

# MAURITIUS CANE INDUSTRY AUTHORITY

## MAURITIUS SUGARCANE INDUSTRY RESEARCH INSTITUTE

Ref A 1/2013

28 June 2013

### SUGAR CANE CROP 2013

#### Status: End May 2013

## 1. CLIMATE

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

The island's average rainfall for the month of May 2013 was 58 mm over the sugar cane areas, representing 35% of the long-term mean of 166 mm. Below normal rainfall was recorded in all sectors, with 38 mm, 67 mm, 70 mm, 9 mm and 80 mm in the North, East, South, West and Centre respectively. These amounts represented 36% of the long-term mean in the North, 37% in the East, 33% in the South, 16% in the West and 38% in the Centre.

Cumulative rainfall for the period October 2012 to May 2013 amounted to 1000 mm in the North, 1965 mm in the East, 1915 mm in the South, 671 mm in the West and 2020 mm in the Centre for an average of 1627 mm for the island. Recorded rainfall represented 92%, 120%, 99%, 82%, 95% and 102% of the respective normal which stands at 1084 mm in the North, 1633 mm in the East, 1928 mm in the South, 813 mm in the West, 2128 mm in the Centre and 1593 mm for the island.

Rainfall deficit in May is detrimental to growth but conducive to ripening.

**Table 1a Rainfall (mm) in May for crops 2012, 2013 and the long-term mean (LTM)**

	North	East	South	West	Centre	Island
<b>2012</b>	95 (89)	280 (156)	207 (98)	79 (141)	270 (129)	197 (118)
<b>2013</b>	<b>38</b> (36)*	<b>67</b> (37)	<b>70</b> (33)	<b>9</b> (16)	<b>80</b> (38)	<b>58</b> (35)
<b>LTM</b>	107	180	212	56	210	166

\* figures in brackets are % of LTM

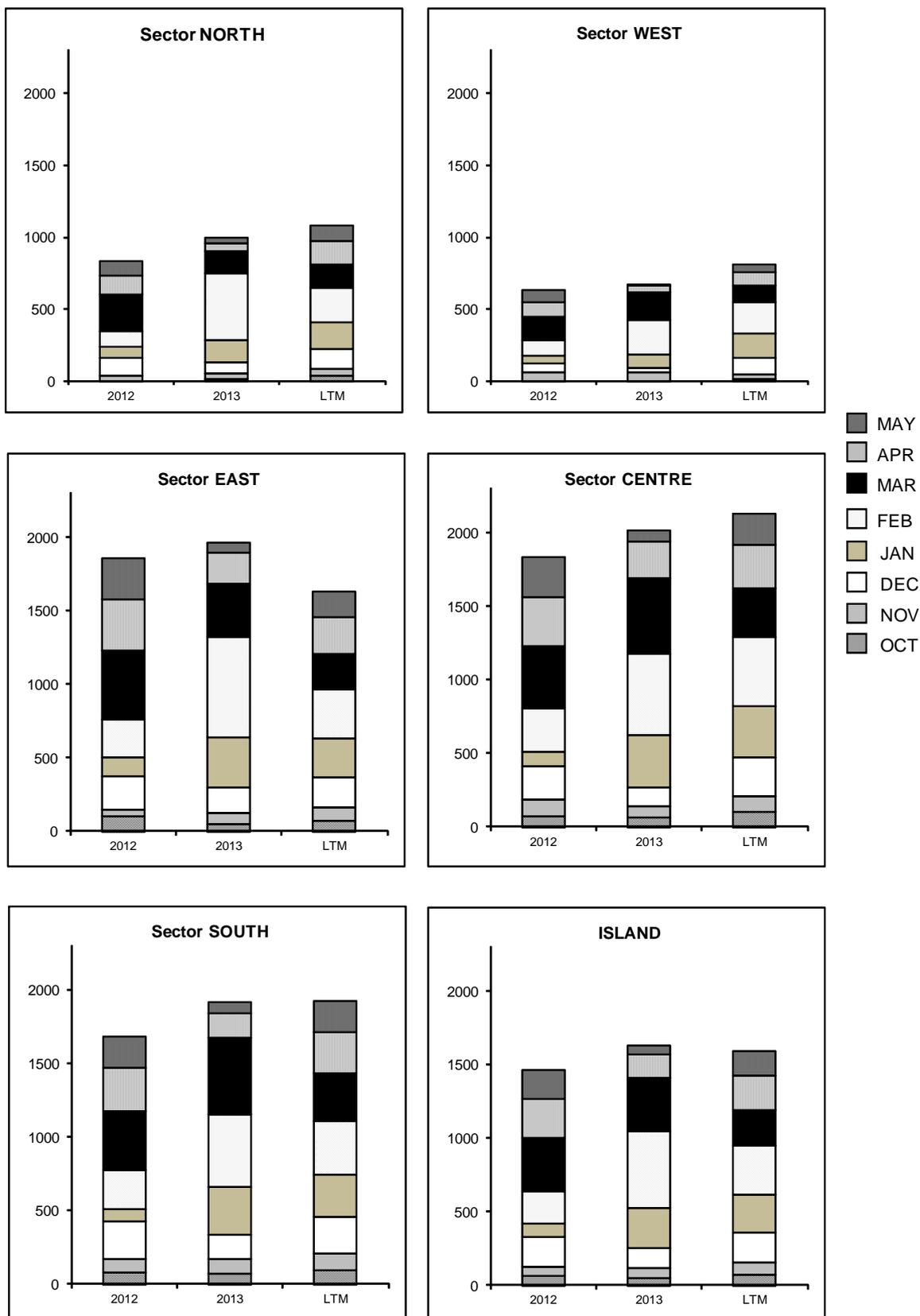
**Table 1b Cumulative rainfall (mm) from October 2012 to May 2013 for crop 2013 compared to crop 2012 and the long-term mean (LTM)**

