

# MAURITIUS SUGAR INDUSTRY RESEARCH INSTITUTE

Ref A 1/2009

4 June 2009

## SUGAR CANE CROP 2009

**Status: End May 2009**

### 1. CLIMATE

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

The island's average rainfall for the month of May 2009 was 195 mm over the sugar cane areas and represented 116% of the long-term mean (168 mm). Sector-wise, rainfall was above the long-term mean of the month by 40% in the East (252 mm), 21% in the South (257 mm) and 11% in the Centre (233 mm). In the North (79 mm) and West (45 mm), it was below the long-term mean by 26% and 20%, respectively.

Cumulative rainfall for the period October 2008 to May 2009 amounted to 1029 mm in the North, 2102 mm in the East, 1955 mm in the South, 782 mm in the West and 2065 mm in the Centre. The average for the island was 1697 mm. The cumulative rainfall represented 95%, 129%, 101%, 96%, 97% and 106% of the long-term mean of the respective sectors and of the island.

**Table 1a. Rainfall (mm) of May for crops 2008, 2009 and the long term mean (LTM)**

	North	East	South	West	Centre	Island
<b>2008</b>	146 (136)	306 (170)	521 (246)	90 (161)	335 (160)	324 (193)
<b>2009</b>	<b>79</b> (74)	<b>252</b> (140)	<b>257</b> (121)	<b>45</b> (80)	<b>233</b> (111)	<b>195</b> (116)
<b>LTM</b>	107	180	212	56	210	168

\* figures in brackets are % of LTM

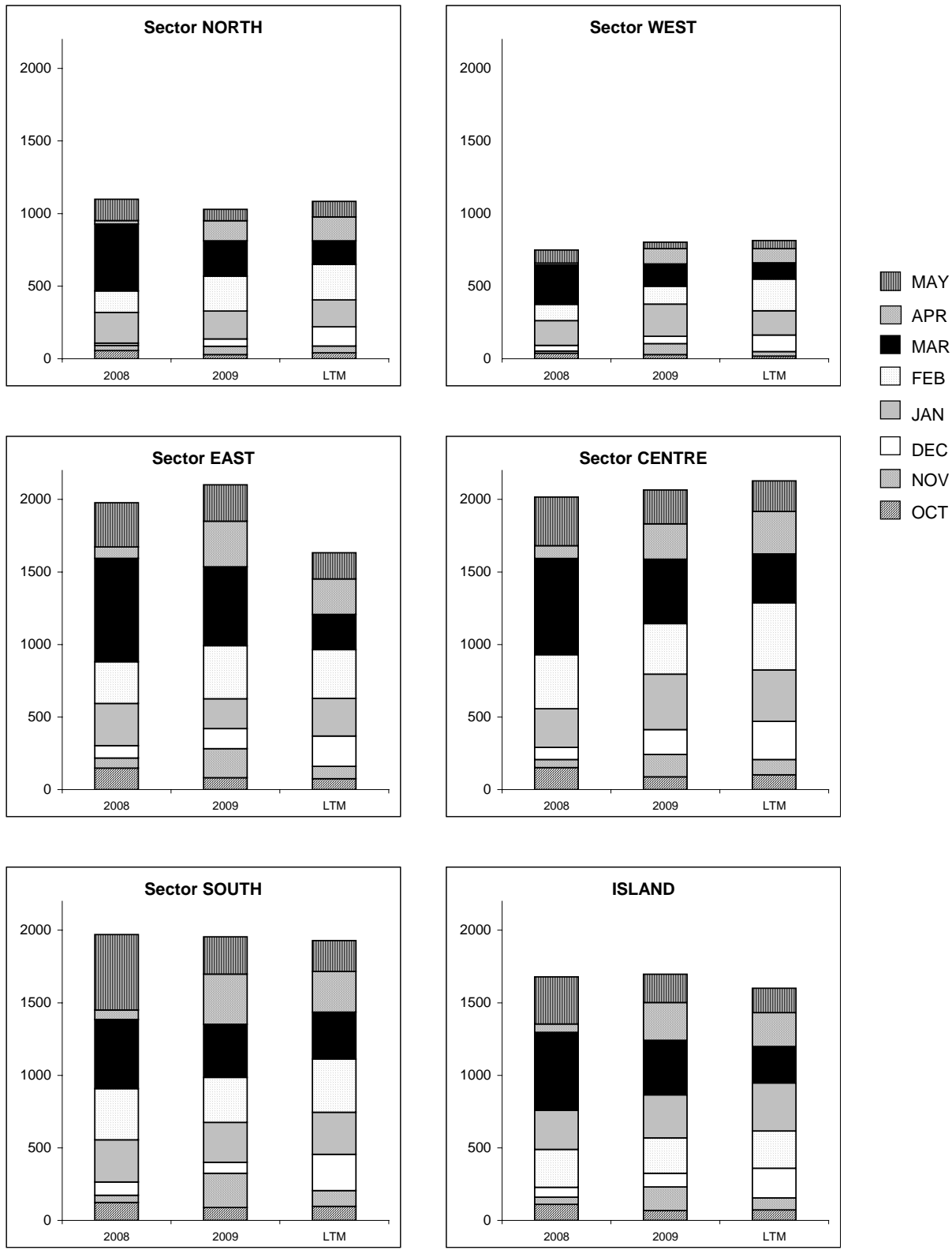
**Table 1b. Cumulative rainfall (mm) from Oct 2008 to May 2009 for crop 2009 compared to that of crop 2008 and the long term mean (LTM)**

