

MAURITIUS SUGAR INDUSTRY RESEARCH INSTITUTE

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8 May 2009

SUGAR CANE CROP 2009

Status: End April 2009

1. CLIMATE

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

The island's average rainfall for the month of April 2009 was 261 mm over the sugar cane areas and represented 112% of the long-term mean (233 mm). Sector-wise, rainfall was above the long-term mean of the month by 29% in the East (315 mm), 24% in the South (346 mm) and 8% in the West (105 mm). In the North (138 mm) and Centre (243 mm), it was below the long-term mean by 16% and 17% respectively.

Cumulative rainfall for the period October 2008 to April 2009 amounted to 1502 mm, which is higher than the island long-term mean of 1433 mm for this period. During the same period, a total of 950 mm was recorded in the North, 1850 mm in the East, 1698 mm in the South, 737 mm in the West and 1832 mm in the Centre. Compared to the respective long-term mean of these sectors, cumulative rainfall represented 97% in the North, 127% in the East, 99% in the South, 97% in the West and 96% in the Centre.

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

	North	East	South	West	Centre	Island
2008	24 (15)	77 (31)	65 (23)	12 (12)	88 (30)	57 (24)
2009	138 (84)	315 (129)	346 (124)	105 (108)	243 (83)	261 (112)
LTM	165	245	280	97	293	233

* figures in brackets are % of LTM

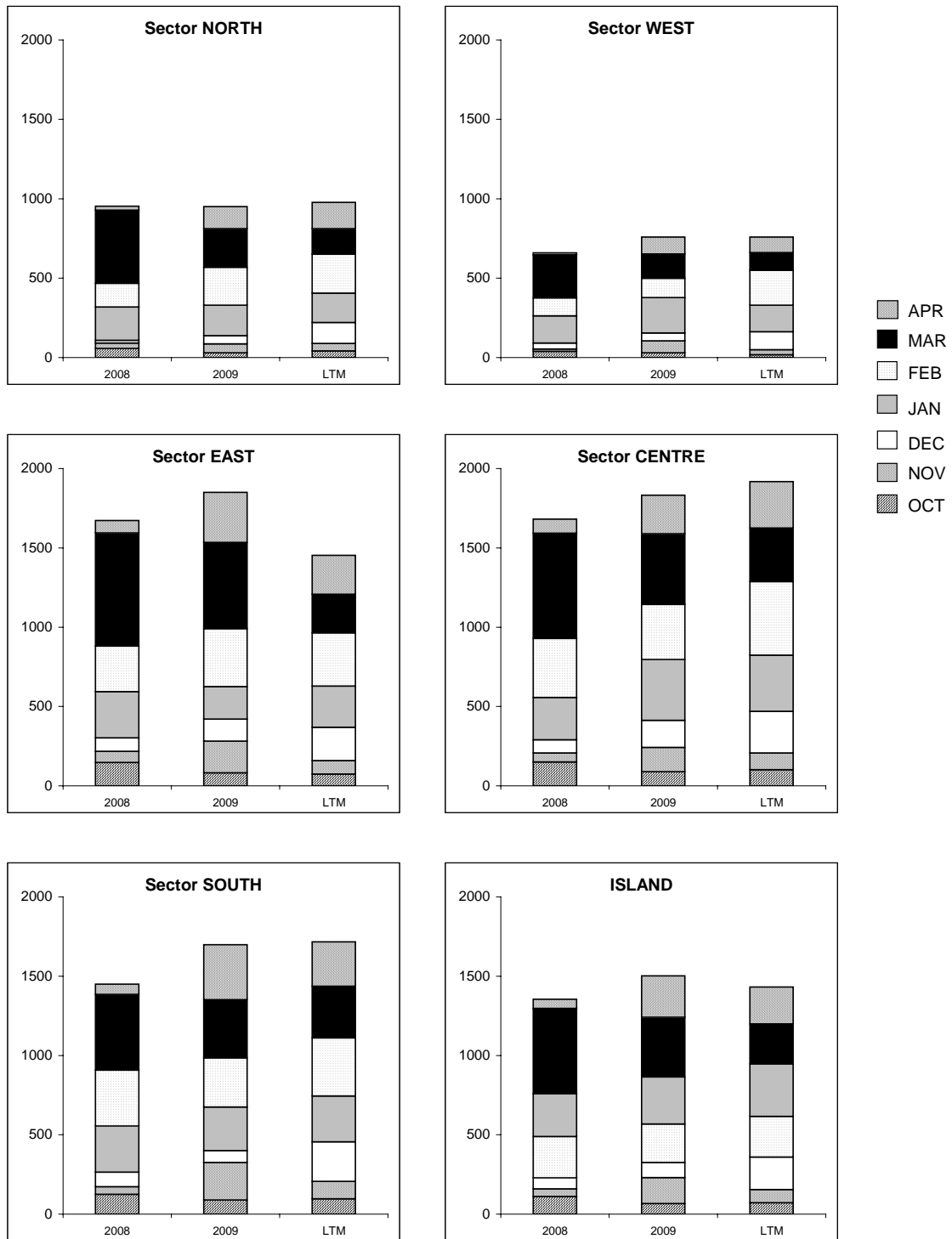
Table 1b. Cumulative rainfall (mm) from Oct 2008 to Apr 2009 for crop 2009 compared to that of crop 2008 and the long term mean (LTM)

