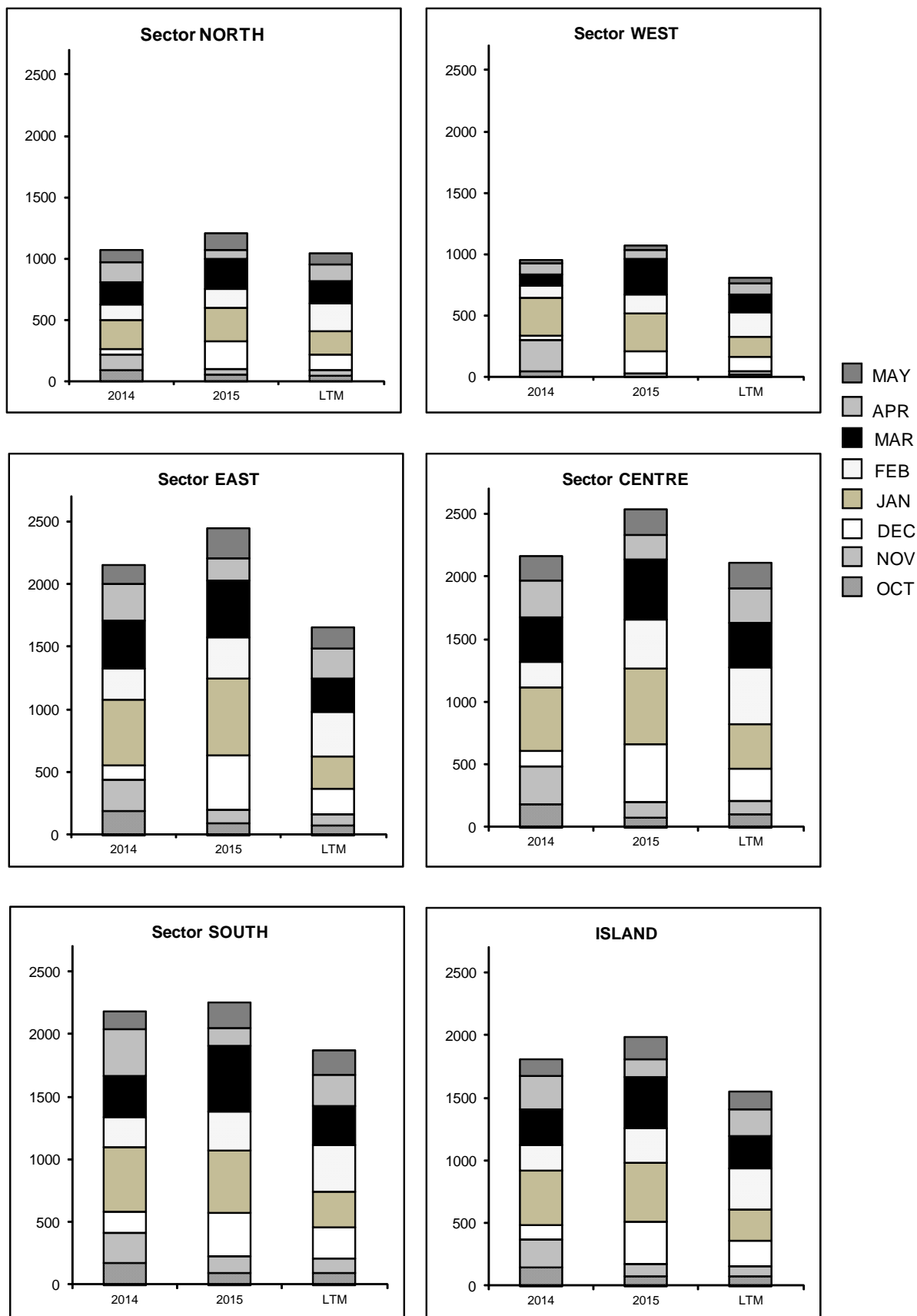
**Table 1b. Cumulative rainfall (mm) from October 2014 to May 2015 for crop 2015 compared to that of crop 2014 and the long term mean (LTM)**

	North	East	South	West	Centre	Island
<b>2014</b>	1071 (102)	2151 (130)	2182 (117)	955 (118)	2161 (103)	1811 (117)
<b>2015</b>	<b>1203</b> (115)*	<b>2443</b> (147)	<b>2254</b> (121)	<b>1070</b> (132)	<b>2535</b> (120)	<b>1986</b> (128)
<b>LTM</b>	1046	1659	1868	809	2107	1554

\* figures in brackets are % of LTM

[Source: raw provisional data from Meteorological Services]

**Figure 1. Monthly rainfall (mm) for the period October 2014 to May 2015 for the 2015 crop compared to the corresponding period of the 2014 crop and to the long term mean (LTM).**



### 1.2 Temperature (Table 2)

Data on maximum and minimum temperatures recorded during the month of May 2015 on MSIRI agro-meteorological stations are given below.

