

# REDUCING COST OF PRODUCTION

## CASE STUDY OF AUSTRALIAN MODEL

By

**Sajid Hussain Naqvi**

**Former President**

IS IT A TEMPORARY PHASE

Some participants may think, what is the great deal .This is a temporary phase of low sugar prices. It will go away with time.

Gentlemen, unfortunately, this does not seem to be case.

### **PETER REIN SAYS**

In the recently held ASSCT conference, Peter Rein, Professor Emeritus at Louisiana state University and author of the well known book “Cane Sugar Engineering” was the key note speaker.

He made the following very important observations.

1. The demand for sugar in the world is steadily increasing by about 2% per year.
2. Prices for sugar (Raw) are reasonably stable at around \$ 400-450/MT for the last 15 years.
3. It seems that Countries or regions which can't produce sugar at this price will be eliminated.

### **TARGET**

- The above gives us a very clear target. We have to reduce cost of production to this level.
- We can add \$ 50 as the refining cost. That will make it \$450-500/MT
- It is with this back ground that we are all here to discuss the issue and I am presenting my to today's presentation.

### **AUSTRALIAN MODEL**

- Gentlemen as you know, Australia exports about 80-85 % of their production.
- Obviously they are keeping their cost of production competitive to the world market, in spite of their very high wages,
- Therefore, I think, visiting their model in the context of today's workshop will be very relevant.

## **REDUCING MANPOWER**

- Reducing Man Power is certainly one way of reducing cost of production.

Let us see what Australia is doing in this area and more important, how they are doing it

### **SOME EXAMPLES**

- Lowest manpower is being used at ROCKY POINT MILLS.
- It is situated in Queensland (Australia) and is operating with the following staff.

During the season	49 persons
-------------------	------------

Off season	23 Persons.
------------	-------------

- This mill had to cut down staff to this level due their smaller capacity (crushing about 200,000-300,000 Tons per annum)
- Others, like MUGROVE MILLS in the north are operating with about 250 people during the season.

### **HOW THEY HAVE DONE IT**

- Gentlemen it has not been done with a stoke of pen as some us may be expecting or may be frightened of , depending upon which side of the table you are sitting.
- It has been done as follows:-
  1. In small steps.
  2. By raising the skill levels of the available staff or hiring highly skilled staff.

(Training facilities up to fitter level are available).

3. Properly oriented instrumentation.

### **AN EXAMPLE FROM PAKISTAN**

- Mirza Sugar Mills operates with about 575 people during the season.
- There is no reason why this figure can not be achieved by other mills in Pakistan.
- I am convinced that we can also achieve Australian Figures if we are ready to do what Australia did under similar circumstances.

### **OTHER AREAS OF OPERATION**

In addition to the above, the following areas

are also being monitored very keenly.

- Efficiencies within the mills and
- Eliminating loss of recovery from field to factory,

## **Efficiency of Operation**

- Top of the line equipment and computer program's are being used to achieve high efficiency in all sections of operation.

## **CANE QUALITY**

- Cane quality is evaluated using NIR instrument.
- It is mounted over feed hopper of the 1st mill.
- It measures Pol. and Fiber% cane directly.
- Cane payment is based on this measurement.

## **MILLING**

- Mill extractions of 96+ are being routinely achieved. Please note it is not reduced extractions.
  - Metal's extraction is not even mentioned.

## **MILL SIZE AND NO OF ROLLERS**

- They are not happy with the performance of two roller mills, especially as the last mill.
- During the factory tour we saw that one mill had installed two rollers above a two roller mill to improve extraction.
- Five or six roller mills are being used. New mills have very large sizes like.50X100 inches

## **CANE PREPARATION**

- Cane preparation is considered key to higher extraction.
- Power used (consumed) during cane preparation is considered a measure of cane preparation.
  - Technologists & Engineers please note installing high power alone is not enough.

## **INDIVIDUAL DRIVES**

- Individual roller drives are the order of the day, because they think Shear of the bagasse is as important as the pressure or the opening of the mills.
- However during discussions it was mentioned that differential grooving can also achieve shear to some extent.

## **IMBIBITION WATER**

- Imbibitions water of 85C is used.
- For this rollers are arced on a lathe by an arcing machine.

## **FINAL MOLASSES PURITY**

- They don't seem to bother much about final molasses purity as their molasses % cane is only about 2.5 % due to high purities of Juice.
  - At least I have no knowledge of their work in this area.

## **LOSS OF RECOVERY FROM FIELD TO FACTORY.**

- We know about 1-1.5 degrees of recovery is wasted from field to factory.
- If we take 10%, as the average recovery, this waste is about 10-15%.
  - The financial impact comes to about Rs 18-27/40 kg of cane

## **AUSTRALIAN EXAMPLE AGAIN**

- In Australia if they get cane supplies within 8-12 hrs. They have made heavy investments in this area.
- They have laid out Railway tracks for the transportation of cane in their entire cane cultivation area.
- The harvesting is done on the instruction of the factory directly. I think this the key to fresh cane and hence high recovery.

## **Questions**

- I will like to end my presentation with some questions.
- Can we take over harvesting and/or transportation of cane?
- Can the financial impact of the loss as given above (Rs 18-27/40 kg cane) cover it.

## **SUBSIDIES**

- Can we give cane price subsidies in kind instead of cash?
- Can we link subsidies to the control over harvesting?

**THANKS FOR YOUR TIME**