	North	East	South	West	Centre	Island
2008	952 (97)	1672 (115)	1450 (84)	659 (87)	1681 (88)	1354 (94)
2009	950 (97)	1850 (127)	1698 (99)	737 (97)	1832 (96)	1502 (105)
LTM	977	1453	1716	758	1918	1433

* figures in brackets are % of LTM

[Source : raw provisional data from Meteorological Services]

Figure 1. Monthly rainfall (mm) for period Oct 2008 to Apr 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 April 2009 on MSIRI agro-meteorological stations are given below.

The mean maximum temperature was above normal at Réduit, Belle Rive and Union Park by 1.1 °C, 1.2 °C and 1.3 °C respectively whereas at Pamplémousses it was close to normal. Above normal mean minimum temperature was recorded on all four stations, the difference being 1.5 °C at Pamplémousses, 1.0 °C at Réduit, 1.3 °C at Belle Rive and at Union Park. The resulting mean amplitude was below normal by 1.4 °C at Pamplémousses, close to normal at Belle Rive and Union Park but slightly higher (by 0.2 °C) than normal at Réduit.

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

Station	Maximum (°C)	Minimum (°C)	Amplitude (°C)
Pamplémousses	29.8 (29.7) *	22.2 (20.7)	7.6 (9.0)
Réduit	27.8 (26.7)	21.2 (20.2)	6.6 (6.4)
Belle Rive	27.2 (26.0)	20.0 (18.7)	7.2 (7.3)
Union Park	27.0 (25.7)	20.8 (19.5)	6.2 (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 2009 were close to normal at Pamplémousses, Belle Rive and Réduit but was well below normal at Union Park. Recorded bright sunshine as a percentage of the normal amounted to 99 at Pamplémousses, 103 at Réduit, 101 at Belle Rive and 76 at Union Park.

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

Station	Apr 2009	Normal	% of Normal
Pamplémousses	220	222	99
Réduit	206	200	103
Belle Rive	186	184	101
Union Park	112	147	76

2. STALK HEIGHT (TABLE 2)

Cane growth was assessed during the last week of April 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 April 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 April amounted to 37.9 cm in the North, 33.4 cm in the East, 31.3 cm in the South, 36.1 cm in the West and 26.7 cm in the Centre. Stalk elongation during the month of April 2009 was thus higher than for the corresponding month in 2008 by 10.8 cm in the North, 5.0 cm in the East and 1.2 cm in the South, was similar in the Centre but below in the West by 5.2 cm. Compared to the normal for the same period, elongation was higher in the North, East and West by 3.1 cm, 0.8 cm and 0.3 cm, respectively. In the other two sectors, it was below the normal by 0.9 cm in the South and by 5.1 cm in the Centre. The island average of 33.4 cm was 12.8% above that of April 2008 (29.6 cm) but was 8.0% below the normal (36.3 cm).

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

Sectors	Stalk elongation (cm) during Apr			Apr 2009 as % of	
	2009	2008	Normal	2008	Normal
North	37.9	27.1	34.8	139.9	108.9
East	33.4	28.4	32.6	117.6	102.5
South	31.3	30.1	32.2	104.0	97.2
West	36.1	41.3	35.8	87.4	100.8
Centre	26.7	26.8	31.8	99.6	84.0
Island	33.4	29.6	36.3	112.8	92.0

2.2 Cumulative Elongation (Table 4b)

Growth from end-December 2008 to end-April 2009 cumulated to 171.4 cm in the North, 161.3 cm in the East, 177.3 cm in the South, 173.3 cm in the West and 139.6 cm in the Centre. Cumulative growths exceeded those of the 2008 crop in four sectors, the advantage being 25.3 cm (17.3%) in the North, 1.5 cm (0.9%) in the East, 14.5 cm (8.9%) in the South and 11.3 cm (7.0%) in the West. For the Centre the figures were comparable. For the same period, cumulative elongation was below normal in sectors East, South and Centre by 10.3 cm, 6.0 cm and 10.2 cm, respectively. In the West it was comparable to the normal while in the North it was better by 4.2 cm. Island-wise the cumulative elongation of 167.7 cm exceeded that of the 2008 crop (155.8 cm) by 7.6% but lagged behind the normal (174.0 cm) by 3.6%.

