

MAURITIUS SUGAR INDUSTRY RESEARCH INSTITUTE

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SUGAR CANE CROP 2009

Status: End June 2009

1. CLIMATE

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

The island's average rainfall for the month of June 2009 was 110 mm over the sugar cane areas and represented 92% of the long-term mean (120 mm). Sector-wise, rainfall was above the long-term mean for the month by 6% in the South. In the other sectors, it was below the long-term mean by 18% in the North (59 mm), 7% in the East (114 mm), 36% in the West (21 mm) and 34% in the Centre (108 mm).

Cumulative rainfall for the period October 2008 to June 2009 amounted to 1088 mm in the North, 2216 mm in the East, 2122 mm in the South, 803 mm in the West and 2173 mm in the Centre. The average cumulative rainfall for the same period for the island was 1807 mm. It represented 94%, 126%, 102%, 95%, 95% and 105% of the long-term mean of the respective sectors and of the island.

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

	North	East	South	West	Centre	Island
2008	137 (190)	184 (150)	201 (128)	85 (258)	231 (142)	175 (145)
2009	59 (82)	114 (93)	167 (106)	21 (64)	108 (66)	110 (92)
LTM	72	123	157	33	163	120

* figures in brackets are % of LTM

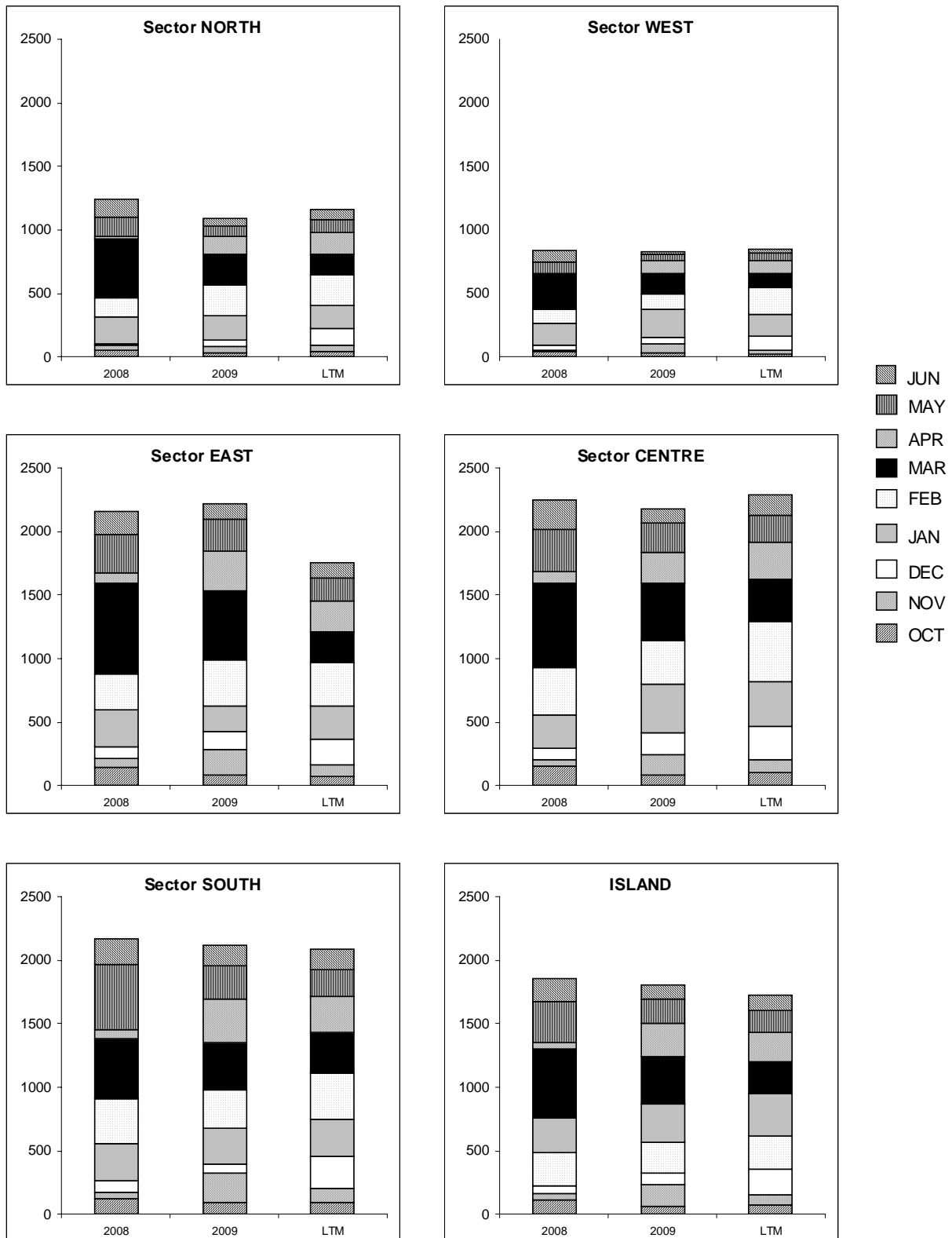
Table 1b. Cumulative rainfall (mm) from Oct 2008 to June 2009 for crop 2009 compared to that of crop 2008 and the long term mean (LTM)

