

# MAURITIUS SUGAR INDUSTRY RESEARCH INSTITUTE

Ref A 1/2011

10 October 2011

## SUGAR CANE CROP 2011

Status: End September 2011

### 1. CLIMATE`

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

Rainfall recorded during the month of September 2011 over the cane areas of the island amounted to 49 mm, which represented 59% of the long term mean (83 mm) for the month. Rainfall was below the long-term mean in all sectors with 13 mm in the North, 74 mm in the East, 58 mm in the South, 3 mm in the West and 71 mm in the Centre. These amounts represented 30%, 94%, 52%, 15% and 56% of the respective long-term means.

Cumulative rainfall for the period October 2010 to September 2011 amounted to 1936 mm for the island. This is 6% lower than the island long-term mean of 2059 mm. During the same period, a total of 1375 mm was recorded in the North, 2632 mm in the East, 1981 mm in the South, 946 mm in the West and 1999 mm in the Centre. Compared to their respective long-term mean, cumulative rainfall represented 103% in the North, 127% in the East, 77% in the South, 103% in the West and 72% in the Centre.

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

|             | North             | East              | South             | West             | Centre            | Island            |
|-------------|-------------------|-------------------|-------------------|------------------|-------------------|-------------------|
| <b>2010</b> | 29<br>(66)        | 77<br>(97)        | 80<br>(71)        | 12<br>(60)       | 97<br>(77)        | 64<br>(77)        |
| <b>2011</b> | <b>13</b><br>(30) | <b>74</b><br>(94) | <b>58</b><br>(52) | <b>3</b><br>(15) | <b>71</b><br>(56) | <b>49</b><br>(59) |
| <b>LTM</b>  | 44                | 79                | 112               | 20               | 126               | 83                |

\* Figures in brackets are % of LTM

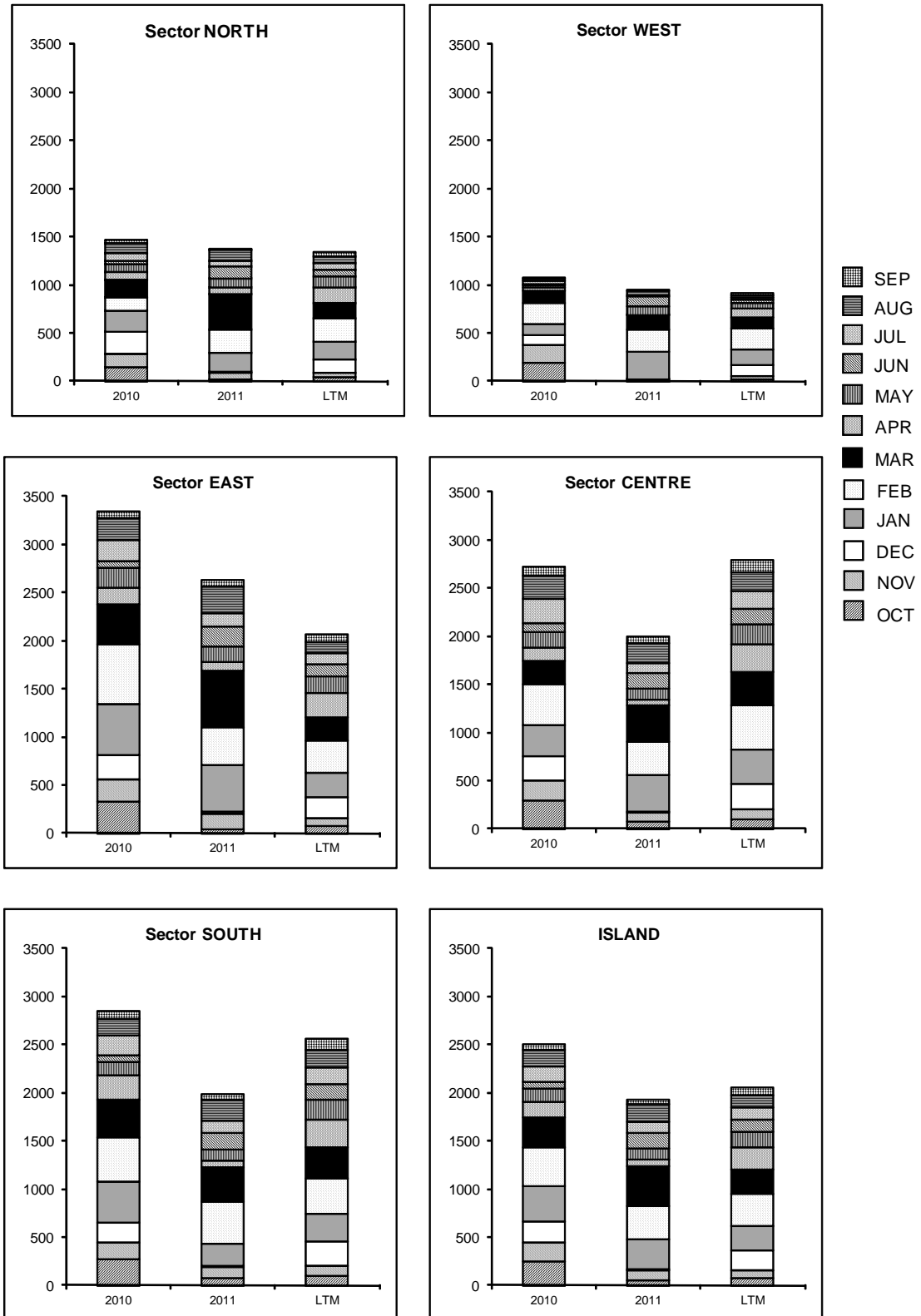
**Table 1b. Cumulative rainfall (mm) from October 2010 to September 2011 for crop 2011 compared to that of crop 2010 and the long term mean (LTM)**