	North	East	South	West	Centre	Island
<b>2012</b>	833 (77)	1859 (114)	1680 (87)	630 (77)	1836 (86)	1463 (92)
<b>2013</b>	<b>1000</b> (92)*	<b>1965</b> (120)	<b>1915</b> (99)	<b>671</b> (82)	<b>2020</b> (95)	<b>1627</b> (102)
<b>LTM</b>	1084	1633	1928	813	2128	1593

\* figures in brackets are % of LTM

[Source : raw provisional data from Meteorological Services]

**Figure 1 Monthly rainfall (mm) for the period October 2012 to May 2013 for the 2013 crop compared to the corresponding period of the 2012 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 2013 on MSIRI agro-meteorological stations are given below.

The mean monthly maximum temperature was above normal at Réduit by 0.3°C and at Union Park by 1.2°C but was close to normal at the other two stations. The mean minimum temperature at Pamplémousses, Réduit, and Union Park was below normal by 0.7°C, 1.0°C and 0.2°C respectively whereas at Belle Rive it was close to the normal. The resulting mean amplitude was above normal at Pamplémousses by 0.6°C, Réduit by 1.3°C and Union Park by 1.4°C whereas at Belle Rive it was similar to the normal. To note that an above normal temperature amplitude promotes sucrose accumulation and ripening.

**Table 2. Maximum and minimum air temperatures recorded on MSIRI agro-meteorological stations in May 2013**

Station	Maximum (°C)	Minimum (°C)	Amplitude (°C)
<b>Pamplémousses</b>	<b>28.0</b> (28.1) *	<b>18.1</b> (18.8)	<b>9.9</b> (9.3)
<b>Réduit</b>	<b>25.4</b> (25.1)	<b>17.0</b> (18.0)	<b>8.4</b> (7.1)
<b>Belle Rive</b>	<b>24.7</b> (24.8)	<b>16.5</b> (16.6)	<b>8.2</b> (8.2)
<b>Union Park</b>	<b>25.5</b> (24.3)	<b>17.7</b> (17.9)	<b>7.8</b> (6.4)

\* figures in brackets are the Normal (1981-2010)

## 1.3 Sunshine (Table 3)

Data from the MSIRI agro-meteorological stations reveal that above normal sunshine hours were recorded during May 2013 on all stations. Recorded bright sunshine as a % of the normal amounted to 109 at both Pamplémousses and Union Park, 112 at Réduit and 103 at Belle Rive. An above normal solar radiation enhances photosynthetic efficiency and is hence beneficial to sucrose accumulation and ripening.

