

MAURITIUS SUGAR INDUSTRY RESEARCH INSTITUTE

Ref A 1/2011

6 May 2011

SUGAR CANE CROP 2011

Status: End April 2011

1. CLIMATE

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

The island's average rainfall of 68 mm over the sugar cane areas for the month of April 2011 represented only 29% of the long-term mean (233 mm). Sector-wise, rainfall recorded during April 2011 was well below the long-term mean for that month. The reduction amounted to 93 mm (56%) in the North, 149 mm (61%) in the East, 217 mm (77%) in the South, 94 mm (97%) in the West and 240 mm (82%) in the Centre.

Rainfall for the period October 2010 to April 2011 cumulated to 1307 mm for the island. This amount was 9% below the island long-term mean of 1432 mm for that period. During that same period, 978 mm were recorded in the North, 1778 mm in the East, 1292 mm in the South, 690 mm in the West and 1341 mm in the Centre. These amounts represented 100%, 122%, 75%, 91%, and 70% of the respective long-term mean.

Table 1a. Rainfall (mm) of April for crops 2010, 2011 and the long term mean (LTM)

	North	East	South	West	Centre	Island
2010	75 (45)	173 (71)	248 (89)	36 (37)	144 (49)	161 (69)
2011	72 (44)	96 (39)	63 (23)	3 (3)	53 (18)	68 (29)
LTM	165	245	280	97	293	233

* Figures in brackets are % of LTM

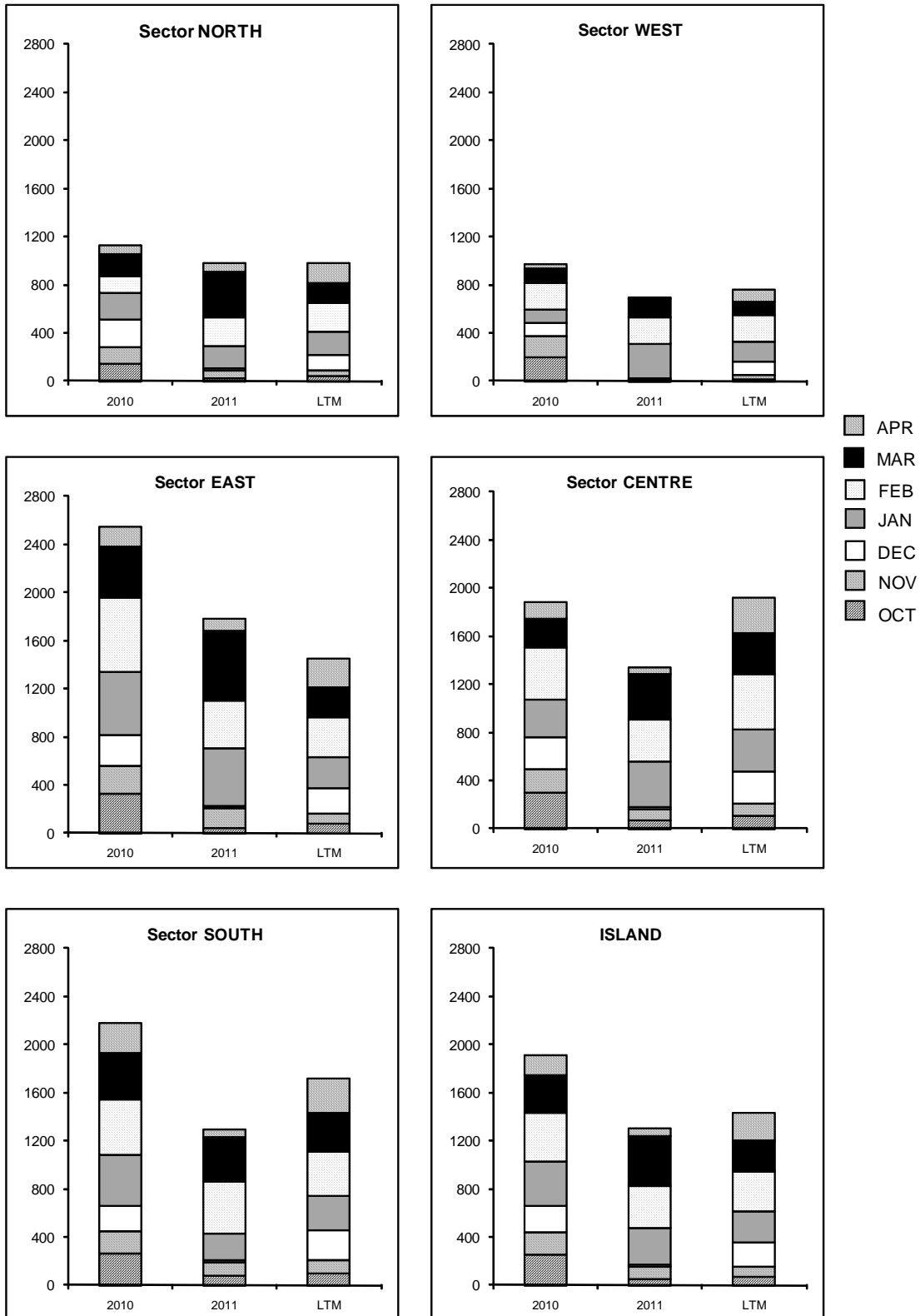
Table 1b. Cumulative rainfall (mm) from October 2010 to April 2011 for crop 2011 compared to that of crop 2010 and the long term mean (LTM)