|             | North                | East                 | South               | West                | Centre              | Island              |
|-------------|----------------------|----------------------|---------------------|---------------------|---------------------|---------------------|
| <b>2010</b> | 1464<br>(109)        | 3348<br>(162)        | 2853<br>(112)       | 1078<br>(117)       | 2704<br>(97)        | 2509<br>(122)       |
| <b>2011</b> | <b>1375</b><br>(103) | <b>2632</b><br>(127) | <b>1981</b><br>(77) | <b>946</b><br>(103) | <b>1999</b><br>(72) | <b>1936</b><br>(94) |
| <b>LTM</b>  | 1340                 | 2065                 | 2557                | 918                 | 2790                | 2059                |

\* Figures in brackets are % of LTM

[Source: raw provisional data from Meteorological Services]

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



## 1.2 Temperature (Table 2)

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

The mean maximum temperature was above normal at all stations, the difference being 1.7 °C at Union Park, 0.3°C at Pamplémousses, and 0.7 °C at Réduit and Belle Rive. The mean minimum temperature was close to the normal at Réduit and Pamplémousses but higher than the normal by 0.4 °C at Union Park and 0.7 °C at Belle Rive. The resulting mean amplitude was similar to the normal at Belle Rive but above normal at the other three stations.

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

| Station              | Maximum (°C)            | Minimum (°C)          | Amplitude (°C)        |
|----------------------|-------------------------|-----------------------|-----------------------|
| <b>Pamplémousses</b> | <b>27.1</b><br>(26.8) * | <b>16.7</b><br>(16.8) | <b>10.4</b><br>(10.0) |
| <b>Réduit</b>        | <b>24.2</b><br>(23.5)   | <b>15.7</b><br>(15.8) | <b>8.5</b><br>(7.7)   |
| <b>Belle Rive</b>    | <b>23.5</b><br>(22.8)   | <b>15.2</b><br>(14.5) | <b>8.3</b><br>(8.3)   |
| <b>Union Park</b>    | <b>24.1</b><br>(22.4)   | <b>16.2</b><br>(15.8) | <b>7.9</b><br>(6.6)   |

\* 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 September 2011 were well above normal at all stations. Recorded bright sunshine as a percentage of the normal amounted to 109 at Pamplémousses, 114 at Réduit, 117 at Belle Rive and 129 at Union Park.

