

MAURITIUS SUGAR INDUSTRY RESEARCH INSTITUTE

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6 May 2010

SUGAR CANE CROP 2010

Status: End April 2010

1. CLIMATE

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

The island's average rainfall for the month of April 2010 was 161 mm over the sugar cane areas and represented 69% of the long-term mean (233 mm). Sector-wise, rainfall was below the long-term mean by 90 mm (55%) in the North, 72 mm (29%) in the East, 32 mm (11%) in the South, 61 mm (63%) in the West and 149 mm (51%) in the Centre.

Cumulative rainfall for the period October 2009 to April 2010 amounted to 1910 mm, which is higher by 33% than the island long-term mean of 1432 mm for this period. During the same period, a total of 1130 mm was recorded in the North, 2551 mm in the East, 2176 mm in the South, 975 mm in the West and 1866 mm in the Centre. Compared to the respective long-term mean of these sectors, cumulative rainfall represented 116% in the North, 176% in the East, 127% in the South, 129% in the West and 97% in the Centre.

Table 1a. Rainfall (mm) of April for crops 2009, 2010 and the long term mean (LTM)

	North	East	South	West	Centre	Island
2009	138 (84)	315 (129)	346 (124)	105 (108)	243 (83)	261 (112)
2010	75 (45)	173 (71)	248 (89)	36 (37)	144 (49)	161 (69)
LTM	165	245	280	97	293	233

* figures in brackets are % of LTM

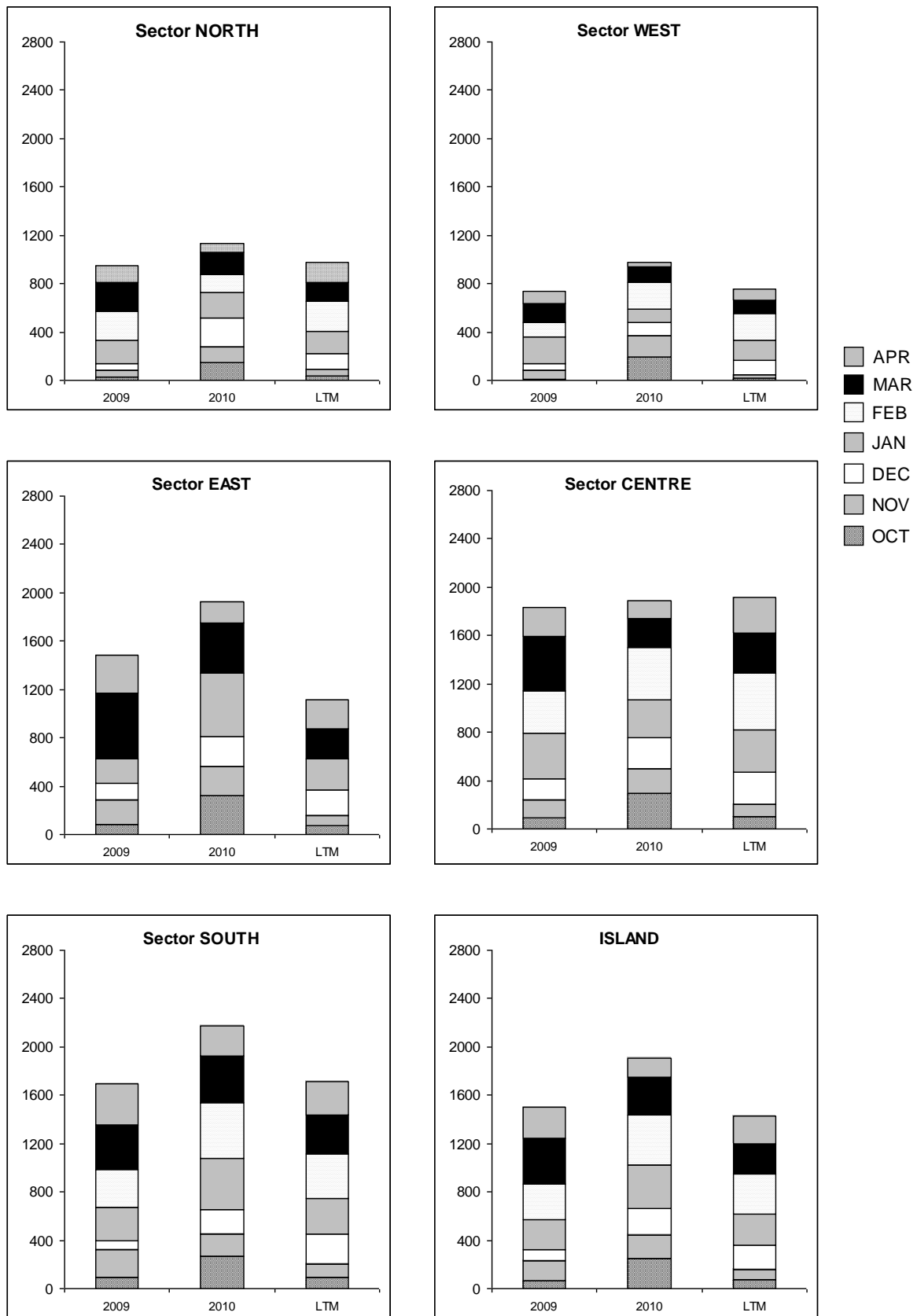
Table 1b. Cumulative rainfall (mm) from Oct 2009 to Apr 2010 for crop 2010 compared to that for crop 2009 and the long term mean (LTM)