**Table 3 Sunshine duration (hr) recorded on MSIRI agro-meteorological stations in May 2013**

Station	May 2013	Normal	% of Normal
<b>Pamplémousses</b>	259	238	109
<b>Réduit</b>	244	217	112
<b>Belle Rive</b>	210	204	103
<b>Union Park</b>	176	162	109

## 2. STALK HEIGHT

Cane growth was assessed during the last week of May 2013 in the 60 sites representative of the five sugar cane sectors of the island. These sites cover the various agro-climatic zones, varieties under cultivation and stages of development of the crop. Data collected are

compared with the mean of the five best cane yielding years of the last ten years in each sector, referred to as normal, and to the corresponding period in May 2012.

### 2.1 Stalk elongation (Table 4a)

Stalk elongation during the month of May 2013 stood at 15.2 cm in the North, 9.0 cm in the East, 12.6 cm in the South, 12.4 cm in the West and 7.4 cm in the Centre. These growth increments were lower than those for the corresponding month in 2012 by 7.4 cm in the North, 9.1 cm in the East, 4.6 cm in the South, 6.3 cm in the West and 6.2 cm in the Centre. Compared to the normal for the same period, growth was again lower in all sectors, the difference being 2.2 cm in both the North and South, 5.4 cm in the East, 3.9 cm in the West and 2.0 cm in the Centre. The 11.7 cm average elongation for the island represented 63.4% of that recorded in May 2012 (18.5 cm) and 75.2% of the normal (15.6 cm).

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

Sectors	Stalk elongation (cm) during May			May 2013 as % of	
	2013	2012	Normal	2012	Normal
North	15.2	22.6	17.4	67.3	87.6
East	9.0	18.1	14.4	49.7	62.5
South	12.6	17.2	14.8	73.3	85.3
West	12.4	18.7	16.3	66.3	76.0
Centre	7.4	13.6	9.4	54.4	78.4
<b>Island</b>	<b>11.7</b>	<b>18.5</b>	<b>15.6</b>	<b>63.4</b>	<b>75.2</b>