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

| Station              | September 2011 | Normal | % of Normal |
|----------------------|----------------|--------|-------------|
| <b>Pamplémousses</b> | 255            | 233    | 109         |
| <b>Réduit</b>        | 248            | 217    | 114         |
| <b>Belle Rive</b>    | 231            | 197    | 117         |
| <b>Union Park</b>    | 194            | 150    | 129         |

## 2. SUCROSE ACCUMULATION (Tables 4a and 4b)

Cane samples from miller-planters' land in all factory areas and covering the main cultivated varieties were analyzed for sucrose content at end-September 2011. 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 2010 and 2009.

**Table 4a Average Pol % Cane (*richesse*) at end-September 2011.**

| Sectors | R 573 | R 575 | M 1246/84 | 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   |       |       | 15.5      | 15.3      | 15.2      | 15.1      |           | 14.6  |           |           | 16.3      | 14.2  |
| East    | 15.0  |       | 14.6      |           | 14.5      | 14.6      |           | 14.3  |           |           |           | 15.3  |
| South   |       |       |           | 15.6      |           |           | 16.1      | 14.2  | 14.4      |           |           | 14.8  |
| West    | 16.2  | 15.9  |           | 15.6      | 15.2      | 15.7      |           | 13.2  |           |           |           | 15.0  |
| Centre  |       |       |           |           |           | 13.9      |           | 13.8  |           | 13.7      |           | 13.4  |

**Table 4b. Comparison of Pol % Cane (*richesse*) of August and September 2009, 2010 and 2011**

| Sector | AUGUST |      |      | SEPTEMBER |      |      |
|--------|--------|------|------|-----------|------|------|
|        | 2009   | 2010 | 2011 | 2009      | 2010 | 2011 |
| North  | 14.4   | 14.8 | 13.3 | 15.0      | 14.9 | 15.1 |
| East   | 14.6   | 14.5 | 13.5 | 15.4      | 14.7 | 14.6 |
| South  | 14.1   | 14.9 | 13.6 | 14.7      | 15.5 | 14.8 |
| West   | 14.8   | 15.7 | 14.4 | 15.0      | 16.0 | 15.4 |
| Centre | 13.4   | 13.8 | 14.1 | 14.2      | 13.8 | 13.7 |
| Island | 14.3   | 14.7 | 13.6 | 14.9      | 15.0 | 14.8 |

At end-September 2011, *richesse* stood at 15.1% in the North, 14.6% in the East, 14.8% in the South, 15.4% in the West and 13.7% in the Centre. Compared to the corresponding period in 2010, *richesse* was higher by 0.2° in the North, comparable in the East and Centre but inferior by 0.7° in the South and 0.6° in the West. Compared to the corresponding period in 2009, sucrose content at the end of August for the present crop was higher in the West by 0.4°. It was comparable in the North and South, but lower by 0.8° in the East and 0.5° in the Centre.

From end-August 2011 up to end-September 2011, *richesse* has improved in all sectors except in the Centre where it has decreased by 0.4°. The increase in the other sectors was 1.8° in the North, 1.1° in the East, 1.2° in the South and 1.0° in the West. For the corresponding period last year, the increments were 0.2° in the East, 0.6° in the South and 0.3° in the West. In the North, the increase was negligible whereas in the Centre *richesse* had stagnated. On average for the island, the increase in *richesse* during September was 1.2° in 2011 compared to 0.3° in 2010 and 0.6° in 2009 for the same period.

Island-wise, the *richesse* of 14.8% at the end of September 2011 was just below the 15.0% of 2010 and 14.9% of 2009.

### 3. CROP 2011

As at 1 October 2011, 19 658 ha (55%) of miller-planters' land had been harvested compared to 20 238 ha (58%) at the same period last year. Sector-wise and for miller-planters only, the harvested area reached 43% in the North, 67% in the East, 51% in the South, 50% in the West and 65% in the Centre. An analysis of cane productivity based on the harvest statistics for miller-planters in all sectors follows. Because of the centralization of milling activities and since

all the canes from the Centre are crushed at FUEL, harvest statistics relative to extraction rate and sugar productivity have been combined for these two sectors.

### 3.1 Cane productivity (Table 5a)

Cane productivity for the island, as at 1 October 2011 amounted to 78.5 TCH and was lower than the 84.0 TCH recorded at the same period in 2010 by 5.5 TCH (7%). Sector-wise, the highest cane productivity to-date was again recorded in the West with 88.8 TCH, followed by the North (83.6 TCH), the South (80.7 TCH), the East (73.7 TCH) and the Centre (69.9 TCH). Compared to the same period in 2010, cane productivity recorded to-date was inferior in all sectors, the difference being 5.6 TCH in the North, 6.1 TCH in East, 3.4 TCH in the South, 6.8 TCH in the West and 6.0 TCH in the Centre.

