

## **PSST WORKSHOP 2015**

### **Topic**

Automation and other measures to reduce cost of production including Human Resource

### **Presented By**

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### **Present Status of Sugar Industry in Pakistan**

The crushing season 2014-15 left the industry in a deep financial crunch. However, severity proportionate more or less to individual provinces according to their ground realities. The industry is facing an awful situation in recent days due to higher cost of production and is in survival-mode. Subsequently, cane payments to grower are not made due to cash flow problem. Therefore, circumstances accelerate un-certainty between two prime stake holders. Mills and Growers.

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### **Present Status of Sugar Industry in Pakistan**

Under the present scenario, trust-deficit amongst stake holders may leads to disaster for every organization/individual who is directly or indirectly associated with industry. A subsidize government package for cane payments is the sole source to provide partial relief for all the stack holders. Existing criticalities reflected by gathered statistics as follows:

<u>Territory</u>	<u>Sindh</u>	<u>Punjab</u>	<u>KPK</u>	<u>Variance</u>
Cost of Production	43-47	53-56	53-56	9-10
Rs/Kg				

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### **Overview**

The difference regarding cost of production is incredibly high between prime producers while, it remained Rs. 2-5 maximum in the recent past couple of years. Therefore, low cost sugar is moving around the country especially in those areas where cost of production is relatively higher and is producing disparity and controversy due to hysterical circumstances.

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### **Overview**

Economic Coordination Committee has allowed the export of 650,000 metric tons of sugar by giving insufficient inland freight subsidy and per kg rebate on exports. But the Pakistan sweetener is unable to compete in international market due to the price slump.

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### **Overview**

The financial crisis had surfaced during 2013-14 when the crushing season was started with surplus stocks while the government delayed the decision on allowing export of surplus sugar. Contrary, neighboring country India has given rebate against the raw sugar exports. The cost of production for raw sugar is lower than the refined sugar, thus promoting its industry by more export of raw sugar to consolidate its place in international market.

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### Overview

On the part of government either fully regularize or de-regularize the sugar industry in order to resolve the sugarcane against sugar price issue once for all, as mixed policies created controversies after every few years.

Under the circumstances, cost of production needs to manage weather its raw material procurement, Engineering, process applications, Human resource optimization are the core aspects to share a part individually. Therefore, according to the on date subject we will discuss the term opportunities which surely contribute reduction.

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### Overview

Sugar industries in Sindh and South Punjab might be able to survive due to high sugar recovery, but those located in central Punjab do not seem to have bright future until and unless some concrete steps are taken by the government and the mills to get them back on track. The task ahead is no doubt laborious but there has to be a beginning. If there is total commitment on the part of all parties, in all probability the sugar industry particularly of central Punjab/KPK stands a good chance of revival.

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### Sugarcane Plantation Yield /Hectare

Year	Yield /Hectare			
	Pakistan	Punjab	Sindh	KPK
2009-10	52.36	51.60	57.70	44.70
2010-11	56.13	55.75	60.43	45.59
2011-12	55.48	56.34	59.00	45.82
2012-13	56.50	56.00	63.00	44.70
<b>2013-14</b>	<b>57.55</b>	<b>57.75</b>	<b>61.71</b>	<b>45.68</b>

Source PSMA

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### Recovery %

Year	Recovery %			
	Pakistan	Punjab	Sindh	KPK
2009-10	9.05	8.86	9.54	8.37
2010-11	9.25	9.24	9.42	8.64
2011-12	9.64	9.68	9.72	9.55
2012-13	10.04	9.92	10.49	9.23
<b>2013-14</b>	<b>9.90</b>	<b>9.85</b>	<b>10.21</b>	<b>8.75</b>

Source PSMA

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### Consolidated Sugar Production in Pakistan (Cane, Beet)

Year	Production (Tons)
2009-10	3,138,135
2010-11	4,172,726
2011-12	4,670,380
2012-13	5,063,158
<b>2013-14</b>	<b>5,614,957</b>

