

An Analysis Paper on wasted capacity of the Sugar Industry

Should the cane industry operate on a 24/7 hour week
as proposed by the MSPA and the Landel Mills
Consultancy?

Should employees be called upon to bear the cost of
unprofessional and inefficient planning of centralisation
and mediocre administration of harvesting and milling
operations?



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prepared with the assistance of the Research & Communication Department of the General Workers Federation

1.0 - Introduction:

Landell Mills Report demonstrates a gradually downward trend in sugar yield per hectare since 2001. The Consultancy tried to explain this trend by harvesting occurring out of the highest sucrose content period due to lengthy crop season. Consequently, the Report spelled out two measures the industry could take: "optimise the allocation of factory area and operating on a seven-day week".

This paper of the JNP argues that while reallocation of factory area is certainly of utmost urgent importance, the introduction of a 24/7 working week and operations during crop season is a colourable device, sneaked in by Landell Mills, without any scientific foundation, to pursue what the MSPA could not impose through the last collective bargaining process.

The Joint Negotiating Panel is of the opinion that optimizing administration of the cane industry at all authority levels will be enough to shorten harvest period and should be set on the agenda as a matter of urgency.

Our conclusion is based on an analysis of wasted crushing opportunity for the industry which we shall present in this paper.

2.0 - Source of Figures

All figures for 2014 are official statistics gathered and compiled by the Mauritius Chamber of Agriculture (MCA). For 2015, figures are as at 12 September. 'Used Capacity' and 'Maximum Capacity' figures for 2015 were not available at MCA and were obtained from mills' weekly reports, except for Terra Milling.

3.0 - Methodology

Actual productivity indicators for 2014 and estimates for 2015 were used to calculate the wasted crushing opportunity of sugar cane in tons and wasted running opportunity in hours converted to one lost day for each 24 hours, as regard to both running hours & non-running hours of sugar factories.

4.0: Wasted Opportunity

4.1: Wasted Cane Crushing Capacity during Running Hours (Tons of cane/hr)

Table 1:

| Sugar Company | Full Capacity | | Used Capacity | | Wasted Capacity | |
|-----------------------|---------------|--------------|---------------|--------------|-----------------|-----------|
| | 2014 | 2015 | 2014 | 2015 | 2014 | 2015 |
| Terra | 325 | 400 | 308 | 388 | 17.2 | 12.5 |
| Alteo | 400 | 400 | 375 | 398 | 25.0 | 2.1 |
| Omnicanne | 400 | 400 | 351 | 377 | 48.6 | 22.8 |
| Medine | 175 | 175 | 166 | 138 | 9.0 | 37.0 |
| Industry Total | 1,300 | 1,375 | 1,200 | 1,301 | 100 | 74 |

In 2014, the wasted crushing capacity of cane for the whole industry by the four existing companies was of 100 tons of cane/hour, representing 8% of total crushing capacity of the whole industry. In the same year Medine was the most performing milling plant while Omnicanne was the least performing one. It should be noted that the wasted capacity is equivalent to a total of 2400 tons of sugar canes per day.

In 2015, wasted capacity is expected to be around 74 tons of cane/hr, if the same conditions prevail.

4.2: Wasted opportunity during non-running hours

Table 2:

| Sugar Company | Daily Average (Hrs) | | Yearly (Hrs) | | No of Days (24 hrs) | | Wasted Opportunity | |
|-----------------------|---------------------|--------------|--------------|--------------|---------------------|------------|--------------------|------------------|
| | 2014 | 2015* | 2014 | 2015* | 2014 | 2015* | 2014 | 2015* |
| | Terra | 4.65 | 4.59 | 972 | 959 | 40 | 40 | 315,851 |
| Alteo | 4.33 | 4.69 | 814 | 882 | 34 | 37 | 325,616 | 352,688 |
| Omnicanne | 2.24 | 1.92 | 390 | 326 | 16 | 14 | 155,904 | 130,560 |
| Medine | 3.00 | 7.17 | 363 | 860 | 15 | 36 | 63,525 | 150,570 |
| Industry Total | 14.22 | 18.37 | 2,539 | 3,028 | 106 | 126 | 860,896 | 1,017,542 |

Non-running hours remain the most important factor of lost capacity in the industry. It cumulated to a total of 2,539 hours in 2014 and is estimated at more than 3,000 hours in 2015. When converted in number of days (24 hours) lost capacity due to non-running status shows a total of 106 absolute days in 2014 representing 15% of the 692 number of crushing days (*jours de roulaison*) cumulated by the industry. It will amount to 18% in 2015 at actual average rate.

At full crushing capacity during these lost hours, total wasted opportunity was of 860,896 tons of sugar cane in 2014 and is expected to rise to one million tons in 2015.