**Table 5a Cane productivity (TCH) as at end August and September for the 2010 and 2011 crops**

| Sectors       | End August  |             | End September |             |
|---------------|-------------|-------------|---------------|-------------|
|               | 2010        | 2011        | 2010          | 2011        |
| North         | 93.0        | 80.8        | 89.2          | 83.6        |
| East          | 80.2        | 72.4        | 79.8          | 73.7        |
| South         | 83.8        | 78.5        | 84.1          | 80.7        |
| West          | 97.1        | 90.9        | 95.6          | 88.8        |
| Centre        | 78.1        | 71.5        | 75.9          | 69.9        |
| <b>Island</b> | <b>84.4</b> | <b>76.8</b> | <b>84.0</b>   | <b>78.5</b> |

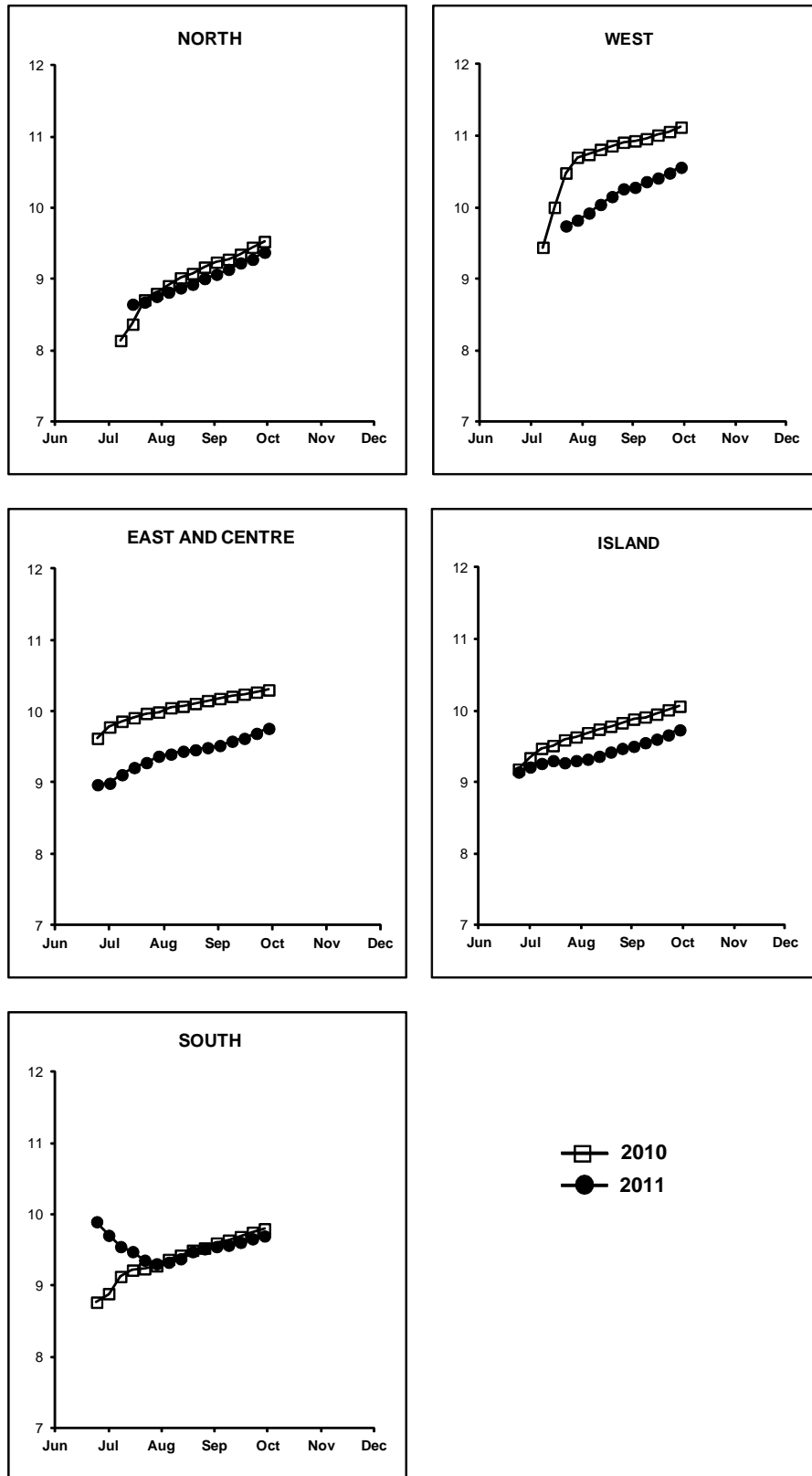
### 3.2 Extraction (Table 5b, Figure 2)