Source PSMA

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### Sugarcane Indicative Price in Comparison with Sugar Avg. Retail Price

Year	Punjab	Sindh	KPK	Av. Sugar Price/kg
2009-10	100.00	102.00	100.00	63.41
2010-11	125.00	127.00	125.00	72.82
2011-12	150.00	154.00	150.00	57.16
2012-13	170.00	172.00	170.00	53.16
2013-14	170.00	172.00	170.00	-
<b>2014-15</b>	<b>180.00</b>	<b>182.00</b>	<b>180.00</b>	-

Source PSMA

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### Cane Indicative Price VS Cost of Production Season 2014-15

Cane price Rs. 160/- 40 kg as in Sindh

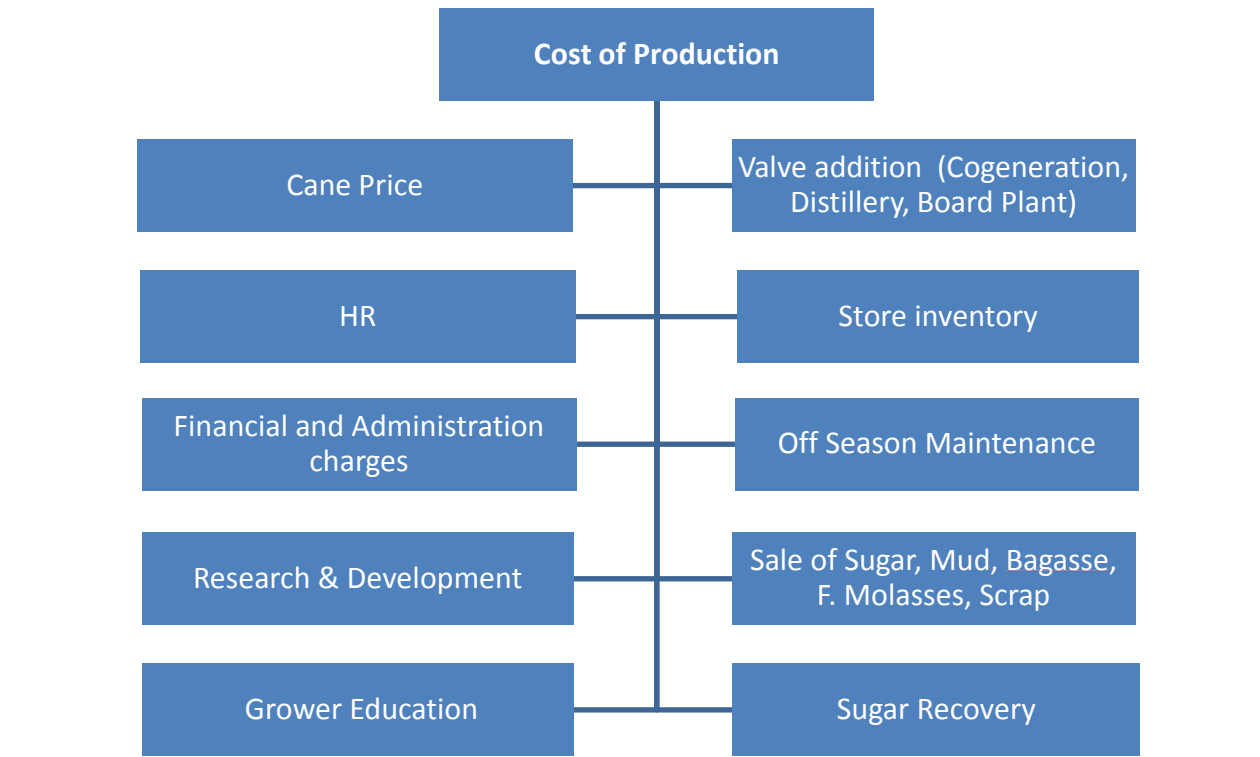
Cane price Rs. 180/- 40 kg as in Punjab

Status at different recovery levels

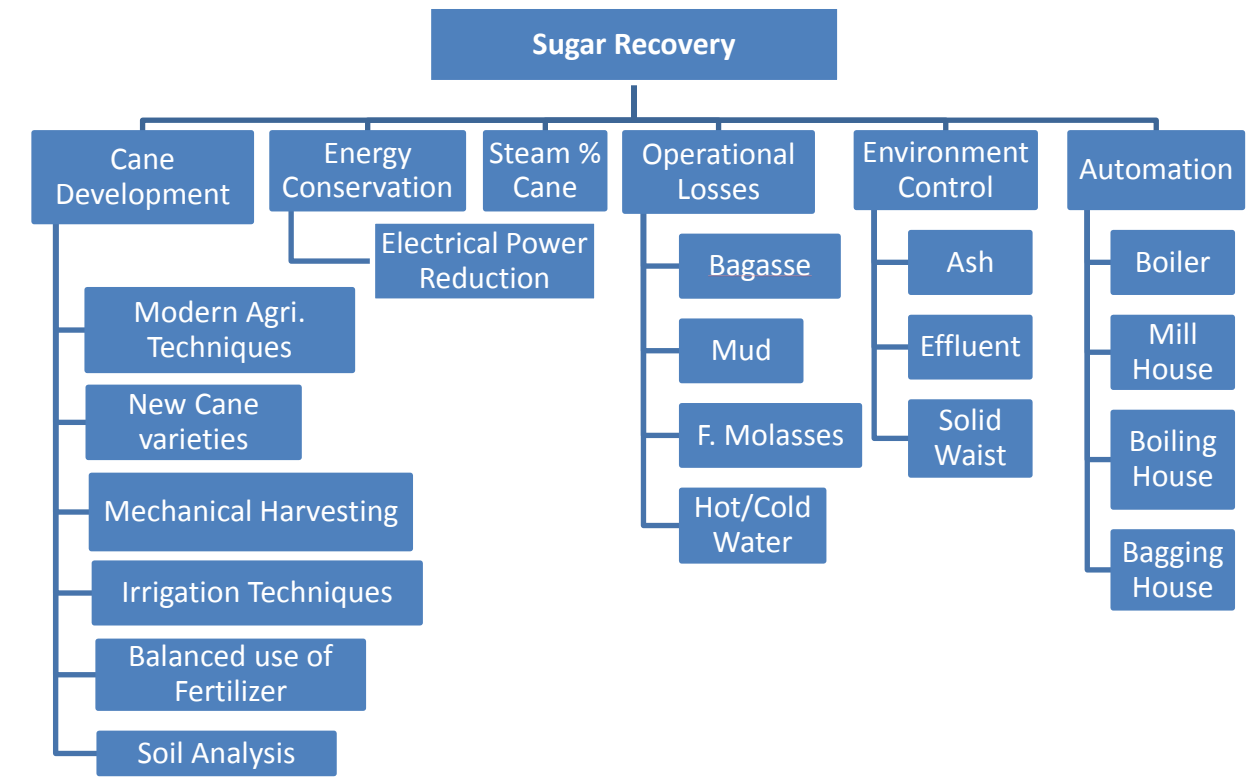
Recovery %	Sindh Rs. 160/- 40 kg	Punjab Rs. 180/- 40 kg
9.0	44.44	<b>50.00</b>
10.0	40.00	45.00
11.0	<b>36.36</b>	<b>40.90</b>
12.0	33.33	37.50

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**Areas of Improvement**



**Areas of Improvement**



- Efforts have to be made to rationalize both the sugarcane and the sugar prices.
  - The major requirement is to try and increase the sugarcane production through increasing the yield per hectare.
  - Export potential exists and it should be pursued vigorously.
  - Quality of the sugar should also be improved so that they fetch a good price in the international market.
  - BMR needs to be done to replace new technology with the old ones.
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### **Cane Development**

Cane development particularly in central Punjab is urgently needed for survival of Industry.