5.0 - Cumulated Annual Wasted Crushing Opportunity - Running and Non-Running Hours

5.1: Cumulated wasted crushing opportunity in tons

Table 3a

| Sugar Company | During Running hrs | | During Non-Running hrs | | Total | |
|-----------------------|--------------------|----------------|------------------------|------------------|------------------|------------------|
| | 2014 | 2015* | 2014 | 2015* | 2014* | 2015* |
| Terra | 69,559 | 50,552 | 315,851 | 383,724 | 385,411 | 434,276 |
| Alteo | 92,4490 | 7,766 | 325,616 | 352,688 | 418,065 | 360,454 |
| Omnicanne | 184,011 | 86,137 | 155,904 | 130,560 | 339,915 | 216,697 |
| Medine | 22,869 | 94,017 | 63,525 | 150,570 | 86,394 | 244,587 |
| Industry Total | 368,889 | 238,472 | 860,896 | 1,017,542 | 1,229,785 | 1,256,014 |

Table 3 shows that more than 1.2 million additional tons of sugar cane could have been crushed if the four milling plants had operated in full capacity on a 24/6 basis during the whole 2014 season. The estimates total wasted capacity for 2015 is at 1.3 million tons of sugar cane.

5.2: Cumulated wasted opportunity in hours

Table 3b:

| Sugar Company | During Running hours | | During non-running hours | | Total | | Converted in days | |
|-----------------------|----------------------|------------|--------------------------|--------------|--------------|--------------|-------------------|------------|
| | 2014 | 2015 | 2014 | 2015 | 2014 | 2015 | 2014 | 2015 |
| Terra | 214 | 156 | 972 | 959 | 1,186 | 1,115 | 49 | 46 |
| Alteo | 231 | 19 | 814 | 882 | 1,045 | 901 | 44 | 38 |
| Omnicanne | 460 | 215 | 390 | 326 | 850 | 542 | 35 | 23 |
| Medine | 131 | 537 | 363 | 860 | 494 | 1,398 | 21 | 58 |
| Industry Total | 1,036 | 928 | 2,539 | 3,028 | 3,575 | 3,955 | 149 | 165 |

When converted into lost hours, wasted capacity cumulates to a total of 149 absolute days in 2014 and 165 in 2015 for the whole industry on a total number of 692 and 687 running days, respectively. The average wasted opportunity in number of days for the whole industry was of 37.25 in 2014 and estimated to rise to 41.25 for the current season.

5.3: Wasted opportunity in tons as a percentage of total cane crushed

Table 3c:

| Surgar Company | 2014 | | |
|-----------------------|--------------------|--------------------|-----------------|
| | Wasted Opportunity | Total cane crushed | WO as a % of TP |
| Terra | 385,411 | 905,056 | 43% |
| Alteo | 418,065 | 1,327,784 | 31% |
| Omnicanne | 339,915 | 1,384,672 | 25% |
| Medine | 86,394 | 421,395 | 21% |
| Industry Total | 1,229,785 | 4,038,907 | 30% |

At Full Capacity during the whole 2014 season (i.e. at 1 300 tons/hour during their respective number of running days on a 24 hour basis) the four factories would have been able to crush a total of 5.3 million tons. Wasted opportunity represents 30% of total cane crushed in 2014.

5.4: Wasted opportunity in hours as a percentage of total running hours

Table 3d:

| Surgar Company | 2014 | | | 2015 | | |
|-----------------------|--------------|---------------|---------------|--------------|---------------|---------------|
| | Wasted | Actual | Wasted as a % | Wasted | Actual | Wasted as a % |
| Terra | 1,186 | 4,044 | 29% | 1,115 | 4,057 | 27% |
| Alteo | 1,045 | 3,698 | 28% | 901 | 3,630 | 25% |
| Omnicanne | 850 | 3,786 | 22% | 542 | 3,754 | 14% |
| Medine | 494 | 2,541 | 19% | 1,398 | 2,020 | 69% |
| Industry Total | 3,575 | 14,069 | 25% | 3,955 | 13,460 | 29% |

In 2014, Industry has cumulated 3,575 hours of wasted opportunity representing 25% of actual total number of running hours cumulated by the four factories. In 2015, it is expected to rise to 29%.

6.0 - Conclusion

It has been demonstrated in this analysis that the sugar industry harvesting and milling operations shows a high level of wasted opportunity. It comes to sugar companies and institutions regulating the sugar industry to tackle efficiently this issue in a view to shorten the crushing period within the months where sucrose yield rates are highest. High level of wasted opportunity seems to be mainly due to breakdowns. Machinery with high breakdowns occurrence confirm high level of inefficiency.

There is no rationality in changing the present 24/6 working hours regime into the 24/7 regime, while sugar mills are unable to operate closer to maximum capacity

In addition, the JNP doesn't understand the rationale between claiming more harvest days through a seven-day week operating system while:

- (1) Cane field labourers are systematically assigned to other tasks than cane cutting during crop season; and
- (2) The cane cutting quotas of permanent cane field labourers are being lowered.

Inefficiency also results from weak planning. It is the responsibility of Board of Enquiry as stipulated in section 30 of the Mauritius Cane Industry Authority Act of 2011, thus of the MCIA and of the Government to ensure *"the economical functioning of the sugar industry with due regard to the employment of labour and the disposal of canes in the factory area"* before authorising closure of factory. This an important legally binding provision underlined in Blue Print on Centralisation (May 1997).

It is unacceptable that, once more, employees are called upon to bear the cost of unprofessional and inefficient planning of centralisation and mediocre administration of harvesting and milling operations.

The JNP, therefore, recommends the following urgent measures to shorten harvest period:

- (1) Optimising allocation of cane among mills as recommended by the Landell Mills Report
- (2) Reducing wasted opportunity at factory level
- (3) Allowing employees to harvest at maximum capacity; and
- (4) Reorganising transportation system from field to factory.

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