	North	East	South	West	Centre	Island
2009	950 (97)	1850 (127)	1698 (99)	737 (97)	1832 (96)	1502 (105)
2010	1130 (116)	2551 (176)	2176 (127)	975 (129)	1866 (97)	1910 (133)
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 period Oct 2009 to Apr 2010 for the 2010 crop compared to that of the same period for crop 2009 and of the long-term mean (LTM).



1.2 Temperature (Table 2)

Data on maximum and minimum temperatures recorded during the month of April 2010 on MSIRI agro-meteorological stations are given below.

The mean maximum temperature was above normal at all stations, the range varying from 0.4 °C at Pamplémousses to 1.9 °C at Belle Rive. Above normal mean minimum temperature was also recorded at Pamplémousses (0.4 °C), Union Park (0.6 °C) and Belle Rive (0.2 °C) whereas at Réduit it was lower by 0.5 °C. The resulting mean amplitude was comparable to the normal at Pamplémousses but higher at the other three stations.

Table 2 Maximum and minimum air temperatures recorded on MSIRI agro-meteorological stations in April 2010

Station	Maximum (°C)	Minimum (°C)	Amplitude (°C)
Pamplémousses	30.1 (29.7) *	21.1 (20.7)	9.0 (9.0)
Réduit	27.5 (26.7)	19.7 (20.2)	7.8 (6.4)
Belle Rive	27.9 (26.0)	18.9 (18.7)	9.0 (7.3)
Union Park	27.1 (25.7)	20.1 (19.5)	7.0 (6.3)

* 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 April 2010 were well above normal at all stations. Recorded bright sunshine as a percentage of the normal amounted to 127 at Pamplémousses, 132 at Réduit, 112 at Belle Rive and 142 at Union Park.

Table 3 Sunshine duration (hrs) recorded on MSIRI agro-meteorological stations in April 2010

Station	Apr 2010	Normal	% of Normal
Pamplémousses	284	222	127
Réduit	264	200	132
Belle Rive	206	184	112
Union Park	209	147	142

2. STALK HEIGHT (TABLE 2)

Cane growth was assessed during the last week of April 2010 in the 63 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 April 2009 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 April amounted to 36.5 cm in the North, 37.6 cm in the East, 40.9 cm in the South, 29.5 cm in the West and 31.4 cm in the Centre. Stalk elongation during the month of April 2010 was thus higher than for the corresponding month in 2009 by 4.2 cm in the East, 9.6 cm in the South and 4.7 cm in the Centre but was below in the North and West by 1.4 cm and 6.6 cm respectively. Compared to the normal for the same period, elongation was higher in the South by 7.7 cm. It was similar in the East but lagging behind the normal in sectors North, West and Centre by 4.5 cm, 3.6 cm and 1.6 cm, respectively. The island average of 37.2 cm was above that of April 2009 (33.4 cm) by 11.3% and the normal (31.0 cm) by 19.8%.

Table 4a. Stalk elongation during the month of April.