	North	East	South	West	Centre	Island
<b>2008</b>	1098 (101)	1978 (121)	1971 (102)	749 (92)	2016 (95)	1678 (105)
<b>2009</b>	<b>1029</b> (95)	<b>2102</b> (129)	<b>1955</b> (101)	<b>782</b> (96)	<b>2065</b> (97)	<b>1697</b> (106)
<b>LTM</b>	1084	1633	1928	814	2128	1601

\* figures in brackets are % of LTM

[Source : raw provisional data from Meteorological Services]

**Figure 1. Monthly rainfall (mm) for period Oct 2008 to May 2009 for the 2009 crop compared to that of the same period for crop 2008 and of the long-term mean (LTM).**



## 1.2 Temperature (Table 2)

Data on maximum and minimum temperatures recorded during the month of May 2009 at MSIRI agro-meteorological stations are given below.

The mean maximum temperature was above normal at Réduit, Belle Rive and Union Park by 1.3 °C, 1.7 °C and 1.4 °C respectively whereas at Pamplémousses it was close to normal. Above normal mean minimum temperature was recorded on all four stations, the difference being 0.8 °C at Pamplémousses, 0.4 °C at Réduit, 0.9 °C at Belle Rive and 1.1 °C at Union Park. The resulting mean amplitude was below normal at Pamplémousses but higher than normal at the other stations.

**Table 2 Maximum and minimum air temperatures recorded on MSIRI agro-meteorological stations in May 2009**

Station	Maximum (°C)	Minimum (°C)	Amplitude (°C)
<b>Pamplémousses</b>	<b>28.3</b> (28.2) *	<b>19.4</b> (18.6)	<b>8.9</b> (9.6)
<b>Réduit</b>	<b>26.3</b> (25.0)	<b>18.3</b> (17.9)	<b>8.0</b> (7.1)
<b>Belle Rive</b>	<b>26.3</b> (24.6)	<b>17.4</b> (16.5)	<b>8.9</b> (8.1)
<b>Union Park</b>	<b>25.7</b> (24.3)	<b>18.7</b> (17.6)	<b>7.0</b> (6.7)

\* figures in brackets are the Normal (1971-00)

## 1.3 Sunshine (Table 3)

Data from the MSIRI agro-meteorological stations showed that sunshine hours during May 2009 were above normal at all stations. Recorded bright sunshine as a percentage of the normal amounted to 110 at Pamplémousses, 102 at Réduit, 106 at Belle Rive and 108 at Union Park.