### 2.2 Cumulative elongation (Table 4b)

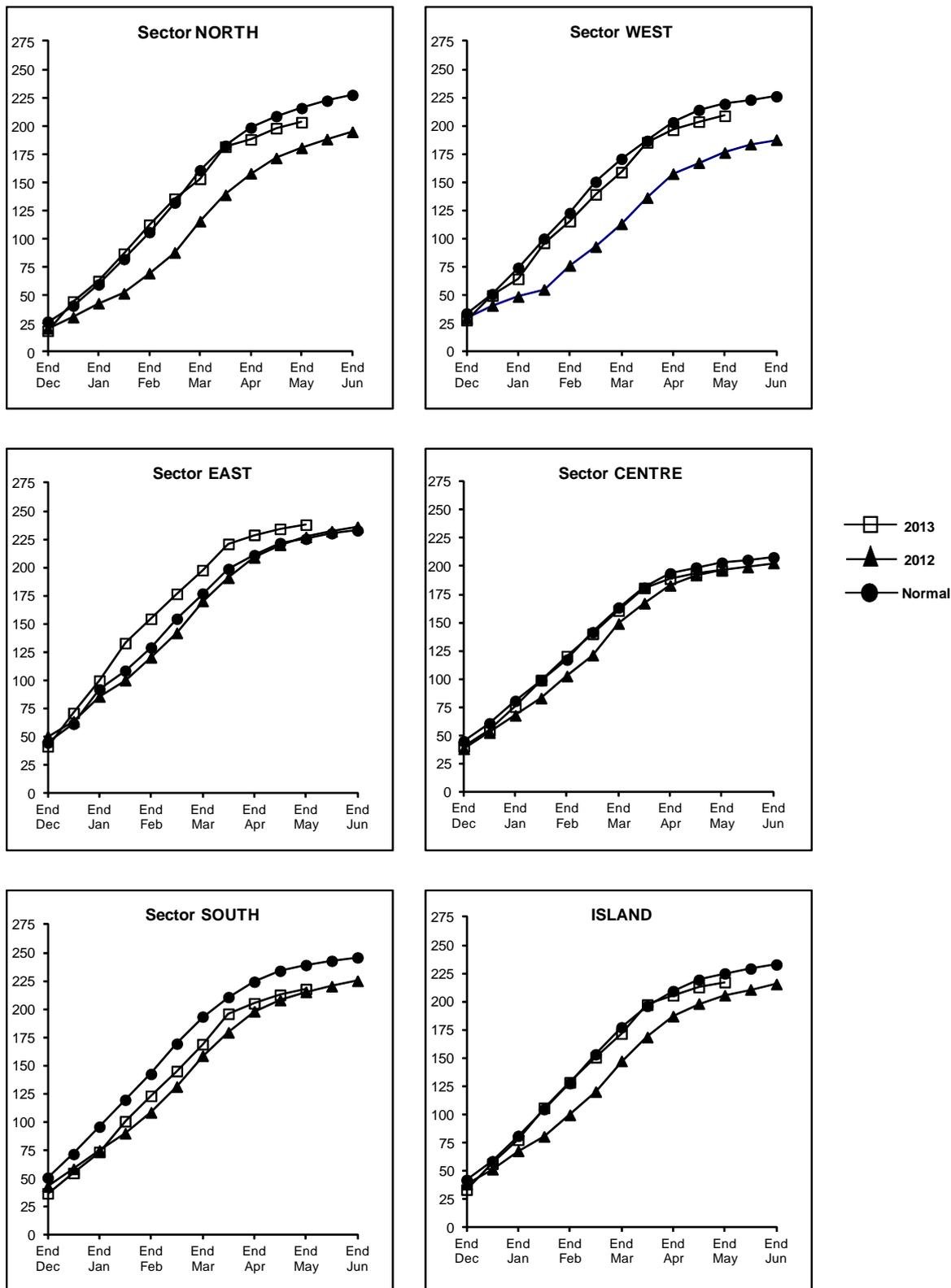
Stalk growth from end-December 2012 to end-May 2013 cumulated to 184.6 cm in the North, 196.2 cm in the East, 180.8 cm in both the South and West, and 156.0 cm in the Centre. These data were higher than during the corresponding period in 2012 by 24.7 cm in the North, 19.7 cm in the East, 8.6 cm in the South and 34.2 cm in the West whereas in the Centre it lagged behind the normal by 2.3 cm. For the same period, cumulative growth lagged behind the normal by 4.4 cm in the North, 7.4 cm in the South, 4.6 cm in the West and 2.1 cm in the Centre whereas in the East, cumulative growth exceeded the normal by 15.8 cm.

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

Sectors	Cumulative elongation (cm) at end- May			May 2013 as % of	
	2013	2012	Normal	2012	Normal
North	184.6	159.9	189.0	115.4	97.7
East	196.2	176.5	180.4	111.2	108.8
South	180.8	172.2	188.2	105.0	96.1
West	180.8	146.6	185.4	123.3	97.5
Centre	156.0	158.3	158.1	98.5	98.7
<b>Island</b>	<b>183.7</b>	<b>167.2</b>	<b>182.8</b>	<b>109.9</b>	<b>100.5</b>

Island-wise the cumulative elongation of 183.7 cm is higher than that of the 2012 crop (167.2 cm) by 9.9% but is comparable to the normal (182.8 cm).

Figure 2. Stalk height at end-May 2013



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

Total stalk height at end May 2013 reached 203.3 cm in the North, 238.0 cm in the East, 217.9 cm in the South, 209.0 cm in the West and 196.3 cm in the Centre to give an island average of 217.4 cm. Compared to the corresponding period in May 2012, cane was taller by 22.7 cm in the North, 10.9 cm in the East, 2.5 cm in the South and 32.6 cm in the West but was comparable in the Centre. Total stalk height at end-May 2013 exceeded the normal only in the East by 12.5 cm (5.6 %), whereas in the other sectors it lagged behind the normal by 12.5 cm (5.8%) in the North, 21.3 cm (8.9%) in the South, 10.5 cm (4.8%) in the West and 6.9 cm (3.4%) in the Centre.