	North	East	South	West	Centre	Island
2008	1235 (107)	2162 (123)	2172 (104)	834 (98)	2247 (98)	1853 (108)
2009	1088 (94)	2216 (126)	2122 (102)	803 (95)	2173 (95)	1807 (105)
LTM	1156	1756	2085	847	2291	1722

* figures in brackets are % of LTM

[Source : raw provisional data from Meteorological Services]

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

The mean maximum temperature was above normal at all stations with the difference ranging from 0.6 °C at Pamplémousses to 2.2 °C at Belle Rive. The mean minimum temperature was comparable to the normal at Réduit but higher by 1.0 °C at Pamplémousses, and 1.5 °C at both Union Park and Belle Rive. The resulting mean amplitude was below normal at Pamplémousses but higher at the Réduit, Belle Rive and Union Park stations.

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

Station	Maximum (°C)	Minimum (°C)	Amplitude (°C)
Pamplémousses	27.1 (26.5) *	17.6 (16.6)	9.5 (9.9)
Réduit	24.7 (23.3)	16.1 (16.1)	8.6 (7.2)
Belle Rive	25.1 (22.9)	16.2 (14.7)	8.9 (8.2)
Union Park	24.3 (22.6)	17.5 (16.0)	6.8 (6.6)

* figures in brackets are the Normal (1971-2000)

1.3 Sunshine (Table 3)

Data from the MSIRI agro-meteorological stations showed that sunshine hours during June 2009 were above normal at all stations. Recorded bright sunshine as a percentage of the normal amounted to 116 at Pamplémousses, 111 at Réduit, 123 at Belle Rive and 127 at Union Park. Above normal solar radiation enhances photosynthesis and sucrose accumulation when it coincides with other favourable weather conditions.

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

Station	June 2009	Normal	% of Normal
Pamplémousses	257	222	116
Réduit	237	214	111
Belle Rive	227	184	123
Union Park	185	145	127

2. STALK HEIGHT (TABLE 2)

Cane growth was assessed during the last week of June 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 June 2008 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 June amounted to 13.6 cm in the North, 9.5 cm in the East, 6.1 cm in the South, 8.9 cm in the West and 5.0 cm in the Centre. Stalk elongation during the month of June 2009 was thus higher than for the corresponding month in 2008 by 2.2 cm in the North, 6.6 cm in the East, 0.2 cm in the South, 4.6 cm in the West and 3.3 cm in the Centre. Compared to the normal for the same period, elongation was higher in the North, East and West by 1.7 cm, 1.6 cm and 1.0 cm, respectively, whereas in the South and Centre, it lagged by 1.7 cm and 3.6 cm respectively. The island average of 8.9 cm was 3.1 cm above that of June 2008 and only 0.2 cm (2.3 %) above the normal.