**Table 2. Maximum and minimum air temperatures recorded on MSIRI agro-meteorological stations in May 2015**

Stations	Maximum (°C)		Minimum (°C)		Amplitude (°C)	
	May 2015	DevN*	May 2015	DevN*	May 2015	DevN*
<b>Pamplemousses</b>	28.8	+0.7	19.7	+0.9	9.1	-0.2
<b>Réduit</b>	26.0	+0.9	18.3	+0.3	7.7	+0.6
<b>Belle Rive</b>	25.3	+0.5	17.6	+1.0	7.7	-0.5
<b>Union Park</b>	25.4	+1.1	18.9	+1.0	6.5	+0.1

\* Deviation from the Normal (1981-2010)

Mean maximum temperature during May 2015 was above normal at all stations ranging from 0.5° at Belle Rive to 1.1° at Union Park. Similarly, mean minimum temperature was above normal at all stations. The resulting mean amplitude exceeded the normal at Réduit, was comparable at Union Park, but below normal at Pamplemousses and Belle Rive.

### 1.3 Sunshine (Table 3)

Data from the MSIRI agro-meteorological stations showed that sunshine hours during May 2015 were above normal at Pamplemousses and Union Park but below normal at the other two stations. Recorded bright sunshine as a percentage of the normal amounted to 98 hours at both Réduit and Belle Rive, 103 at Pamplemousses and 111 at Union Park.

**Table 3. Sunshine duration (h) recorded on MSIRI agro-meteorological stations in May 2015**

Station	May 2015	Normal	% of Normal
<b>Pamplemousses</b>	244	238	103
<b>Réduit</b>	213	217	98
<b>Belle Rive</b>	199	204	98
<b>Union Park</b>	180	162	111

## 2. STALK HEIGHT

During the last week of May 2015, stalk height was measured at 53 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 to those at the corresponding period in May 2014 and with the mean of the five best cane yielding crops of the last ten years in each sector (referred to as normal).

### 2.1 Stalk elongation (Table 4a)

Stalk elongation during the month of May 2015 was 24.1 cm in the North, 20.4 cm in the East, 18.5 cm in the South, 23.7 cm in the West and 6.9 cm in the Centre. These growth increments exceeded those of 2014 by 5.2 cm in the North and by 8.8 cm in the East. Stalk elongation was similar to that of 2014 in the South but lagged behind those of 2014 in the West and in the Centre by 2.9 cm and 1.7 cm respectively. Compared to the normal for the corresponding period, growth was above normal in all sectors except in the Centre. The island stalk elongation of 20.0 cm was above that for both the corresponding period in 2014 by 3.5 cm (21.1%) and the normal by 3.8 cm (23.1%).

**Table 4a. Stalk elongation during the month of May 2015**

Sectors	Stalk elongation (cm) during May			May 2015 as % of	
	2015	2014	Normal	2014	Normal
North	24.1	18.9	17.8	127.5	135.5
East	20.4	11.6	14.3	175.9	143.1
South	18.5	18.5	16.1	100.0	115.2
West	23.7	26.6	18.6	89.1	127.7
Centre	6.9	8.6	8.9	80.2	77.2
<b>Island</b>	<b>20.0</b>	<b>16.5</b>	<b>16.2</b>	<b>121.1</b>	<b>123.1</b>

### 2.2 Cumulative elongation (Table 4b)

Cumulative growth from end-December 2014 to end-May 2015 amounted to 182.7 cm in the North, 165.3 cm in the East, 166.6 cm in the South, 183.1 cm in the West and 133.5 cm in the Centre. These data lagged behind those of 2014 and the normal in all sectors. Island-wise the cumulative elongation of 169.0 cm was lower than that of the 2014 crop (185.1 cm) by 8.7% and to that of the normal (181.4 cm) by 6.8%.