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

Sectors	Stalk height (cm) at end-May			End-May 2013 as % of	
	2013	2012	Normal	2012	Normal
North	203.3	180.6	215.8	112.6	94.2
East	238.0	227.1	225.5	104.8	105.6
South	217.9	215.4	239.2	101.2	91.1
West	209.0	176.4	219.5	118.5	95.2
Centre	196.3	196.6	203.2	99.8	96.6
<b>Island</b>	<b>217.4</b>	<b>205.7</b>	<b>225.1</b>	<b>105.7</b>	<b>96.6</b>

At island level, the total stalk height of 217.4 cm at the end of May 2013 was above that of the corresponding period in 2012 by 11.7 cm (5.7%) but lagged behind the normal by 7.7 cm (3.4%).

### 3. 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 May 2013. 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 are compared with those of the last two years.

**Table 5a Average Pol % Cane (richesse) at end May 2013**

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	R 579	M 1394/86	M 3035/66	M 1672/90	R 570
North			12.2	12.2			10.8	9.9	10.8	10.8	9.9		10.1			10.8	10.1
East		13.5	13.0	12.6	11.5	12.1	10.5	11.6	9.1	11.7	12.1		10.4				12.1
South	11.0	11.7	11.9	10.4	12.3	12.0			10.7	10.9	10.9	10.8	10.8	11.3		11.5	9.6
West			11.1		11.2				8.8	9.5	10.8		11.0				7.3
Centre	14.1	12.1	9.6			11.2				10.2	9.7		9.6		9.4		8.4

The *richesse* in the end-May 2013 samples was 10.6% in the North, 11.4% in the East, 11.0% in the South, 10.5% in the West and 11.2% in the Centre. Compared to the corresponding period in 2012, sucrose content at end-May 2013 was higher by 3.2° in the North, 1.3° in the East, 1.0° in the South, 2.2° in the West and 0.7° in the Centre. Sucrose content at the end of May 2013 was also higher in all sectors than that of the corresponding period in 2011. The advantage was 3.0° in the North, 2.2° in the East, 1.7° in the South, 1.3° in the West and 1.0° in the Centre.

**Table 5b Comparison of Pol % Cane (*richesse*) at the end of April and May 2011, 2012 and 2013**

Sectors	APRIL			MAY		
	2011	2012	2013	2011	2012	2013
<b>North</b>	5.3	4.9	6.6	7.6	7.4	10.6
<b>East</b>	7.0	8.1	8.0	9.2	10.1	11.4
<b>South</b>	6.9	7.2	7.7	9.3	10.0	11.0
<b>West</b>	6.1	5.7	7.1	9.2	8.3	10.5
<b>Centre</b>	6.9	7.7	7.4	10.2	10.5	11.2
<b>Island</b>	6.5	6.8	7.4	<b>9.0</b>	<b>9.3</b>	<b>11.0</b>

From end-April 2013 up to end-May 2013, *richesse* has improved in all sectors. The highest increment of 4.0° was observed in North followed by 3.8° in the Centre, 3.4° in both the East and West, and 3.3° in the South. For the corresponding period last year, the increments recorded were 2.5° in the North, 2.0° in the East, 2.8° in both the South and Centre, and 2.6° in the West. On average for the island, the increase in *richesse* was 3.6° in 2013 which was higher than the increment of 2.5° obtained in both 2012 and 2011 for the same period.

Island-wise, the *richesse* of 11.0% recorded at the end of May 2013 was superior to that of the corresponding period in 2012 (9.3%) by 1.7° and in 2011(9.0%) by 2.0°.

#### 4. CROP 2013

The overall dry and cool temperature prevailing during the month of May 2013 has been unfavourable for stalk growth. This is reflected in the stalk elongation data with an average of 11.7 cm for the island which is lower than that of 2012 and the normal. However, total stalk height at end of May 2013 is better than that of May 2012 by about 6% which augurs a better cane productivity for the 2013 crop compared to the 2012 crop. No further significant growth is anticipated as winter conditions, namely dry cold weather, set in, except in the irrigated crops of the West, North and low-lying areas of the East and South.

The sucrose accumulation pattern and ripening conditions observed during May are encouraging. This is clearly shown by the higher increase in *richesse* of 3.6° obtained in May this year compared to the increase of 2.5° in May 2012 and the higher *richesse* of 11.0% at end May 2013 as opposed to 9.3% at corresponding period in 2012. In case weather during winter is normal, an extraction rate much higher than that of 2012 is expected.

Official estimates will, however, be communicated by the Crop Monitoring Committee following its meeting scheduled on 06 June 2013.