**Table 3 Sunshine duration (hrs) recorded on MSIRI agro-meteorological stations in May 2009**

Station	May 2009	Normal	% of Normal
<b>Pamplémousses</b>	259	236	110
<b>Réduit</b>	225	221	102
<b>Belle Rive</b>	213	201	106
<b>Union Park</b>	175	163	108

## 2. STALK HEIGHT (TABLE 2)

Cane growth was assessed during the last week of May 2009 in the 59 sites representative of the five sugar cane sectors of the island. These sites cover the various agro-climatic zones, the

varieties under cultivation and the stages of development of the crop. Data collected are compared with those of May 2008 and with the mean for that month 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 amounted to 16.2 cm in the North, 15.8 cm in the East, 13.3 cm in the South, 14.1 cm in the West and 8.1 cm in the Centre. Stalk elongation during the month of May 2009 was thus higher than for the corresponding month in 2008 by 1.3 cm in the North, 7.0 cm in the East and 1.8 cm in the Centre whereas in the South and West it was lower by 0.9 cm and 1.4 cm respectively. Compared to the normal for the same period, elongation was comparable in the North but lagged by 1.2 cm in the East, 1.8 cm in the South, 4.1 cm in the West and 8.1 cm in the Centre. The island average of 14.2 cm was 15.4% above that of May 2008 (12.3 cm) but 4.7 % below the normal (14.9 cm).

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

Sectors	Stalk elongation (cm) during May			May 2009 as % of	
	2009	2008	Normal	2008	Normal
North	16.2	14.9	15.9	108.7	101.9
East	15.8	8.8	17.0	179.5	92.9
South	13.3	14.2	15.1	93.7	88.1
West	14.1	15.5	18.2	91.0	77.5
Centre	8.1	6.3	16.2	128.6	50.0
<b>Island</b>	<b>14.2</b>	<b>12.3</b>	<b>14.9</b>	<b>115.4</b>	<b>95.3</b>

### 2.2 Cumulative Elongation (Table 4b)

Cumulative growth from end-December 2008 to end-May 2009 was above that of the corresponding period for the 2008 crop in all sectors. Growth for that period stood at 187.6 cm in the North, 177.1 cm in the East, 190.6 cm in the South, 187.4 cm in the West and 147.7 cm in the Centre. However, these records were below the respective normal by 11.5 cm in the East, 7.8 cm in the South, 3.6 cm in the West and 18.3 cm in the Centre. In the North, cumulative growth topped the normal by 4.5 cm.

Island-wise the cumulative elongation of 181.9 cm exceeded that of the 2008 crop (168.1 cm) by 8.2% but lagged behind the normal (188.9 cm) by 3.7%.

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

Sectors	Cumulative elongation (cm) at end- May			May 2009 as % of	
	2009	2008	Normal	2008	Normal
North	187.6	161.0	183.1	116.5	102.5
East	177.1	168.6	188.6	105.0	93.9
South	190.6	177.0	198.4	107.7	96.1
West	187.4	177.5	191.0	105.6	98.1
Centre	147.7	146.4	166.0	100.9	89.0
<b>Island</b>	<b>181.9</b>	<b>168.1</b>	<b>188.9</b>	<b>108.2</b>	<b>96.3</b>