**Table 4b. Cumulative elongation at end-May 2015**

Sectors	Cumulative elongation (cm) at end- May			End-May 2015 as % of	
	2015	2014	Normal	2014	Normal
North	182.7	186.3	185.4	98.1	98.6
East	165.3	188.6	178.3	87.6	92.7
South	166.6	186.9	186.3	89.1	89.4
West	183.1	195.3	186.6	93.8	98.1
Centre	133.5	153.4	152.5	87.0	87.5
<b>Island</b>	<b>169.0</b>	<b>185.1</b>	<b>181.4</b>	<b>91.3</b>	<b>93.2</b>

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

At end-May 2015, total cane height reached 206.7 cm in the North, 209.6 cm in the East, 216.7 cm in the South, 222.9 cm in the West and 182.5 cm in the Centre giving an island average of 210.9 cm. Compared to the same period in 2014, cane was shorter by 4.0 cm in the North, 35.2 cm in the East, 2.7 cm in the South, 6.2 cm in the West and 22.9 cm in the Centre. Total cane height at the end of May 2015 was comparable to the normal in the West but inferior in all the other sectors by 4.5 cm in the North, 16.5 cm in the East, 16.8 cm in the South and 12.9 cm in the Centre.

Island-wise the total cane height of 210.9 cm at end-May 2015 lagged behind that of end-May 2014 by 13.3 cm (5.9%) and to that of the normal by 12.0 cm (5.4%).

**Table 4c. Stalk height at end-May**

Sectors	Stalk height (cm) at end-May			End-May 2015 as % of	
	2015	2014	Normal	2014	Normal
North	206.7	210.7	211.2	98.1	97.9
East	209.6	244.8	226.1	85.6	92.7
South	216.7	219.4	233.5	98.8	92.8
West	222.9	229.1	221.8	97.3	100.5
Centre	182.5	205.4	195.4	88.9	93.4
<b>Island</b>	<b>210.9</b>	<b>224.2</b>	<b>222.9</b>	<b>94.1</b>	<b>94.6</b>

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

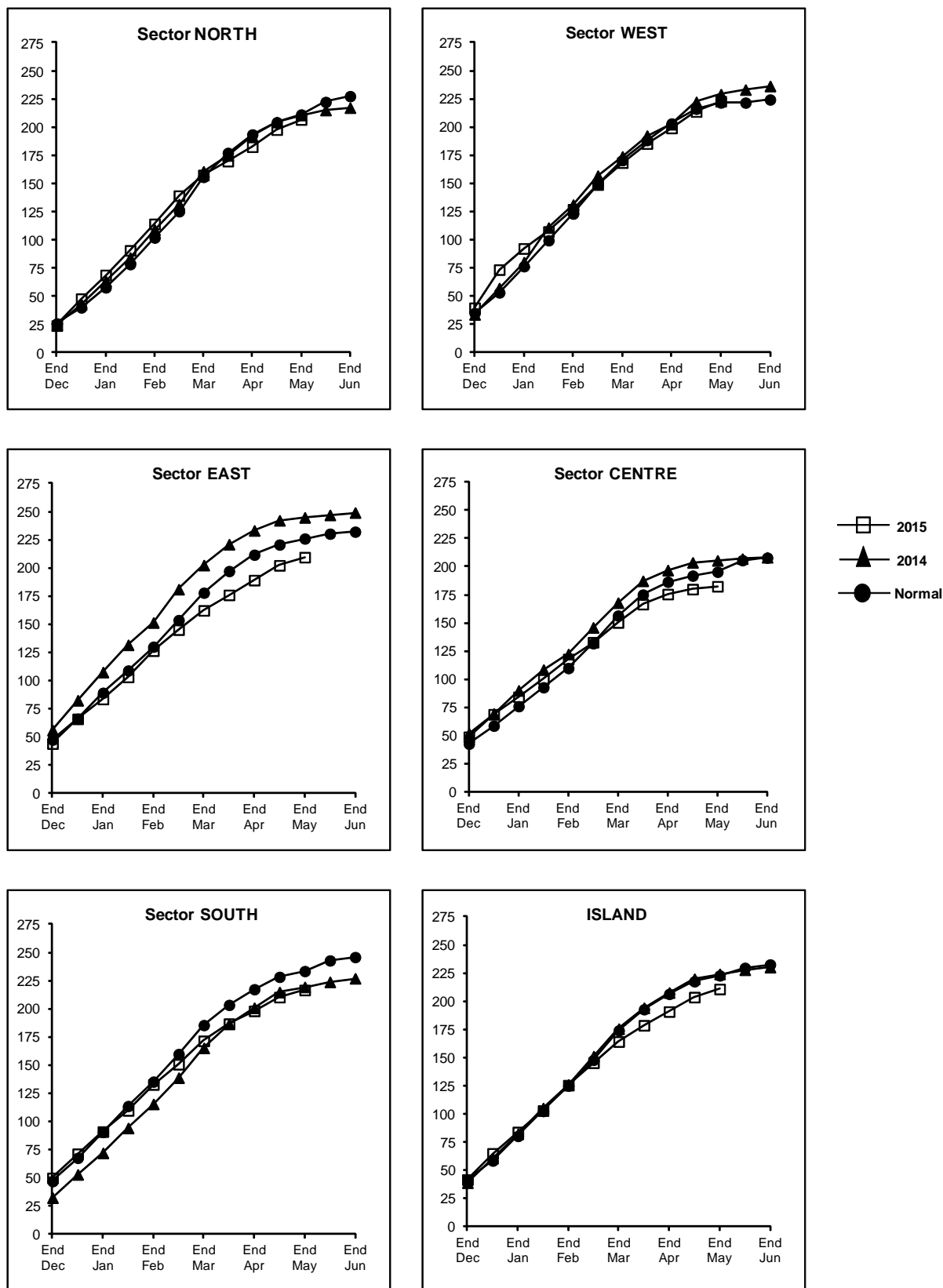
During the last week of May 2015, cane samples from miller-planters' land in all factory areas and representing the main cultivated varieties were analyzed for sucrose content. The average Pol % cane (*richesse*) was computed on the basis of area under cultivation for each variety in the different factory areas of each sector. The results were compared with those of the last two years.