Table 4b. Cumulative elongation at end-April.

Sectors	Cumulative elongation (cm) at end- Apr			Apr 2009 as % of	
	2009	2008	Normal	2008	Normal
North	171.4	146.1	167.2	117.3	102.5
East	161.3	159.8	171.6	100.9	94.0
South	177.3	162.8	183.3	108.9	96.7
West	173.3	162.0	172.8	107.0	100.3
Centre	139.6	140.1	149.8	99.6	93.2
Island	167.7	155.8	174.0	107.6	96.4

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

Total stalk height at end-April 2009 reached 205.8 cm in the North, 207.6 cm in the East, 238.3 cm in the South, 214.8 cm in the West and 190.8 cm in the Centre. Compared to the same period in 2008, cane was taller by 37.8 cm in the North, 1.5 cm in the East, 34.2 cm in the South, 19.3 cm in the West and 7.6 cm in the Centre. Total cane height at the end of April 2009 exceeded the normal by 8.6 cm (4.4%) in the North, 3.2 cm (1.4%) in the South and 14.6 cm (7.3%) in the West but it was below normal by 6.4 cm (3.0%) in the East and 6.7 cm (3.4%) in the Centre.

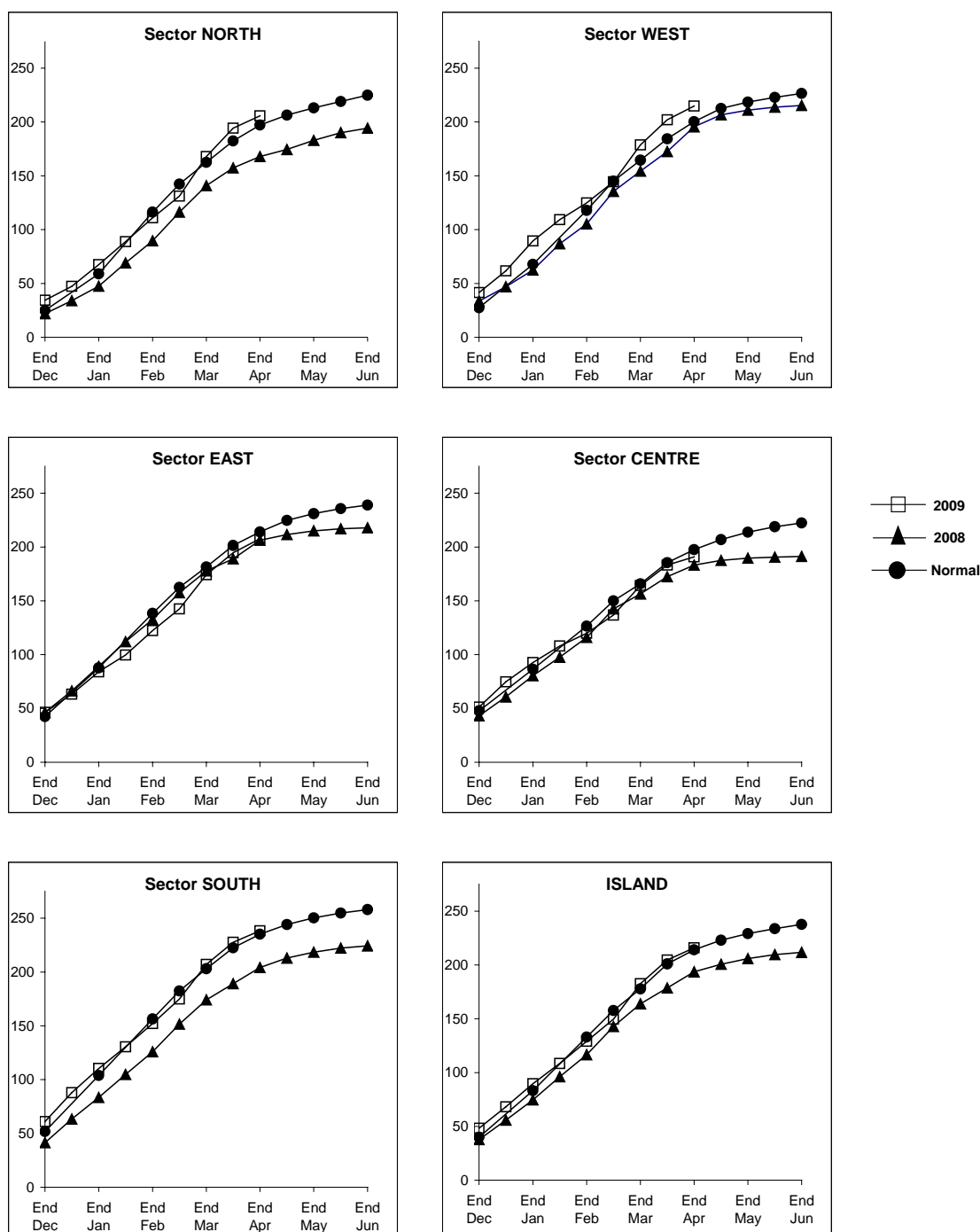
Island-wise the total cane height of 215.9 cm at end-April 2009 was higher than that of end-April 2008 by 22.4 cm (11.6%) and the normal by 1.9 cm (0.9%).