The recorded island extraction rate of 9.73% was lower than at the corresponding period in 2010 (10.06%) by 0.33°. Sector-wise, it was 9.38% in the North, 9.76% in the East-Centre, 9.70% in the South and 10.56% in the West. Compared to end-August of last year, extraction rate is lagging behind in all sectors by 0.15° in the North, 0.54° in the East-Centre, 0.10° in the South and 0.56° in the West.

**Table 5b. Cumulative Extraction rate (%) as at end August and September for the 2010 and 2011 crops**

| Sectors       | End August  |             | End September |             |
|---------------|-------------|-------------|---------------|-------------|
|               | 2010        | 2011        | 2010          | 2011        |
| North         | 9.17        | 9.01        | 9.53          | 9.38        |
| East /Centre  | 10.15       | 9.49        | 10.30         | 9.76        |
| South         | 9.53        | 9.52        | 9.80          | 9.70        |
| West          | 10.91       | 10.26       | 11.12         | 10.56       |
| <b>Island</b> | <b>9.83</b> | <b>9.47</b> | <b>10.06</b>  | <b>9.73</b> |

Figure 2. Evolution of extraction rate (%) for the 2010 and 2011 crops



### 3.3 Sugar productivity (Table 5c)

Island-wise, the recorded sugar productivity of 7.64 TSH was lower by 10% (0.81 tonne) than that at the corresponding period in 2010 (8.45 TSH). Sector-wise sugar productivity was 7.84 TSH in the North, 7.12 TSH in the East-Centre, 7.83 TSH in the South and 9.38 TSH in the West. Sugar productivity was lower than that at the corresponding period in 2010 in all sectors, the difference amounting to 0.66 TSH in the North, 1.03 TSH in the East-Centre, 0.41 TSH in the South and 1.25 TSH in the West.

**Table 5c Sugar productivity (TSH) as at end August and September for the 2010 and 2011 crops**

| Sectors       | End August  |             | End September |             |
|---------------|-------------|-------------|---------------|-------------|
|               | 2010        | 2011        | 2010          | 2011        |
| North         | 8.53        | 7.28        | 8.50          | 7.84        |
| East / Centre | 8.10        | 6.85        | 8.15          | 7.12        |
| South         | 7.99        | 7.47        | 8.24          | 7.83        |
| West          | 10.59       | 9.33        | 10.63         | 9.38        |
| <b>Island</b> | <b>8.30</b> | <b>7.27</b> | <b>8.45</b>   | <b>7.64</b> |

## 4. CROP PRODUCTIVITY 2011

Weather during the month of September has been favourable to ripening particularly in the light of below normal rainfall, and above normal solar radiation. This has contributed to a higher increase in *richesse* during September 2011 compared to the corresponding month of the two previous years, the more so that cane was still relatively immature by end-August 2011. Nevertheless, the *richesse* remained overall slightly below those of the past two years and this is well translated in the lower extraction rates recorded in all sectors at end-September, 0.33° less than in 2010. On the other hand, cane productivity has improved slightly from 76.8 TCH to 78.5 TCH during the past month. Cane yields are still lagging behind those of last year in all sectors, with an average of 7% less for the island. As a result of the combined impacts of lower extraction rates and cane productivities in all sectors, sugar yield is lower than at the same period last year by 0.81 TSH (10%) island-wise. A slight improvement from end-August has however been recorded when the sugar productivity was 1.03 TSH (12.4%) less than at the same period in 2010.