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

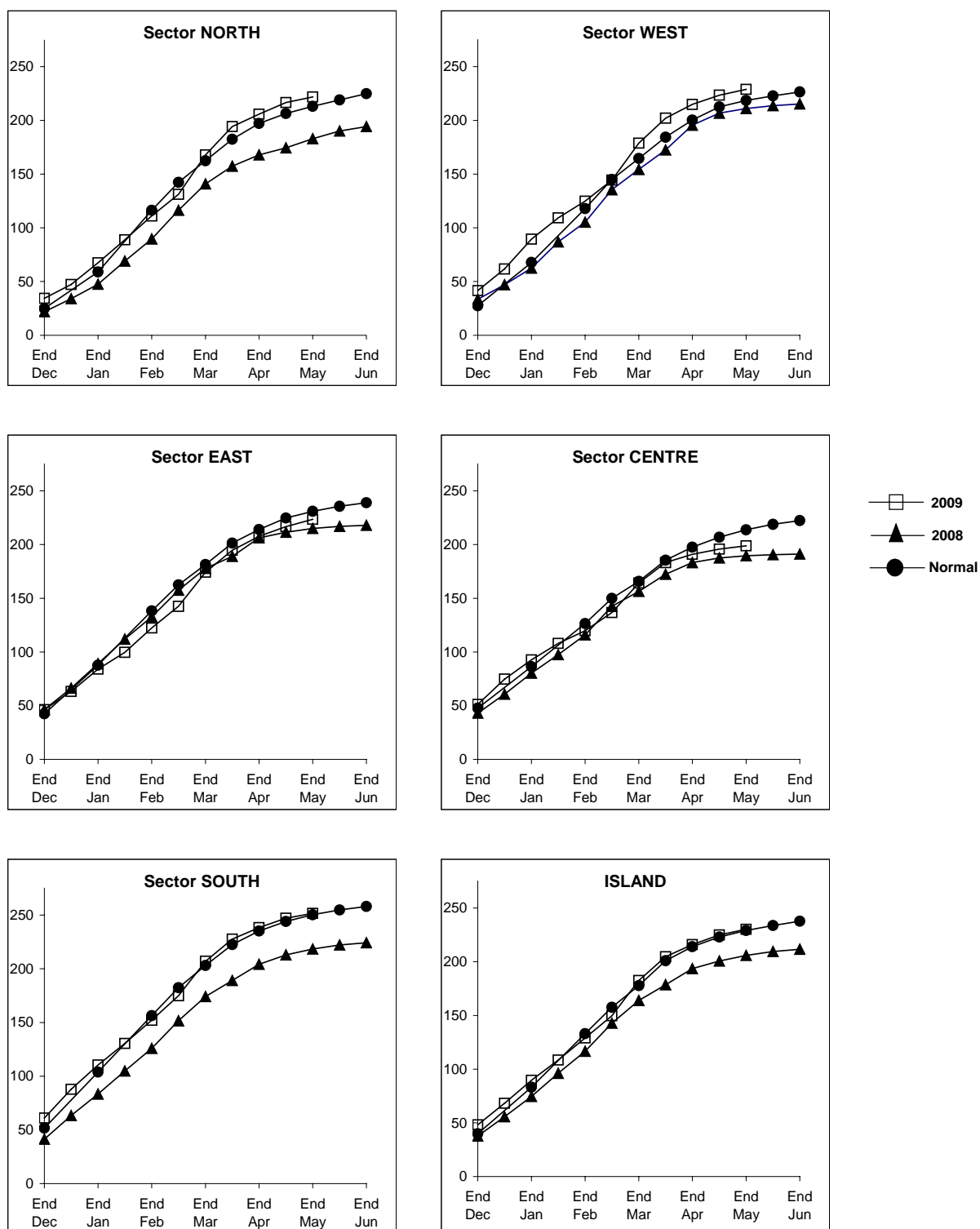
By end-May 2009, total stalk height reached 222.0 cm in the North, 223.4 cm in the East, 251.6 cm in the South, 228.9 cm in the West and 198.9 cm in the Centre. Cane was taller in all sectors compared to the same period in 2008, the advantage amounting to 39.1 cm in the North, 8.5 cm in the East, 33.3 cm in the South, 17.9 cm in the West and 9.4 cm in the Centre. Total cane height at the end of May 2009 exceeded the normal by 8.8 cm (4.1%) in the North, 1.4 cm (0.6%) in the South and 10.5 cm (4.8%) in the West but it was below normal by 7.6 cm (3.3%) in the East and 14.8 cm (6.9%) in the Centre.

Island-wise the total cane height of 230.1 cm at end-May 2009 was higher than that of end-May 2008 by 24.3 cm (11.8%) and the normal by 1.1 cm (0.5%).