Sectors	Stalk elongation (cm) during Apr			Apr 2010 as % of	
	2010	2009	Normal	2009	Normal
North	36.5	37.9	41.0	96.3	88.9
East	37.6	33.4	37.6	112.6	100.1
South	40.9	31.3	33.2	130.7	123.0
West	29.5	36.1	33.1	81.7	89.0
Centre	31.4	26.7	33.0	117.6	95.1
Island	37.2	33.4	31.0	111.3	119.8

2.2 Cumulative Elongation (Table 4b)

Cumulative growth from end-December 2009 to end-April 2010 was 158.5 cm in the North, 163.7 cm in the East, 171.5 cm in the South, 169.4 cm in the West and 137.1 cm in the Centre. Cumulative elongation lagged behind those of the 2009 crop in four sectors, namely by 7.5% in the North, 3.3% in the South, 2.3% in the West and 1.8% in the Centre. In the East, it was better by 1.5% when compared to that of the 2009 crop. For the same period, cumulative elongation was below normal in all sectors. The difference was 16.2 cm in the North, 10.2 cm in the East, 9.7 cm in the South, 2.2 cm in the West and 18.5 cm in the Centre. Island-wise the cumulative elongation of 162.8 cm was below that of the 2009 crop (167.7 cm) by 2.9% and the normal (170.6 cm) by 4.6%.

Table 4b. Cumulative elongation at end-April.

Sectors	Cumulative elongation (cm) at end- Apr			Apr 2010 as % of	
	2010	2009	Normal	2009	Normal
North	158.5	171.4	174.7	92.5	90.7
East	163.7	161.3	173.9	101.5	94.1
South	171.5	177.3	181.2	96.7	94.6
West	169.4	173.3	171.6	97.7	98.7
Centre	137.1	139.6	155.6	98.2	88.1
Island	162.8	167.7	170.6	97.1	95.4

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

Total stalk height at end-April 2010 reached 183.2 cm in the North, 203.3 cm in the East, 222.8 cm in the South, 212.6 cm in the West and 184.7 cm in the Centre. Compared to the same period in 2009, cane was shorter by 22.6 cm in the North, 4.3 cm in the East, 15.5 cm in the South, 2.2 cm in the West and 6.1 cm in the Centre. Total cane height at the end of April 2010 was below normal by 20.3 cm in the North, 15.3 cm in the East, 10.1 cm in the South and 16.6 cm in the Centre. In the West, total cane height exceeded the normal by 11.1 cm.

Island-wise the total cane height of 203.8 cm at end-April 2010 lagged behind that of end-April 2009 by 12.1 cm (5.6%) and the normal by 9.6 cm (4.5%).