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

Sectors	Stalk elongation (cm) during June			June 2009 as % of	
	2009	2008	Normal	2008	Normal
North	13.6	11.4	11.9	119.3	114.3
East	9.5	2.9	7.9	327.6	120.3
South	6.1	5.9	7.8	103.4	78.2
West	8.9	4.3	7.9	207.0	112.7
Centre	5.0	1.7	8.6	294.1	58.1
Island	8.9	5.8	8.7	153.4	102.3

2.2 Cumulative Elongation (Table 4b)

Cumulative growth from end-December 2008 to end-June 2009 was above that of the corresponding period for the 2008 crop in all sectors. Growth over that period stood at 201.2 cm in the North, 186.6 cm in the East, 196.7 cm in the South, 196.3 cm in the West and 152.7 cm in the Centre. However, it was below the respective normal by 9.9 cm in the East, 9.5 cm in the South, 2.7 cm in the West and 21.9 cm in the Centre. In the North, cumulative growth topped the normal by 6.2 cm.

Island-wise the cumulative elongation of 190.8 cm exceeded that of the 2008 crop (173.9 cm) by 9.7% but lagged behind the normal (197.6 cm) by 3.4%.

Table 4b. Cumulative elongation at end-June.

Sectors	Cumulative elongation (cm) at end- June			June 2009 as % of	
	2009	2008	Normal	2008	Normal
North	201.2	172.4	195.0	116.7	103.2
East	186.6	171.5	196.5	108.8	95.0
South	196.7	182.9	206.2	107.5	95.4
West	196.3	181.8	199.0	108.0	98.6
Centre	152.7	148.1	174.6	103.1	87.5
Island	190.8	173.9	197.6	109.7	96.6

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

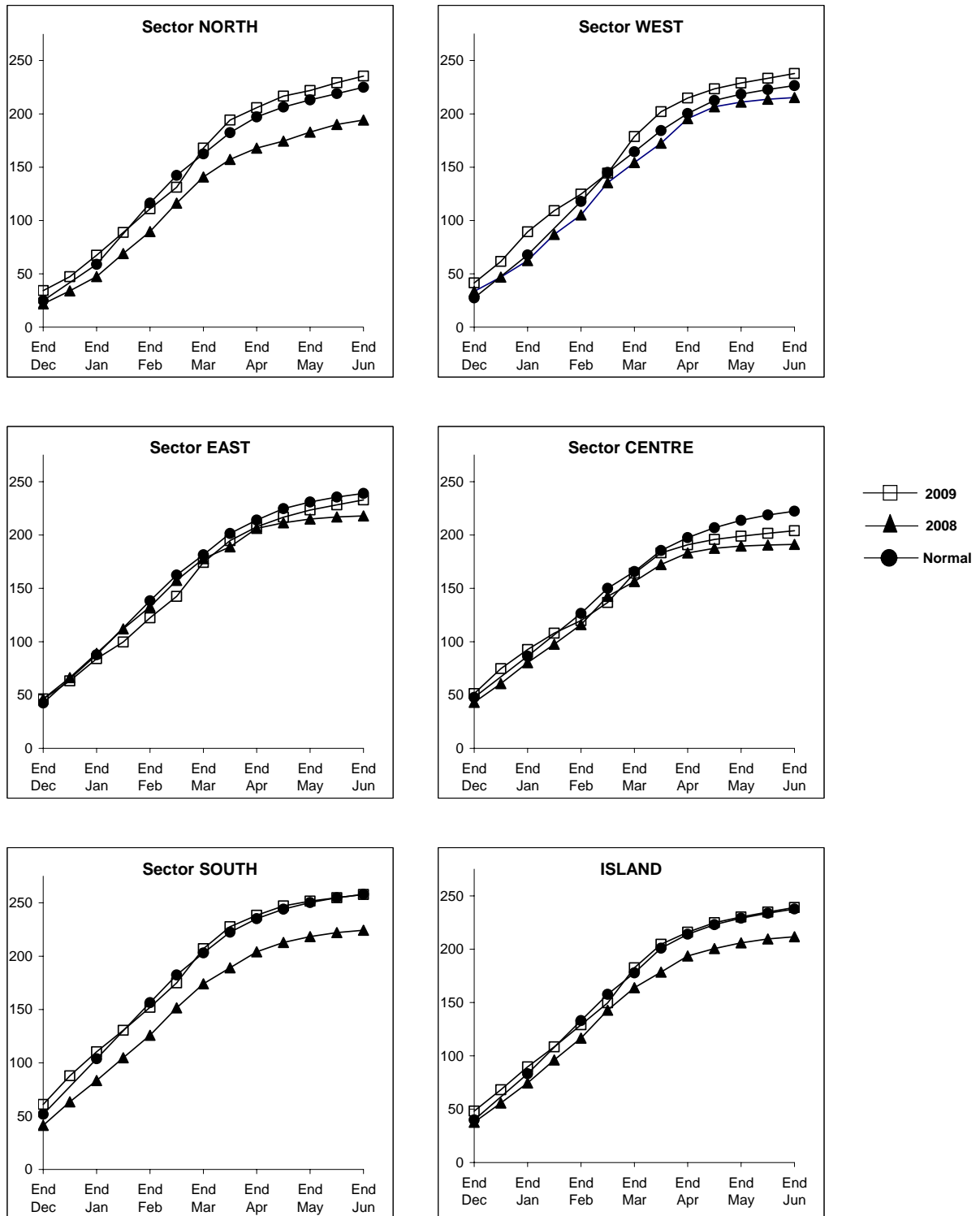
By end-June 2009, total stalk height reached 235.6 cm in the North, 232.9 cm in the East, 257.7 cm in the South, 237.8 cm in the West and 203.9 cm in the Centre. Cane was taller in all sectors compared to the same period in 2008, the advantage being 41.3 cm in the North, 15.1 cm in the East, 33.5 cm in the South, 22.5 cm in the West and 12.7 cm in the Centre. Total cane height at the end of June 2009 was close to the normal in the South but exceeded it by 10.5 cm (4.7%) in the North and by 11.4 cm (5.0%) in the West. In the remaining two sectors it was below normal by 6.0 cm (2.5%) in the East and 18.4 cm (8.3%) in the Centre.