**Table 5a. Average Pol % cane (richesse) at end-May 2015.**

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 1400/86	M 1176/77	M 1861/89	M 1989/99	R 579	M 1672/90	R 570
North			11.4	12.4			10.0	8.2	8.2	9.1	11.2			12.1	9.5	9.0
East		11.4	12.0			12.7	7.6	13.0	10.0	8.0	11.0			8.4		7.1
South	13.5	12.5	11.3	11.7	12.3	11.2			10.9	10.9	10.9	11.9		9.5	9.2	9.4
West			12.1		9.6				6.9	7.4	9.6		8.5	10.7		7.3
Centre	13.4	11.8				10.2				9.3	9.8			9.2		

The cane analysis data indicate higher sucrose contents in the early maturing varieties M 52/78, M 703/89 and R 573 than in the mid-season ones such as M 1400/86, and in the late season R 570. However, sucrose content is still below the maximum threshold in all varieties, indicating the potential for significant increases till the end of the crop season if favourable weather conditions are met.

**Figure 2. Stalk height at end-May 2015.**



**Table 5b. Comparison of Pol % cane (richesse) at the end of April and May 2013, 2014 and 2015.**

Sectors	APRIL			MAY		
	2013	2014	2015	2013	2014	2015
North	6.6	7.4	7.6	10.6	9.4	9.7
East	8.0	8.3	8.2	11.4	11.2	9.4
South	7.7	7.8	8.3	11.0	10.6	10.6
West	7.1	7.5	8.1	10.5	10.5	8.9
Centre	7.4	8.6	8.6	11.2	11.1	10.7
Island	7.4	7.9	8.1	<b>11.0</b>	<b>10.6</b>	<b>9.9</b>

The *richesse* in the end-May samples was 9.7% in the North, 9.4% in the East, 10.6% in the South, 8.9% in the West and 10.7% in the Centre. Compared to the corresponding period in 2014, sucrose content at end-May 2015 was similar in the South, higher in the North but lagged behind in the other sectors by 1.8° in the East, 1.6° in the West and 0.4° in the Centre. Sucrose content at the end of May for the present crop was also lagging behind that of 2013 in all sectors.

From end-April 2015 up to end-May 2015, *richesse* improved in all sectors. The highest increment of 2.3° was observed in the South followed by 2.1° in both the North and Centre, 1.2° in the East and 0.8° in the West. On average for the island, the increase in *richesse* was 1.8° in 2015 compared to 2.7° in 2014 and 3.6° in 2013.

Island-wise, the *richesse* of 9.9% recorded at the end of May 2015 was lower than those of the corresponding period in 2014 (10.6%) and 2013 (11.0%) by 0.7° and 1.1°, respectively.

#### 4. CROP 2015

Weather during May 2015 in terms of rainfall, temperature and solar radiation has been favourable to growth, resulting in a higher elongation rate compared to the normal and to that of May 2014. However, due to the setback in growth cumulated up to February 2015, total stalk height is still lagging behind that of 2014 by 13.3 cm (5.9%) and to that of the normal by 12.0 cm (56.4%).

The conditions in April 2015, with a deficient rainfall and a favourable sucrose accumulation did not persist in May 2015 with above normal rainfall that was more favourable to growth rather than to ripening. As a result, the sucrose content in May 2015 was lower to those of the same period in 2014 and 2013. The potential for rapid sucrose increase however exists if favourable weather conditions are experienced till the end of the crop season.

The growth and sucrose accumulation data at end-May 2015 indicate that the 2015 crop is lagging behind that of last year in both cane productivity and particularly in *richesse*.