Table 4c. Stalk height at end-April

Sectors	Stalk height (cm) at end-Apr			End-Apr 2009 as % of	
	2009	2008	Normal	2008	Normal
North	205.8	168.0	197.2	122.5	104.4
East	207.6	206.1	214.0	100.7	97.0
South	238.3	204.1	235.1	116.8	101.4
West	214.8	195.5	200.2	109.9	107.3
Centre	190.8	183.2	197.5	104.1	96.6
Island	215.9	193.5	214.0	111.6	100.9

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.

Figure 2. Stalk height at end- April 2009.

The data clearly 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 ones R 570 and M 3035/66. However, sucrose content is still far from the potential achievable even in the early varieties.

The *richesse* derived at the end-April sampling was 5.6% in the North, 7.2% in the East, 6.4% in the South, 6.3% in the West and 7.7% in the Centre. Compared to the corresponding period in

2008, sucrose content at end-April 2009 was lagging by 1.8° in the North, 2.1° in the East, 1.5° in the South, 1.1° in the West and 0.8° in the Centre. Sucrose content at end of April for the present crop was also inferior than that of the corresponding period in 2007 by 2.8° in the North, 1.4° in the East and West, and 1.6° in the South. In the Centre, it exceeded that of 2007 by 0.5°.

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

Sectors	M 52/78	M 703/89	R 573	M 695/69	R 575	M 387/85	M 1246/84	M 1557/70	M 1400/86	M 1176/77	R 579	M 1394/86	M 3035/66	R 570
North			8.0	10.6			6.8		3.5	6.3	5.1			4.2
East	12.2		9.1	9.1	9.4	8.4	5.4	8.9	6.6	7.5	6.3		5.9	4.4
South	9.4	7.9	6.8	6.7	7.4				6.2	7.1	5.9	7.1	4.7	4.3
West			8.3	5.4	7.2	6.6			5.2	6.7	8.0			2.7
Centre	9.9	8.3		5.5		8.7			7.3	7.9	8.1		5.9	4.2

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

Sectors	APRIL		
	2007	2008	2009
North	8.4	7.4	5.6
East	8.6	9.3	7.2
South	8.0	7.9	6.4
West	7.7	7.4	6.3
Centre	7.2	8.5	7.7
Island	8.1	8.2	6.6

Island-wise, the *richesse* of 6.6% recorded at the end of April 2009 was below that of the corresponding period in 2008 and 2007 by 1.6° and 1.5° respectively.

4. CROP 2009

Weather conditions have continued to be favourable to growth during the month of April, resulting in an overall good elongation rate of the cane. Thus total cane height was slightly above the normal and exceeded that of the 2008 crop by as much as 22.4 cm (11.6%). Consequently, sucrose accumulation has not been optimal with at the end of April, the island average being only 6.6% and lagging behind those of 2008 and 2007. Such a value should not be taken as an indication of a potentially low extraction rate at harvest since ripening can be very rapid when conducive climatic conditions are experienced in the coming months. At this stage, a better cane productivity than in 2008 can be anticipated while sugar productivity will be determined by the climatic conditions that will be encountered in the coming months.