Island-wise the total cane height of 239.0 cm at end-June 2009 was higher than that of end-June 2008 by 27.4 cm (12.9%) and the normal by 1.3 cm (0.5%).

Table 4c. Stalk height at end-June

Sectors	Stalk height (cm) at end-June			End-June 2009 as % of	
	2009	2008	Normal	2008	Normal
North	235.6	194.3	225.1	121.3	104.7
East	232.9	217.8	238.9	106.9	97.5
South	257.7	224.2	258.0	114.9	99.9
West	237.8	215.3	226.4	110.5	105.0
Centre	203.9	191.2	222.3	106.6	91.7
Island	239.0	211.6	237.7	112.9	100.5

Figure 2. Stalk height at end- June 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.

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

Sectors	M 52/78	M 703/89	R 573	M 695/69	R 575	M 387/85	M 1246/84	M 2256/88	M 1176/77	M 1400/86	R 579	M 1394/86	M 2593/92	M 3035/66	R 570
North			13.9	13.6			10.6		12.2	9.5	8.3				9.5
East		14.4	13.6	13.4	15.0	14.3	12.5	13.7	13.2	11.6	11.0			10.6	11.2
South	15.6	13.2	12.4	11.9	13.1				11.9	11.2	10.6	13.2	11.6	10.0	9.6
West			12.5	12.2	13.3	11.7			11.8	10.8	13.2				9.8
Centre	15.6	13.0		10.6		14.4			12.6	11.4	11.1			10.1	7.3

The *richesse* at end-June 2009 was 10.9% in the North, 12.6% in the East, 11.6% in the South, 12.1% in the West and 12.5% in the Centre. Compared to the corresponding period in 2008, *richesse* was lagging behind in the North and East by 0.5° and 0.1° whereas, in the other sectors, it was higher by 0.3° in the South, 0.8° in the West and 0.2° in the Centre. Sucrose content at the end of June for the present crop was behind that of the corresponding period in 2007 in all sectors, the difference being 0.2° in the North, 0.4° in the East, 0.5° in the South, 0.1° in the West and 0.4° in the Centre.

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

Sectors	MAY			JUNE		
	2007	2008	2009	2007	2008	2009
North	10.4	10.3	8.7	11.1	11.4	10.9
East	11.4	10.9	10.3	13.0	12.7	12.6
South	10.5	9.6	9.3	12.1	11.3	11.6
West	10.4	9.3	9.6	12.2	11.3	12.1
Centre	10.9	10.3	10.6	12.9	12.3	12.5
Island	10.7	10.1	9.6	12.2	11.8	11.8

From end-May 2009 to end-June 2009, *richesse* has improved in all sectors. The highest increment of 2.5° was observed in the West followed by 2.3° in both the East and the South, 2.2° in the North and 1.9° in the Centre. For the corresponding period last year, the increments recorded were 1.1° in the North, 1.8° in the East, 1.7° in the South, and 2.0° in both the West and the Centre. On average, the increase in *richesse* was 1.5° in 2007 and 1.7° in 2008 compared to 2.2° in 2009 for the same period.