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

Sectors	Stalk height (cm) at end-May			End-May 2009 as % of	
	2009	2008	Normal	2008	Normal
North	222.0	182.9	213.2	121.4	104.1
East	223.4	214.9	231.0	104.0	96.7
South	251.6	218.3	250.2	115.3	100.6
West	228.9	211.0	218.4	108.5	104.8
Centre	198.9	189.5	213.7	105.0	93.1
<b>Island</b>	<b>230.1</b>	<b>205.8</b>	<b>229.0</b>	<b>111.8</b>	<b>100.5</b>

**Figure 2. Stalk height at end- May 2009.**



**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. 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.

As expected, the cane analysis data indicate a higher sucrose content in the early varieties M 52/78, M 703/89 and R 573 than in the mid-season ones like M 1176/77 and M 1400/86, and in the late season R 570 and M 3035/66. Sucrose content is still below its potential in all varieties, indicating the possibility for significant increases until the end of the crop season if favourable weather conditions are met.

**Table 5a Average Pol % Cane (richesse) at end May 2009.**

Sectors	M 52/78	M 703/89	R 573	M 695/69	R 575	M 387/85	M 1246/84	M 2256/89	M 1176/77	M 1400/86	R 579	M 1394/86	M 2593/92	M 3035/66	R 570
North			11.1	12.8			9.7		9.3	7.6	6.1				7.1
East	14.1	12.4	11.4	11.5	12.6	11.9	10.6	11.0	10.7	9.7	8.7			8.8	7.8
South	13.1	11.6	10.3	10.0	10.9				9.4	8.7	8.0	10.3	9.4	6.9	6.8
West			12.1	9.6	10.6	9.8			9.2	8.0	9.9				6.2
Centre	13.9	11.3		9.1		11.2			11.2	9.0	8.7			7.6	6.6

The *richesse* in the end-May samples was 8.7% in the North, 10.3% in the East, 9.3% in the South, 9.6% in the West and 10.6% in the Centre. Compared to the corresponding period in 2008, sucrose content at end-May 2009 was lagging by 1.6° in the North, 0.6° in the East and 0.3° in the South whereas in both the West and the Centre, it was higher by 0.3°. Sucrose content at end of May for the present crop was behind that of the corresponding period in 2007 in all sectors, the gap being 1.7° in the North, 1.1° in the East, 1.2° in the South, 0.8° in the West and 0.3° in the Centre.

**Table 5b Comparison of Pol % Cane (richesse) at the end of April and May 2007, 2008 and 2009.**

Sectors	APRIL			MAY		
	2007	2008	2009	2007	2008	2009
North	8.4	7.4	5.6	10.4	10.3	8.7
East	8.6	9.3	7.2	11.4	10.9	10.3
South	8.0	7.9	6.4	10.5	9.6	9.3
West	7.7	7.4	6.3	10.4	9.3	9.6
Centre	7.2	8.5	7.7	10.9	10.3	10.6
Island	<b>8.1</b>	<b>8.2</b>	<b>6.6</b>	<b>10.7</b>	<b>10.1</b>	<b>9.6</b>

From end-April 2009 up to end-May 2009, *richesse* improved in all sectors. The highest increment of 3.3° was observed in the West followed by 3.1° both in the North and East, and 2.9° both in the South and Centre. For the corresponding period in 2008, the increments recorded were 2.9° in the North, 1.6° in the East, 1.7° in the South, 1.9° in the West and 1.8° in the Centre. On average, the increase in *richesse* was 1.9° in 2008 as opposed to 3.0° in 2009 for the same period.

Island-wise, the *richesse* of 9.6% recorded at the end of May 2009 is inferior to that at the corresponding period in 2008 and 2007 by 0.5° and 1.1°, respectively.

#### **4. CROP 2009**

Weather during the month of May, being on the overall wet, relatively hot and sunny, has been favourable for growth. This is reflected in the stalk elongation data with an average of 14.2 cm for the island. This rate is above that of 2008 but slightly below the normal. Total cane height at the end of May is thus similar to the normal and better than in 2008 by 11.8%. This is indicative of a better cane productivity in 2009 than in 2008.

Despite weather conditions being generally favourable for growth, sucrose accumulation during May has been on the high side in comparison to that recorded by the past two crops at corresponding periods. The average for the island (9.6%) is however still lower than the 10.1% of 2008 and the 10.7% of 2007. This is not cause for concern as the crop is very healthy and possess a high capacity for further rapid sucrose accumulation under favourable conditions.