	North	East	South	West	Centre	Island
2010	1130 (116)	2551 (176)	2176 (127)	975 (129)	1866 (97)	1910 (133)
2011	978 (100)	1778 (122)	1292 (75)	690 (91)	1341 (70)	1307 (91)
LTM	977	1453	1716	758	1918	1432

* Figures in brackets are % of LTM

[Source: raw provisional data from Meteorological Services]

Figure 1. Monthly rainfall (mm) for the period Oct 2010 to Apr 2011 for the 2011 crop compared to the corresponding period of the 2010 crop and to the long term mean (LTM)



1.2 Temperature (Table 2)

Data on maximum and minimum temperatures recorded during the month of April 2011 on MSIRI agro-meteorological stations are given below.

The mean monthly maximum temperature was comparable to the normal at Pamplémousses but exceeded the normal by more than 1.0 °C at the other stations. Above normal mean monthly minimum temperature was recorded at Pamplémousses (+0.5 °C), Union Park (+0.8 °C) and Belle Rive (+1.2 °C) whereas at Réduit it was close to the normal. The resulting mean amplitude was comparable to the normal at Belle Rive, lower at Pamplémousses and higher at Réduit and Union Park.

Table 2. Maximum and minimum air temperatures recorded on MSIRI agro-meteorological stations in April 2011

Station	Maximum (°C)	Minimum (°C)	Amplitude (°C)
Pamplémousses	29.8 (29.7) *	21.5 (21.0)	8.3 (8.7)
Réduit	27.9 (26.8)	20.2 (20.3)	7.7 (6.5)
Belle Rive	27.5 (26.4)	19.8 (18.6)	7.7 (7.8)
Union Park	27.4 (25.9)	20.5 (19.7)	6.9 (6.2)

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

1.3 Sunshine (Table 3)

Data from the MSIRI agro-meteorological stations showed that sunshine hours during April 2011 were 30% above normal at Union Park but slightly above normal at the other stations. Recorded bright sunshine as a percentage of the normal amounted to 105 at Pamplémousses, 103 at Réduit, 109 at Belle Rive and 130 at Union Park.

Table 3 Sunshine duration (hrs) recorded on MSIRI agro-meteorological stations in April 2011

Station	Apr 2011	Normal	% of Normal
Pamplémousses	243	232	105
Réduit	217	211	103
Belle Rive	210	192	109
Union Park	197	152	130

2. STALK HEIGHT

Measurements of stalk height had been carried out during the last week of April 2011 at 60 sites in the five sugar cane growing 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 April 2010 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 April amounted to 38.2 cm in the North, 35.0 cm in the East, 38.3 cm in the South, 31.2 cm in the West and 33.5 cm in the Centre. Stalk elongation in the North, West and Centre during the month of April 2011 was in fact slightly higher by about 2.0 cm than for the corresponding month in 2010, but in the East and South it lagged that of April 2010 by 2.6 cm. Compared to the normal for the same period, elongation was higher in the South and Centre by 7.2 cm and 1.7 cm. It lagged behind the normal in sectors East by 2.9 cm and in the West by 2.3 cm. The island average elongation of 36.4 cm was below that of April 2010 (37.2 cm) by 2.1% but higher than the normal (32.5 cm) by 11.9%.