Island-wise, the *richesse* of 11.8% at the end of June 2009 was similar to that at the corresponding period in 2008 but below the 12.2° for the corresponding period in 2007.

4. CROP 2009

As at 27 June 2009, 2377 ha representing about 6.9 % of miller-planters' land had been harvested compared to 1614 ha (4.6%) at the same period last year. Sector-wise and for miller-planters only, harvested area reached 7.3% in the East, 10.0% in the South, 7.8% in the West and 4.9% in the Centre. Cane harvest has not yet started in the North. An analysis of cane productivity based on the harvest statistics for miller-planters in sectors East, South, West and Centre follows. However, following the centralization of milling activities and the transfer of canes from one factory area to another, the comparisons made are not strictly comparable for sugar productivity and extraction rates except for the West and South sectors where data for the same factory areas are presented. Since all the canes from the Centre sector is being sent to the East, harvest statistics in terms of extraction rate and sugar productivity have been combined for these two sectors.

4.1 Cane productivity (Table 6a)

Cane productivity for the island as at 27 June 2009 amounted to 84.8 TCH and was higher than the 78.4 TCH recorded in 2008. Sector-wise, the best cane productivity to-date was recorded in the West with 99.9 TCH, followed by the Centre (89.0 TCH), the South (85.2 TCH) and the East (78.1 TCH). Compared with the same period in 2008, cane productivity recorded to-date was higher in the South by 7.7 TCH and in the Centre by 7.4 TCH. In the East, it is slightly below that of 2008 by 0.2 TCH.

Table 6a Cane productivity (TCH) as at end June for the 2008 and 2009 crops

	East	South	West	Centre	Island
2008	78.3	77.5	-	81.6	78.4
2009	78.1	85.2	99.9	89.0	84.8

4.2 Extraction (Table 6b)

The recorded island extraction rate of 8.93% was higher than that of the corresponding period in 2008 (8.72%) by 0.21%. Sector-wise, extraction rates recorded to-date were 9.09% in the West, 8.97% in the East-Centre and 8.86% in the South. Compared with the corresponding period last year, extraction rate to-date was higher by 0.56% in the South but was comparable in sector East-Centre. It should be noted that last year's extraction rate for East-Centre sector included part of the cane harvested from Mon Loisir factory area.

Table 6b Extraction rate (%) as at end June for the 2008 and 2009 crops

	East -Centre	South	West	Island
2008	8.96	8.30	-	8.72
2009	8.97	8.86	9.09	8.93

4.3 Sugar productivity (Table 6c)

Island-wise, the recorded sugar productivity of 7.57 TSH was higher than that at the corresponding period in 2008 (6.84 TSH) by 0.73 tonne. Sector-wise sugar productivity was 7.19 TSH in the East-Centre, 7.55 TSH in the South and 9.08 TSH in the West. In sectors East-Centre and South, sugar productivity was higher than that at the corresponding period in 2008 inclusive of the canes transferred from Mon Loisir factory area.

Table 6c Sugar productivity (TSH) as at end June for the 2008 and 2009 crops

	East -Centre	South	West	Island
2008	7.08	6.43	-	6.84
2009	7.19	7.55	9.08	7.57

5. 2009 CROP PRODUCTIVITY

The cane elongation data indicates that growth has subsided in most sectors with the advent of winter. The favourable weather generally recorded during the growth phase of the 2009 crop has resulted in a higher total cane height. To-date cane productivity is exceeding that of 2008 by some 6%. Concurrent with the slowing of the growth process, ripening has set in and the increase in *richesse* observed from the results of cane samples analyzed is better than last year. This is reflected by data at factory level with a slightly higher extraction rate this year as cane is of a better quality with a higher proportion of cane to trash and tops. The superior cane yield and extraction is resulting in 10.7% more sugar per hectare.