- Land leveling.
  - Increase in sugarcane yield/hectare.
  - Introduction of new varieties.
  - Adoption of new agricultural techniques.
  - New irrigation methods.
  - Advanced fertilizer application methods.
  - Mechanical harvesting
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### **Reduction in Top and Trash**

It has been established that by controlling the top and trash, Recovery may be increased up to 0.1%.

Cane crushing Pakistan season 2013-14 = 56,460,524 MT

Sugar Produced = 5,587,568 MT

Recovery = 9.90 %

By increasing recovery 0.1%

Extra sugar produced = 5587 MT

The saving @ 55,000 will amount to Rs. 300 million for the season

### **Source SML-PSST workshop 2011**

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### **Sugar Recovery**

A 10,000 TCD mill can produce 100 MT/day extra sugar by increasing 1% recovery which comes to 550 million rupees in 100 day.

Recovery % is a prime indicator of overall performance of any Sugar Mill. There is a sharp recovery difference in between Punjab and Sindh. Efforts are to be made to concentrate on this area.

- Cane development.
  - Reduction in cut to crush losses.
  - Reduction in operational losses.
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### **Energy Conservation**

The major contributors are:

- Cane preparation
  - Bagasse Moisture
  - Mill performance
  - Steam generation
  - Steam consumption in prime movers
  - Steam consumption in production house
  - Recirculation of material in production house
  - Introduction of Automation
  - Installation of VFDs
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### **Automation Advantages**

1. Automation contributes primarily to save energy, improves product quality & reduce labor which ultimate reduce cost of production.
  2. DCS contributes bagasse saving at Boiler up to 10%
  3. Mill automation increases capacity enhancement up to 5 %. While equipments life extended by 10 % from the design aspect due to minimum torque variations.
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### **Automation Advantages**

4. Comprehensive Boiler automation improve Boiler efficiency.
  5. Automation at Evaporators improve the brix, prime aspect to save energy.
  6. Pan automation despite high initial investment contributes reduction of boiling time up to 20–30 % and reduce the Molasses purity.
  7. Bagging house automation avoids over weighing and reduce sugar loss.
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### **Human Resources**

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#### **Primary Role of HR**

- Help the organization manage its Human Resources efficiently and effectively.
  - Planning, developing and implementing human resource objectives, quality of work and legal compliance.
  - Reconcile conflict between organizational objectives and employee objectives.
  - Satisfactorily meet societal and employee needs, demands and expectations.
  - Employee Rights –Discipline/Termination.
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#### **HR Functions**

- Employment Law
  - Job Design and Job Analysis
  - Recruitment
  - Selection
  - Training & Development
  - Performance Appraisal
  - Safety & Health
  - Labor Relations
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### **HR Application**

- Auto attendance system.
  - Control on mobile in working hours.
  - Introduction of CC TV cameras at important places.
  - Strict monitoring of workers to avoid wastage of time.
  - Application of Appraisal and ACR system.
  - Implementation of Proper accountability procedure.
  - Avoid the personality conflict.
  - Team Building.
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### **THE NEWS**

#### **Jawwad Rizvi**

**Friday , January 30, 2015**

LAHORE: Around 8 to 10 Sugar Mills in Punjab are likely to face bankruptcy by the end of the ongoing crushing season owing to financial crunch after sugar prices crashed in the province and the Sindh government lowered the sugarcane price in the province.

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### **WE NEED**

- Unity at Mills level
  - Unity at Staff level
  - Trust at Mills Level
  - Trust at Staff Level
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### **We need to make**

- Common & uniform cane purchase policy at regional Mill level
- Common & uniform Cane Development Policy at regional Mill level

**AT ANY COST, IF WANT TO SURVIVE**

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