Table 4a. Stalk elongation during the month of April

Sectors	Stalk elongation (cm) during April			April 2011 as % of	
	2011	2010	Normal	2010	Normal
North	38.2	36.5	37.9	104.7	100.9
East	35.0	37.6	37.9	93.1	92.3
South	38.3	40.9	31.1	93.6	123.2
West	31.2	29.5	33.5	105.8	93.1
Centre	33.5	31.4	31.8	106.7	105.3
Island	36.4	37.2	32.5	97.9	111.9

2.2 Cumulative Elongation (Table 4b)

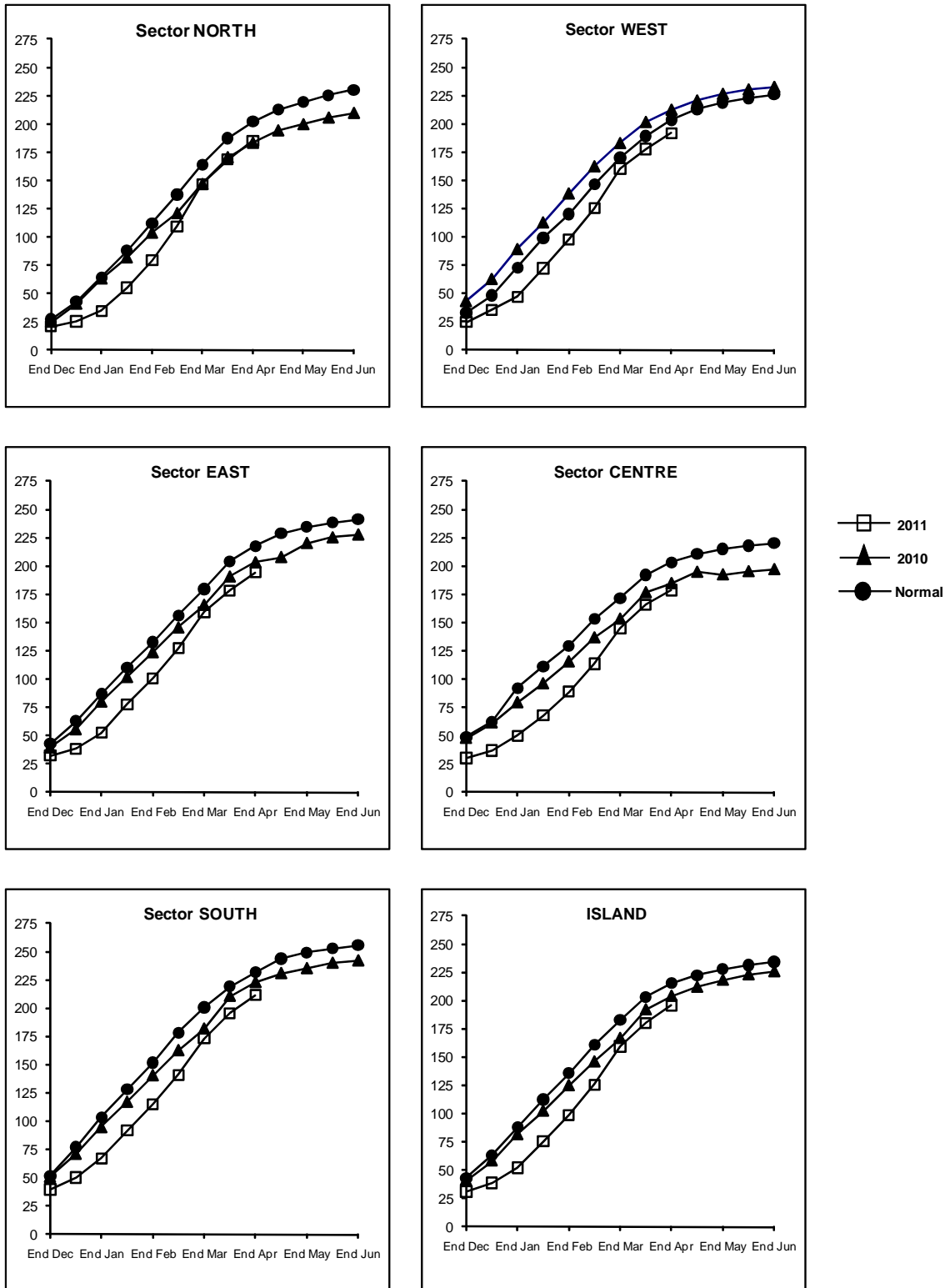
Cumulative growth from end-December 2010 to end-April 2011 was 164.1 cm in the North, 161.7 cm in the East, 171.7 cm in the South, 167.0 cm in the West and 148.6 cm in the Centre. These cumulative growths when compared to those of 2010 were higher by 5.6 cm (3.5%) in the North and 11.5 cm (8.4 %) in the Centre. In the South, cumulative growth was comparable to that of last year while in sectors East and West it lagged by 2.0 cm (1.2%) and 2.4 cm (1.4%), respectively.