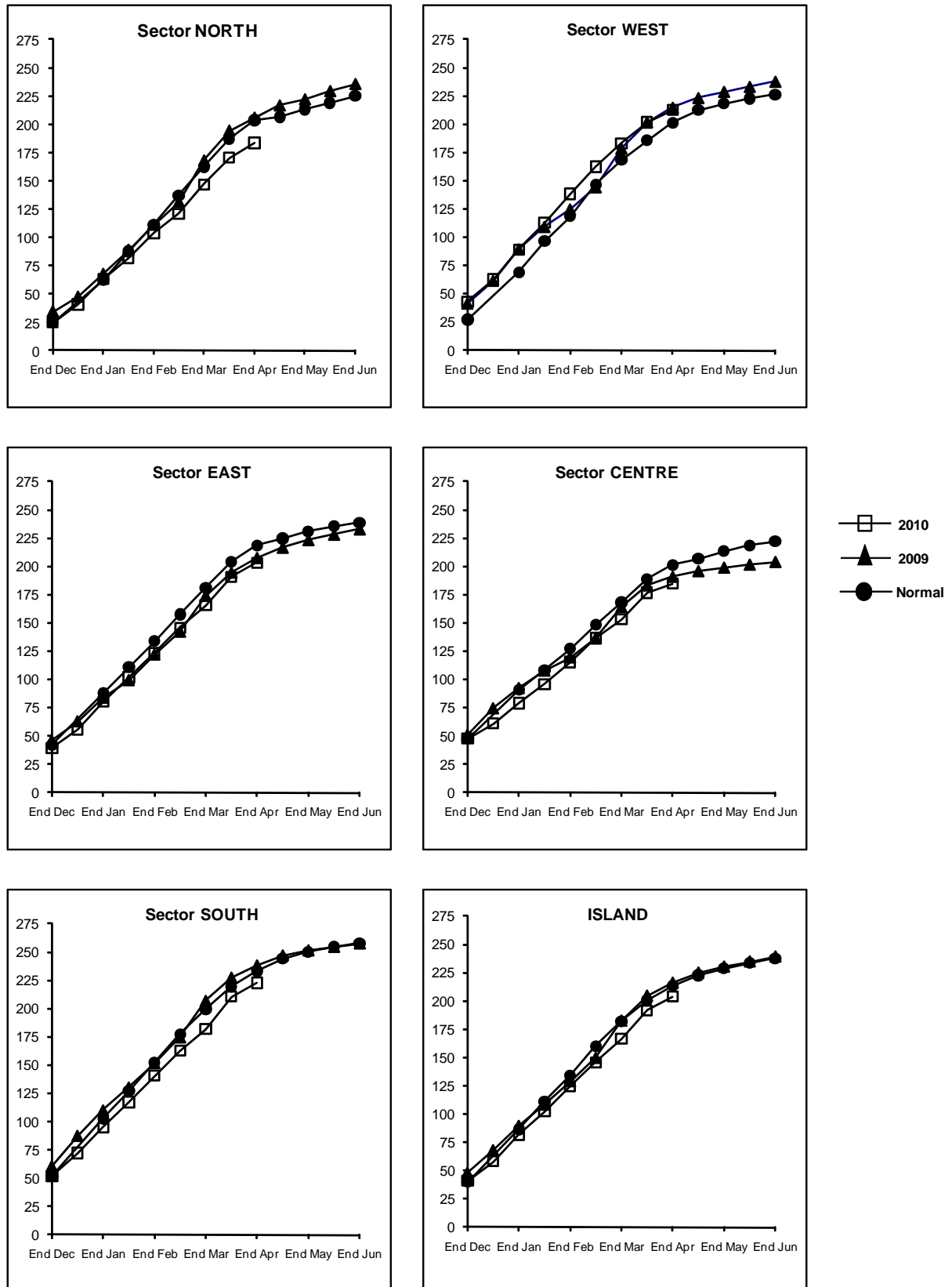
Table 4c. Stalk height at end-April

Sectors	Stalk height (cm) at end-Apr			End-Apr 2010 as % of	
	2010	2009	Normal	2009	Normal
North	183.2	205.8	203.5	89.0	90.0
East	203.3	207.6	218.6	97.9	93.0
South	222.8	238.3	232.9	93.5	95.7
West	212.6	214.8	201.5	99.0	105.5
Centre	184.7	190.8	201.3	96.8	91.8
Island	203.8	215.9	213.4	94.4	95.5

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.

Figure 2. Stalk height at end- April 2010.



The data clearly 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.

The *richesse* derived at the end-April sampling was 7.9% in the North, 8.5% in the East, 8.2% in the South, 8.7% in the West and 8.8% in the Centre. Compared to the corresponding period in 2009, sucrose content at end-April 2010 was superior by 2.3° in the North, 1.3° in the East, 1.8° in the South, 2.4° in the West and 1.1° in the Centre. Sucrose content at the end of April, for the present crop, was also higher than that of the corresponding period in 2008. The advantage was 0.5° in the North, 0.3° in the South and Centre, and 1.3° in the West. In the East, it lagged behind that of 2008 by 0.8°.

Table 5a Average Pol % Cane (richesse) at end April 2010.

Sectors	M 52/78	M 703/89	R 573	M 695/69	R 575	M 387/85	M 1246/84	M 2256/89	M 2593/92	M 1400/86	M 1176/77	R 579	M 1394/86	M 3035/66	R 570
North			10.5	10.0			5.3		8.6	6.6	9.0	7.4			7.3
East	12.0	11.1	9.7	9.3	11.5	11.0	9.1	8.1		7.9	8.8	6.7		7.0	5.8
South	10.5	9.3	9.0	9.3	9.4				9.9	8.4	8.0	7.5	7.4	6.3	5.3
West			8.8	10.0	9.6					7.7	8.1	10.6			6.7
Centre	11.8	10.5		8.8		7.5				7.5	7.8	7.9		6.4	5.3

Table 5b Comparison of Pol % Cane (richesse) at the end of April 2008, 2009 and 2010.

Sectors	APRIL		
	2008	2009	2010
North	7.4	5.6	7.9
East	9.3	7.2	8.5
South	7.9	6.4	8.2
West	7.4	6.3	8.7
Centre	8.5	7.7	8.8
Island	8.2	6.6	8.3

Island-wise, the *richesse* of 8.3% recorded at the end of April 2010 was higher than that of the corresponding period in 2009 by 1.7° but only slightly better than in 2008 (0.1°).

4. CROP 2010

Despite the favourable weather conditions experienced during the growth and development phases, total cane height islandwide was lagging behind the normal and that of 2009 by about 5%. This is attributed to the relatively higher share of late harvested crops among the elongation sites. It is still possible for these crops, being comparatively younger, to further elongate, even when cooler conditions set in with winter. Below normal rainfall in April 2010 has created the mild stress needed for ripening to set in, especially when that moisture stress became associated with higher solar radiation regime and temperature amplitude during the month. The potential productivity of the 2010 crop is still highly dependent on forthcoming weather conditions.