Table 4b. Cumulative elongation at end-April

Sectors	Cumulative elongation (cm) at end- April			April 2011 as % of	
	2011	2010	Normal	2010	Normal
North	164.1	158.5	174.6	103.5	94.0
East	161.7	163.7	174.7	98.8	92.6
South	171.7	171.5	179.6	100.1	95.6
West	167.0	169.4	170.7	98.6	97.9
Centre	148.6	137.1	154.3	108.4	96.3
Island	164.6	162.8	172.0	101.1	95.7

For the same period, cumulative growth was below normal in all sectors. The difference amounted to 10.5 cm in the North, 13.0 cm in the East, 7.9 cm in the South, 3.7 cm in the West and 5.7 cm in the Centre. Island-wise the cumulative elongation of 164.6 cm was higher than that of the 2010 crop (162.8 cm) by 1.1% but inferior to the normal (172.0 cm) by 4.3%.

Figure 2. Stalk height at end-April 2011



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

Total stalk height at end-April 2011 reached 185.1 cm in the North, 194.2 cm in the East, 211.6 cm in the South, 191.8 cm in the West and 178.7 cm in the Centre. Compared to end-April 2010, cane height was taller by 1.9 cm in the North but shorter in the other sectors by 9.1 cm in the East, 11.2 cm in the South, 20.8 cm in the West and 6.0 cm in the Centre. Total cane height at the end of April 2011 was also lower than the normal in all sectors. It was lagging by 16.8 cm (8.3 %) in the North, 23.6 cm (10.8%) in the East, 20.0 cm (8.7%) in the South, 11.7 cm (5.8%) in the West and 24.7 cm (12.1%) in the Centre.

Island-wise the total cane height of 195.9 cm at end-April 2011 was lagging behind that of end-April 2010 by 7.9 cm (3.9%) and the normal by 19.5 cm (9.1%).

Table 4c. Stalk height at end-April

Sectors	Stalk height (cm) at end-April			End-April 2011 as % of	
	2011	2010	Normal	2010	Normal
North	185.1	183.2	201.9	101.0	91.7
East	194.2	203.3	217.8	95.5	89.2
South	211.6	222.8	231.6	95.0	91.3
West	191.8	212.6	203.5	90.2	94.2
Centre	178.7	184.7	203.4	96.8	87.9
Island	195.9	203.8	215.4	96.1	90.9

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.

The data indicate a higher sucrose content at most sites under the early varieties M 52/78, M 703/89, R 573, M 695/69 and R 575 compared to the mid- and late-season ones. However, sucrose content is still far from the potential achievable even in the early varieties.

Table 5a Average Pol % Cane (richesse) at end April 2011.

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			8.1	6.2			5.5	6.7	7.0	3.9	6.4		5.7				3.6
East	7.3	9.5	9.2	8.4	11.4	9.2	6.4	6.5	4.9	6.2	6.8		6.2		5.7		5.5
South	7.9	9.7	7.8	7.6	6.9				7.9	4.9	7.3	7.1	6.7	5.9	4.7	4.3	4.8
West			7.6		6.7				5.5	4.7	6.2		8.4				3.9
Centre	8.8	8.3		5.6		5.4				5.5	6.2		6.4		5.6		5.9

The *richesse* derived at the end-April sampling was 5.3% in the North, 7.0% in the East, 6.1% in the West, and 6.9% in both the South and the Centre. Compared to the corresponding period in 2010, sucrose content at end-April 2011 was lower in all sectors, the difference being 2.6° in the North, 1.5° in the East, 1.3° in the South, 2.6° in the West and 1.9° in the Centre. Compared to the corresponding period in 2009, sucrose content was lagging by 0.3° in the North, 0.2° in the East and West, and 0.8° in the Centre. In the South, it was higher than that of 2009 by 0.5°.

Table 5b Comparison of Pol % Cane (*richesse*) at the end of April 2009, 2010 and 2011.

Sectors	APRIL		
	2009	2010	2011
North	5.6	7.9	5.3
East	7.2	8.5	7.0
South	6.4	8.2	6.9
West	6.3	8.7	6.1
Centre	7.7	8.8	6.9
Island	6.6	8.3	6.5

Island-wise, the *richesse* of 6.5% recorded at the end of April 2011 was similar to that of 2009 at the same period but lagging severely behind that of 2010, by 1.8°.

4. CROP 2011

Weather during the month of April 2011 has been more favourable to sucrose accumulation than to growth with rainfall below the normal and solar radiation higher than normal in all sectors. Nevertheless average island elongation during April 2011 has been close to both that of the normal and that of April 2010. At the end of April total cane height, when compared to April 2010 and the normal, was inferior by only 3.9% and 9.1% respectively. On the other hand, in spite of favourable conditions sucrose accumulation has not been encouraging and this is reflected in the cane analysis results of end-April with the overall *richesse* at island level being similar to that of 2009 and lagging by nearly 2° behind that of 2010 at the same period.